Beginning Readers and the Use of Rime Analogies in Word Recognition

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Abstract
Learning how to segment and blends sounds within words is instrumental in the acquisition of literacy. The purpose of this action research was to explore how the use of rime analogies can help beginning readers recognize new words. Researchers have determined that explicit phonics instruction is more beneficial than implicit phonics instruction, and that the use of rime analogies helps student decode unknown words through the recognition of known sound units. An experimental and control group were used in this study to compare the growth of students who were exposed to four rime analogies against students who were exposed to rime analogies implicitly. The experimental group showed the most growth from pre-test to post-test in decoding nonsense words containing rime analogies.

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Beginning Readers and the Use of Rime Analogies in Word Recognition

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Abstract

Learning how to segment and blends sounds within words is instrumental in the acquisition of literacy. The purpose of this action research was to explore how the use of rime analogies can help beginning readers recognize new words. Researchers have determined that explicit phonics instruction is more beneficial than implicit phonics instruction, and that the use of rime analogies helps student decode unknown words through the recognition of known sound units. An experimental and control group were used in this study to compare the growth of students who were exposed to four rime analogies against students who were exposed to rime analogies implicitly. The experimental group showed the most growth from pre-test to post-test in decoding nonsense words containing rime analogies.
Beginning Readers and the Use of Rime Analogies in Word Recognition

Throughout the years, a growing debate in the educational field has been whether educators should focus on phonics or whole language as a means of teaching the reading process to emergent readers (Christensen & Bowey, 2005; Cassidy & Smith, 2004; Connelly, Johnston, & Thompson, 2001; Hines, 2009; Holmes, 2009; McKay & Thompson, 2009; Savage & Carless, 2004; de Graaff, Bosman, Hasselman, & Verhoeven, 2009; Walton & Walton, 2002). Reading requires more than just alphabetic awareness. To be a successful reader, one needs to understand letter/sound correspondence and be able to apply it to letter/word patterns as well as language patterns he or she has acquired (Goodman, 2001; Hines, 2009). These three tools, when working together, help a student attack unknown words and understand the text. Additionally, Adams (1990) adds that these tools can lead to student reading fluency and automacity in recognizing words in text. However, many educators ignore this notion and teach students reading skills via a whole language approach (de Graaff et. al., 2009). Whole language is a method of teaching young readers to read that involves emerging students in a print-rich environment and placing the emphasis on the meaning of the text rather than on the meaning of sounds (Kotaman, Tekin, & Tekin, 2002). Students often learn sight vocabulary words exactly that way- through repetitive sight of the words. This method does not allow students to be ‘code breakers’ and break apart and explore the different sounds and patterns available (Freebody & Luke 1990). A student’s ability to become a successful reader is stalled when they are not explicitly taught how to recognize and use letter/word patterns. So what phonemic methods are available for explicitly teaching young readers how to break apart words and identify sound units within words?

Research exists that expands on many approaches, such as identifying small sound units in words
(phonemes), chunking larger sound units in words (onset-rime and word families), and chunking by syllabic breaks.

For my research, I examined and explored the use of word families, or rime analogies, in helping beginning readers’ word recognition skills. The purpose of this action research was to examine how the use of rime analogies, as a part of explicit phonics instruction, can help beginning readers recognize new words. Through research from my literature review, my own research I conducted, and the lens of socio-cultural theory, I have been able to determine how the teaching of rime analogies helps students decode new words. The use of an experimental group and control group allowed me to see growth and compare results from participants in both groups. Explicit instruction with lots of practice and repetition allowed the students in the experimental group to show the most growth overall in this study. I also found the students who had a solid phonological awareness basis coming in to this study to make considerable growth compared to participants who lacked a basis of phonological awareness. Overall, all participants’ learning behaviors, whether positive or negative, did not have a large effect on their ability to learn and acquire a new phonics skill.

**Theoretical Framework**

Prior to analyzing the use of the rime analogies and its ability to increase word recognition, the meaning of literacy must be explored. Phonics is a small piece in a student becoming literate; however, without that small piece, the puzzle of literacy is left undone. Gee (2001) claims that literacy, both oral and written, is a social practice that is historically and culturally determined. Literacy has a strong socio-cultural foundation, in which children’s development sprouts from experiences, views, and attitudes they encounter (Goodman, 2001;
Heath, 1982). Therefore, students should play an active role in their literacy learning experiences.

The idea of teaching phonics using rime analogies allows students to become active learners as they participate in the breaking-down and changing-around of words (Aukerman, 2007; Goodman, 2001; Freebody & Luke, 1990; Meier, 2003). Since students are the key in constructing their learning, phonics instruction can be seen as deeply rooted in the socio-cultural theory. In the socio-cultural theory, learning is referred to as changing participation over time. Rogoff (1992) breaks down participation into three constituted planes: apprenticeship (the plane of community activity in which adults or teachers facilitate learning by modeling performance during joint participation), guided participation (interpersonal processes happening in daily activities), and participatory appropriation (personal processes in which the child changes through participation as it prepares him or her for comparable activities in the future). As Goodman argues, active participation in a literate society allows students to discover and create those initial literacies that are so important for beginning readers. Consequently, by using rimes to teach phonics, students are actively engaging in the learning process and therefore actively making meaning.

In addition to this, the location of power within the learning environment effects how a student learns new literacy skills. What students learn and how they learn it can be identified through how power is circulated: from teacher to student, student to student, or student to classroom. This cycle of power is known as circulation of power (Rex & Schiller, 2009). In the method of teaching phonics, the power of learning translates from teacher to student as the teacher explicitly teaches skills and the students interact with words and construct meaning from them. The teacher is the mentor who scaffolds and helps students attain a level of understanding
during the lesson. The power ultimately shifts to the student as they ‘perform’ the new meaning and are able to apply it to new situations. The circulation of power theory enables students to critique, self-assess, and build new knowledge as power circulates from teacher to learner (Rex & Schiller, 2009). This idea of power circulating from teacher down to student is an important part of early literacy. Students need explicit, modeled examples and time to explore new skills before they can be internalized and used in different contexts (Holmes, 2009). Unfortunately, enabling students to take on the role of learner to leader cannot be seen through the lens of whole language. Therefore, it is with benefit that we encourage the teaching of rime analogies to emerging readers so they can build crucial literacy skills that facilitate them to become successful readers.

**Research Question**

Considering that rapid word recognition is imperative to literacy acquisition, this action research study asks, how does the use of rime analogies, as a part of phonics instruction, help beginning readers recognize new words?

**Literature Review**

With many young readers in the United States needing extra help with reading skills and continually falling behind their peers in school, it is imperative that effective instruction for reading be put into place (de Graaff, Bosman, Hasselman, & Verhoeven, 2009; Hines, 2009). There is a great deal of research that investigates how phonics instruction should be implemented into daily reading instruction to help young readers acquire important literacy skills. According to Walton and Walton (2002), “the specific reading strategies children use when beginning to read are strongly influenced by the instruction they receive” (p. 10). The following review of
literature examines this issue. First, the broad topics of explicit phonics instruction and implicit phonics instruction are introduced and then cross-analyzed. Subsequently, the phonological awareness task of phoneme segmentation is clarified and explored. Finally, the onset-rime method of phonics is discussed. Evidence that phonics plays a role in a young reader’s ability to decode and acquire new words is dispersed throughout this review. Overall, the research here indicates that explicit phonics instruction is a crucial piece in developing young readers into successful readers. In addition, the research provides evidence of the use of the onset-rime method as an important component to the development of phonemic awareness.

**Phonics Instruction**

Learning to read is a skill one must acquire in order to participate in a literate society (Hines, 2009). For many young readers, this does not come easy. There exists a large body of research that indicates children who experience reading difficulty early on continue to fall behind as their schooling progresses (Holmes, 2009; Hines, 2009; Ouellette & Beers, 2010; Walton, Bowden, Kurtz, & Angus, 2001). Many students need extra assistance when exploring the alphabet and cracking its code- two skills which are seen as predictors of successful readers (Cassady & Smith, 2004). Therefore, identifying the best method for teaching these skills to young readers should be used and implemented in the primary grades. For years, the debate has been which method is more beneficial in teaching students alphabetic principles and decoding strategies- the explicit phonics model or the implicit phonics method? Both methods must be identified before the issue can be presented.
Explicit Phonics Instruction

Explicit phonics instruction, sometimes referred to as systematic phonics instruction, is a method which values the individual components of words as it teaches phonological awareness. Phonological awareness, according to Walton and Walton (2002), is a skill comprised of phoneme sound units. A phoneme is the smallest unit in a word, namely single letter sounds. Walton et. al. (2001) describes four units of sounds in words: namely, syllable, onset-rime/rhyming, and phonemes. Likewise, the National Reading Panel (NRP) has identified two types of explicit phonics: synthetic, which encompasses small phoneme units; and analogizing, which is learning to decode larger units within a word (syllables and onset-rimes) (Eldredge, Quinn, & Butterfield, 2001). Children who are taught phonics through the explicit method are exposed to letter-sound correspondences and syllable segmentation of words. Children are usually assessed on these skills by reading nonsense words to test the transfer of context-free decoding of known words to unknown words. Advocates for explicit phonics instruction argue that teaching young readers to manipulate, segment, and blend sounds to make words is an essential step in the process of learning to read (Christensen & Bowey, 2005; Cassidy & Smith, 2004; Connelly, Johnston, & Thompson, 2001; Daly, Chafouleas, Persampieri, bonfiglio, & LaFleur, 2004; Holmes, 2009; McKay & Thompson, 2009; Savage & Carless, 2004; de Graff et. al, 2009; Walton et. al., 2001; Walton & Walton, 2002).

Implicit Phonics Instruction

Implicit phonics, or whole-word instruction as it is often called, is a method which teaches young readers to acquire sight vocabulary through memorization of whole words with little to no attention paid to the letter-sound relations found within the words (de Graaff et. al.,
During implicit phonics, Holmes (2009) claims, young readers acquire new words spontaneously through a ‘psycholinguistic guessing game' as they read authentic texts and make predictions based on the context clues surrounding the words. Advocates of implicit phonics instruction believe children learn phonics skills embedded within the authentic text they read and are exposed to daily (de Graaff et. al., 2009; Kotaman, Tekin, & Tekin, 2002; Thompson, Connelly, Fletcher-Flinn, & Hodson, 2009).

**Explicit Phonics vs. Implicit Phonics**

Countless studies over the years have put explicit phonics and implicit phonics up against each other in an effort to dispense the best instruction for beginning readers’ needs. Most of this research shows overwhelming empirical evidence in the case for explicit phonics instruction in the classroom. Research by de Graaff et. al. (2009), which sought to investigate which phonics method was more beneficial for Kindergarten English language children, found that children who were taught using an explicit phonics model showed more progress in phonemic awareness, spelling skills, and reading than children taught using an implicit phonics model. The authors’ findings are parallel to research done by Christensen and Bowey (2005). After assessing 116 2nd grade students in Australia using three phonics intervention groups (two explicit and one implicit), the authors found children in the implicit phonics group to perform more poorly in reading and spelling words when compared to the children in the two explicit phonics groups. It is highly probable that the outcome of the Christensen and Bowey study is due to the fact that the implicit group did not receive instruction on attacking new words and had little practice in doing so. Research by de Graaff et. al. (2009) and Christensen and Bowey(2005) both back Holmes’ (2009) claim that reading is a skill that must be taught in order for students to decipher the alphabetic code by converting graphemes (symbols) to phonemes (sounds).
In addition, research has been conducted to show how explicit phonics can improve student reading comprehension. A study by Connelly et. al. (2001) compared two groups of six-year-old beginning readers to see which group would differ in reading comprehension skills. One group received phonics instruction centered around phonemic awareness, while the other group’s learning centered on book experience and whole-word instruction. Similar to the findings of de Graaff et. al. (2009) and Christensen and Bowey (2005), Connelly et. al. (2001) found the phonics group to show higher levels of progression overall. The phonics-taught students obtained higher scores on reading comprehension, produced more context-appropriate errors while reading, and also made more spoken attempts at reading unknown words within the text. The evidence from this study supports Holmes’ (2009) claim that young readers need to be taught decoding strategies since they can only predict content words explicitly 10% of the time, therefore proving that the implicit method of guessing to decode is a less than effective strategy. Additionally, the Connelly et. al. (2001) study supports the idea that phonics has a direct effect on reading and vocabulary skills. This was also the case in research conducted by Eldredge et. al.(2001). The authors’ study assessed 504 second-grade students from two school districts in Utah on phonological awareness and how it affects their reading vocabulary and reading comprehension skills. The students’ phonics skills were assessed by use of an 81-item multiple choice test developed by the researchers. The students’ comprehension and vocabulary skills were assessed using the Gates-MacGinitie Reading Test. Results from this study found the children’s phonological knowledge directly impacted reading comprehension and reading vocabulary gains. This evidence was based on data gathered from pre-testing in September and post-testing in May of the same school year. One idea we can conclude from this study is that
young readers need direct exposure to phonological awareness over the course of a school year in order to make gains in decoding, comprehension, and vocabulary skills.

Vocabulary is an important part in the process of learning to read (Bowey, Vaughan, & Hansen, 1998; Ehri & Rosenthal, 2007; Wright & Ehri, 2007). According to Ehri and Rosenthal, vocabulary learning is at the heart of all language development. The authors’ argue that “spellings help to secure pronunciations of words in memory by connecting graphemes to phonemes” (p. 396). In order for this connection to take place, students must have exposure to phonics skills that help them store words in their schema based on letter-sound correspondences. Ehri and Ronsenthal (2007) conducted research on 20 second-grade students to see if explicit teaching of new words was more beneficial than just hearing the words in the acquisition of vocabulary skills. Students assigned to the group of explicitly taught vocabulary words used pictures, definitions, and multiple sentence meanings to gain an understanding of what the new vocabulary word meant and how to use it in context. Unlike the explicit group, the spelling-absent group was never shown the vocabulary words and only practiced orally reciting words in each session. Overall, the students in the explicit group outperformed the spelling-absent group in the pronunciation, spelling, and meanings of new vocabulary words. Ehri and Rosenthal’s findings suggest students learn more words when they are exposed to the spellings, rather than just speaking them. The findings of Ehri and Rosenthal’s study aligns with the research on explicit phonics instruction that argues children need a variety of instruction to be able to spell and understand the meaning of new vocabulary words (de Graaff et. al., 2009; Bowey et. al., 1998).

The way in which you acquire phonemic awareness in the beginning stages of reading development may seem inferior to the big picture. However, current research has found that the
type of instruction you receive early on effects the ways in which you continue to learn words later on in life. Thompson et. al. (2009) conducted a study on 52 undergraduate students to find out if the reading instruction they received in their first years of primary schooling effected how they read words as adults. Half of the undergraduate students had received explicit phonics instruction during childhood in Scotland while the other half had not received phonics instruction during childhood in New Zealand. The undergraduate students were assessed using word naming tasks and non-word pronunciation tasks. The authors’ argue this was done in order to understand how each student broke apart new words (non-words) to pronounce them, therefore viewing a phonics-based history of learning or a whole-word history of learning. Thompson et. al.’s research found both groups to have equal levels of ability in reading vocabulary and word-naming skills. Conversely, the findings also show that the undergraduate students who had received phonics instruction as children made regular pronunciation of context-free words more than the non-phonics students. Additionally, the phonics-instructed undergraduate students gave more regular pronunciation responses to the non-words in the study. The findings from this body of research designate explicit phonics as a sturdy step in acquiring early phonological awareness skills that will carry on with children their whole lives.

**Phoneme Segmentation**

When examining explicit phonics, it is clear there are numerous ways of teaching the core skills to beginning readers. Many studies conducted over the past 20 years have pinpointed the ways in which phonics can be taught in order to create successful readers (Bowey et. al., 1998; Conrad & Levy, 2011; Daly et. al., 2004; Ehri et. al., 2009; Eldredge et. al., 2001; Goswami & Mead, 1992; Hines, 2009; Moseley & Poole, 2001; McKay & Thompson, 2007; Savage & Carless, 2004; Walton et. al 2001; Walton and Walton 2002). Teaching beginning
readers how to break apart words has recently been of some debate. There is research out that supports both small unit and large unit approaches.

A common approach taken by teachers is the ‘sound-it-out’ method, known as phoneme segmentation. Phoneme segmentation is the ability to break a word into smaller units, namely individual letter sounds. When a child uses this method, it is assumed they have already acquired alphabetic principles needed to correlate graphemes to phonemes (Cassady & Smith, 2004; Conrad & Levy, 2011; Ehri et. al., 2009). Young readers are taught to isolate each sound before blending all sounds together to create a word (i.e. /b/ /e/ /d/ = bed). Many researchers believe phoneme segmentation is an effective way to teach beginning readers to attack new or unknown words (Cassady & Smith, 2004; Conrad & Levy, 2011; Ehri, Satlow, & Gaskins, 2009; McKay & Thompson, 2009; Mesmer et. al., 2010). Research conducted by Daly et. al. (2004), and Mesmer et. al. (2010) both found teaching young readers real and nonsense words at the phonemic level resulted in higher accuracy of real word reading, compared to those young readers who focused on sight words only. This was in part due to the students’ ability to transfer familiar phonemic sounds from a known word to an unknown word. Daly et. al. (2004) and Mesmer et. al.’s (2010) research supports the idea of teaching small units to young readers in order to help them gain access to new words easily.

Being that a phoneme is the smallest unit of a word, many researchers argue it is easier for a child to begin learning to break down words by phonemes rather than larger units of onset-rimes. Ehri et. al.’s (2009) research on phoneme segmentation backs up this claim. The authors’ performed a study on 102 Kindergarten through third-grade students from a private school in Pennsylvania who were deemed struggling readers at their current grade level. The authors’ assessed children using two explicit phonics models (KEY- which teaches to decode by analogy,
and KEY-PLUS- which uses analogy decoding with grapho-phonemic awareness added in). The results revealed that those students who were in the KEY-PLUS group showed considerable gains in reading and spelling compared to the KEY group. These findings are noteworthy as they show how adding phoneme segmentation to instruction was an important step to boosting reading and spelling skills in beginning readers.

In addition to this, phoneme segmentation has been shown to increase young readers’ ability to name letter-sounds and therefore decode words quicker (Conrad & Levy, 2011). This is an important skill because, as Holmes argues, “efficient and automatic word recognition frees sources, which can then be devoted to higher-level linguistic processing, such as…deriving sentence meanings or forming inferences across sentences” (p. 309). Research conducted by Conrad and Levy (2011) found that children who practiced rapid letter naming consistently improved their speed and, therefore, have the potential to decode unknown words quicker. The authors’ used 44 students from first-grade and second-grade classrooms to complete the study. All children were identified by their teachers as having slow naming speed with letter-sound correspondence. Students were broken up into two groups and then, interestingly, were exposed to one type of training followed by the second type of training. One training method involved practicing words that had orthographic patterns (“word families”). The second training method involved rapidly naming letter sounds out of alphabetic sequence. Line graphs included in the study show that student who participated in the orthographic pattern training second read more words correctly and named letters more rapidly than those students who completed the orthographic training first. This study’s findings suggest beginning readers need to have a strong alphabetic base before they can move on to large unit chunking in words. Similar to this, a study done by Savage and Carless (2004) on first-grade students in London, England compared
phoneme segmentation to a rime-based method to see which predicted the most growth in nonsense word reading and letter-sound knowledge. Students who participated in the study were separated into one of three intervention conditions- phoneme awareness, mixed phoneme and onset-rime awareness, or word-level work. After post-testing all students, the researchers found phonemic manipulation to be closely linked to strong decoding skills. Parallel to Conrad and Levy’s (2011) research, the authors of the current study found phoneme segmentation to be the growth predictor for beginning reader’s essential phonics skills.

**Onset-Rime Method**

Contrary to the above-mentioned studies, research into the use of onset-rimes as a way to teach phonics reveals positive results (Booth & Perfetti, 2002; Bowey et. al., 1998; Cassady & Smith, 2004; Goikoetxea, 2005; Goswami & Mead, 1992; Hines, 2009; McKay & Thompson, 2009; Moseley & Poole, 2001; Walton et. al., 2001; Walton et. al., 2002; Wright & Ehri, 2007). A word can be split into two parts- an onset and a rime. An onset is the information up the vowel in the word (i.e. spin- /sp/ is the onset), and a rime is made up of the vowel and the rest of the word (i.e. bat- /at/ is the rime) (Savage & Carless, 2004). Breaking a word into its onset and rime allows for less time focusing on decoding. According to Mosely and Poole, putting together two spoken sounds is easier than the four or five you can encounter when phoneme segmenting. The authors add that the blending task for a word chunked by its onset and rime is also easier as the reader does not have to recall all sounds to make the word. Comparable to this thinking, Ehri et. al. (2009) argue that dividing a word into its onset and rime is the ‘natural’ way to break it down for further analyzing.
Research conducted by Goswami and Mead (1992) set out to investigate whether onsets or rimes were more beneficial in helping students make analogies between spelling patterns in words in reading (i.e. using the word *beak* to help read the onset in *bean* or the rime in *peak*). The authors assessed 44 children ages six to seven years old in two sessions: analogies (which specifically focused on beginning and/or end analogies) and phonological awareness (which included segmentation and deletion of initial or final consonants). Goswami and Mead found onset-rime awareness to be closely related to end analogies, while phonological awareness tasks were not. The findings from this study indicate the greater reliance on ending sounds as children listen to and decode words. This is parallel to research done on rime analogies (Hines, 2009; Mckay & Thompson, 2009; Moseley & Poole, 2001). The research conducted by Bowey et. al. (1998), however, contradicts this information. The authors’ research on first grade and second grade children indicated that beginning readers do not consistently use end analogies. The research also indicated that beginning analogies were used consistently stronger throughout the reading of unfamiliar target words during assessments.

A study completed by Hines (2009) also compared the students’ use of onsets and rimes while decoding unfamiliar words. Hines completed research on four first-grade students identified as ‘at-risk’ reading students who lived in the eastern United States. The students in the study read instruction-specific books to the researcher before being prompted to read target words from flashcards that had either the onset or the rime color-coded. After post-testing the children, Hines found exceptional results. All four children showed tremendous gains from pre-test to post-test, as they increased their score percentage of correctly read words. The findings suggest all children involved in the study showed growth in instructional words taught and near-transfer words, despite being labeled ‘at-risk’ in their reading development. Walton et. al. (2001)
The use of onset/rime to teach phonics skills has been researched throughout the world. A study by Guokoetxea (2005) found that preliterate and literate Spanish-speaking students from Spain in preschool through first-grade found it an easier task to discriminate larger units in words (onset/rimes) than smaller units in words (phonemes). The students in Guokoetxea’s study were split into three equal conditions- syllable tasks, onset-rime tasks, and phoneme tasks. All groups received a list of 40 words which included 20 words that fit their condition’s criterion and 20 words that did not fit their condition’s criterion. Additionally, ten words in each group had shared syllables at the beginning (onset), and ten words in each group had shared syllables at the end (rime). The syllable condition and onset-rime condition exhibited the most correct responses in the study. Guokoetxea’s research advocates for the teaching of larger unit chunks in words as a means of teaching explicit phonics instruction to beginning readers.

Walton et. al (2001) also found the use of larger units within words to show benefits over smaller units within words. The authors’ worked with Shuswap and Heiltsuk First Nation first-grade children to examine the use of rime strategies in learning to read. The children in the study were assigned to either the rime strategy condition or the control condition. The rime strategy condition focused on letter-sounds, rhyming, phoneme identity, and working memory; the control group was read stories twice a week in a small group and the children were encouraged to interact with the researcher and book. Though the results of the study showed the rime children did not make significant gains over the other children in medial phoneme identification or phonological working memory, an interesting outcome did arise. The children in the rime strategy condition learned to recode individual letters without the direct instruction from the
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researchers. The evidence presented in this study proposes that teaching beginning readers via the rime-based method could implicitly teach them phoneme skills as well. These findings hold true for research conducted by Walton and Walton (2002) as well. The authors assessed kindergarten students in three groups: 1. rime analogy, 2. rhyming, phoneme identification, and letter-sound correspondence, and 3. a control group. Mirroring the behavior exhibited in Walton et. al.’s rime group, Walton and Walton’s rime analogy groups developed the untaught strategy of phoneme segmentation during sessions. Since most beginning readers have had more exposure to rhyme than phonemic skills, the researchers claim rime-based methods of teaching explicit phonics skills are easier to learn than letter recoding.

A third study done by Walton et. al. (2001) argues these same results. The researchers conducted two longitudinal experiments on British Columbia first-graders and kindergartners. Both experiments were completed to find the effectiveness of letter recoding and rime analogy reading strategies with beginning readers.

In the first experiment, the researchers used 77 first-graders. The first-grade students were assessed on their rhyming skills, phonemic awareness, letter-sound knowledge, and word reading ability over an 11-week interval. The students engaged in rime, phoneme, or rhyming games during each session with the researchers or research assistants as a means of building skills. The findings from this experiment indicated students who had experience with rime analogies not only recoded more words than students from the phoneme group, but also increased their ability to phonetically decode words without being taught this strategy. The students in the rime analogy group also scored significantly higher on the non-word assessment, which could be interpreted by the fact that these students had more exposure to analogies and transferred this task to unknown words. In addition, the point can be made that the rime analogy
students may have also used their untaught phoneme skills to help decode non-words during assessment.

In the second experiment conducted by Walton et. al. (2001), 62 kindergarten students from British Columbia were assessed in the same manner as the first-grade students in the first experiment. This second experiment was conducted to compare the reading strategies of letter recoding and rime analogy to students who were ‘weak’ pre-readers as opposed to the first-grade readers who had already been formally introduced to print and text at school. Parallel to findings in the first experiment, the researchers found the kindergarteners who were taught the rime analogy method were stronger on every pre-reading skill measured compared to students taught only letter recoding. Based on the results of both experiments, it is clear that young students can quickly use large units within words to help decode and learn new literacy skills. Additionally, these studies hold proof that brief, direct instruction in phonological awareness, specifically rime analogy, is needed in the primary grades of schooling.

There is much research that supports teaching rime analogies in order to build student’s success in word recognition and decoding (Goikoetxea, 2005; Goswami & Mead, 1992; Hines, 2009; Walton et. al., 2001; Walton & Walton 2002). Recently, some research has taken this a step further and investigated the use of rime-prompting when helping students decode text. Moseley and Poole (2001) investigated whether students could decode a word, with teacher rime-prompting, during authentic reading tasks. The researchers conducted their study on 22 first-grade students in the United Kingdom. The students, who were all of mixed reading ability, were randomly assigned to either the rime prompting group or the word prompting group. Each group met with researchers twice a week for eight minutes and read authentic texts aloud. A word choice test and a rhyme reading test were used to assess all students at the beginning and
end of the study period. Results from these assessments revealed that all students in the rime prompting group out-performed the word prompting group on ability to decode words accurately. This research confirms again that rime-analogy teaching can improve reading skills in young readers.

Overall, exposing young readers to phonics skills, namely rime analogies, has been shown to significantly boost students’ ability to decode unknown words. Through the teaching of the rime method, it has also been found that students involuntarily pick up phoneme segmentation skills. The use of large sound units within words is clearly a positive starting point in teaching young readers phonological awareness.

Conclusion

Given this body of knowledge on how explicit phonics instruction plays a large role in young readers’ ability to learn vocabulary and comprehension skills, there are many suggestions for teachers to support the use of explicit phonics and rime analogies within the classroom. Primarily, teachers need to understand the difference between implicit and explicit phonics in order to meet the needs of their students phonologically. When a teacher implements explicit phonics instruction, they are allowing students to be engaged and in charge of their learning through the manipulation, segmentation, and deletion of sounds to create new words. A teacher must expose his/her students to letter-sound correspondences and allow each child to gain rapid automacity with this so the child can transfer this to authentic tasks. With many students falling behind in reading skills, teachers must use explicit phonics as a way to help children become successful readers. The teacher should have a large focus on using large sound units, specifically onset-rimes, to begin teaching young readers decoding skills. This can be taught through word
families (i.e. –all, -ip, -at), rhyming activities, or rime-based games. Research has proven that once students have a grasp on onset-rime analogy, his/her phonemic awareness skills flourish. Starting reading instruction in a place where students can easily identify and attain new knowledge is critical. Therefore, the use of rimes in the teaching of beginning explicit phonological awareness is an important part of any literacy lesson or curriculum presented in the primary grades of schooling.

Methods

Context

The research for this study occurred at Lyonsville Elementary School (pseudonym). Lyonsville is a small rural town in upstate New York. The community has about 6,200 citizens with an average household size of 2.5 persons (“City-data.com”, 2012). As of the 2009-2010 school year, Lyonsville had a total enrollment of 445 students in pre-kindergarten through sixth grade. Of these students, 80% were Caucasian, 11% were Black or African American, 5% were Hispanic or Latino, and 4% were Multiracial. The number of students eligible for free/reduced lunch was 261 (“New York State Report Card”, 2012). All participants for this study were chosen from the same first grade classroom. The total number of students within the classroom at the time of the study was 18 students. Of these 18 students, eleven were females and seven were males. There were nine Black or African American students, eight Caucasian students, and one Asian student within the classroom.

Participants

Six first grade students were chosen for participation in this study and were from the researcher’s current first grade classroom. Students were chosen based on teacher’s knowledge
of individual’s known literacy skills and oral assent to participant. Students ranged in age from 6.6 years old to 7.1 years old. No students had been identified as having a disability under the Individuals with Disabilities Education Act (IDEA). Two of the participating students, two males, were academically above grade level expectations thus far in the school year. Two other students, one male and one female, were meeting grade level expectations thus far in the school year. Two female participants in the study were academically below grade level thus far in the school year. One female student had recently ended participation in the school’s Reading Recovery program. One male student moved during the second day of participation, and therefore only five students were able to participate in the study. Students were broken up into two groups: group 1 (experimental), and group 2 (control). It was important to break participating students up into two groups as a way to compare two different variables. The experimental group participated in daily 20 minute lessons with the researcher focusing on and practicing with rime analogies. The students in the experimental group were taught using explicit phonics instruction and then participated in guided practice with the researcher. These students also participated in daily whole group phonics lessons, teacher read alouds, and guided reading groups within the regular daily schedule of their classroom. The control group was exposed to the same rime analogies but not through explicit phonics instruction. Students in the control group listened to books read aloud by the researcher that contained the rime analogies, but the rime analogies were not explicitly pointed out or talked about. Since all students participating in the study were from the same classroom, the control group students also participated in daily whole group phonics lessons, teacher read alouds, and guided reading groups within the regular daily schedule of their classroom.
Experimental Group Participants

Jack (pseudonym), a male Caucasian, was 7.1 years old in March of first grade. Jack enjoys playing soccer and skateboarding. Jack was performing above grade level expectations in ELA and Math. Jack did not receive any extra services for ELA or Math support besides what occurred within the classroom.

Kadi (pseudonym), a female Caucasian, was 6.11 years old in March of first grade. Kadi enjoys playing dress up and taking care of her little brother at home. Kadi was performing at grade level expectation in ELA and Math. Kadi received pull-out speech services twice a week. She did not receive any extra services for ELA or Math support besides what occurred within the classroom.

Natalie (pseudonym), a female Black or African American, was 6.9 years old in March of first grade. Natalie likes to play with her Barbies and read to her mom and dad at night. Natalie was performing below grade level expectations in ELA and Math. Natalie received pull-out reading services with the reading teacher daily, pull-out speech services four times a week, and had recently ended participation in the school’s Reading Recovery program. Natalie received extra instructional support from a volunteer adult within the classroom each day for 20 minutes primarily focusing on flash card sight word drill, reading vocabulary, and writing numbers to 100.

Control Group Participants

Sean (pseudonym), a male Caucasian, was 6.6 years old in March of first grade. Sean enjoys learning about trains and playing with Legos. Sean was performing at grade level
expectation in ELA and Math. Sean did not receive any extra services for ELA or Math support besides what occurred within the classroom.

Ava (pseudonym), a female Caucasian, was 6.8 years old in March of first grade. Ava enjoys drawing pictures and playing on the playground. Ava was performing below grade level expectations in ELA and Math. Ava received pull-out reading services with the reading teacher daily to work on comprehension skills. She received extra instructional support from a volunteer adult within the classroom each day for 10-15 minutes primarily focusing on flash card sight word drill, reading comprehension, and counting/writing numbers to 100 from memory.

Researcher

I am currently a graduate student at St. John Fisher College enrolled in the Literacy 1-6 program. I hold a bachelor’s degree in Elementary Education with a concentration in English from Eastern Illinois University. The 2011-2012 school year was my fourth year teaching first grade at Lyonsville Elementary School.

As the researcher, I took on the role of active participant observer while observing the students and taking field notes (Mills, 2001). I was engaged in lessons with all six students daily and monitored the effects and adjusted my instruction accordingly. According to Mills (2011), this is the most common data collection that teachers use in their research. When fulfilling my role as active participant observer within my study, I wanted to identify how the use of rime analogies facilitated new word recognition in beginning readers.

During all six students’ first grade year, I had been an active participant as their classroom teacher. My daily lessons were structured around feedback I received from the previous day’s lesson. Before I began my research, I had a strong knowledge of where each child
was academically and what types of literacy skills and tasks they had previously been exposed to in their schooling.

I chose to work with the experimental group each day of the study for twenty minutes within the classroom setting. Through the role of active participant observer, I took field notes, would scaffold assistance when needed, and built each day’s lesson on the previous day’s work. I wanted the experimental group to be able to identify rime analogies in different context, so I actively participated with them and used a variety of tasks to practice each rime analogy.

Method

On the first day of my research, I pre-tested all five students. Each student viewed a list of eight nonsense words that contained four rime analogies. The purpose of using nonsense words was to see if any student had prior exposure to the rimes and could in turn pick them out and recite them. Students were encouraged to give a guess as to what they thought the words were. Since all the participating students scored a zero out of eight on the pre-test, all four rime analogies were used during the study with the understanding that none of the students could orally recite them.

During the four days of lessons in this study, I worked with the experimental group in teaching all three students four different rime analogy patterns. On each of the four days during the study the students were exposed to a new rime analogy (“-ake”, “-eat”, “-ide”, and “-oat”). These four rime analogies were chosen based on the fact that they all contained a long vowel sound, and all students participating in this study had very little experience working with words that contained a long vowel sound in March of their first grade year. I also found these four rimes to have multiple words associated with them that the students would understand, and were
common among the English language. In each lesson, students viewed an index card with a word containing the day’s rime analogy written in black ink. I would say the word and have students repeat. The definition of the word was told if a student was not sure what the word meant. I would then point out and say the rime analogy, in which the students then repeated. Students were shown three more index cards containing words with the lesson’s rime analogy. All four words were repeated orally by all students. The students then listened as the teacher read a book that included the lesson’s rime analogy. The students were encouraged to listen for and recite words that contained the rime analogy. At the end of the lesson, if time allowed, students engaged in a ‘word twister’ game with the researcher. The game was incorporated to keep the students actively engaged and enthusiastic about the learning. All three students showed good sportsmanship while working together and were encouraged to help each other out while participating in the ‘word twister’ game.

The two students in the control group of this study met with the researcher for 20 minutes a day for the four days of the study. Each day, the students listened to a book- the same books used with the experimental group- and actively participated by making predictions, connecting text to self or text to text, and retelling events. The rime analogies in each book were not pointed out nor were they discussed. The students in the control group also participated in daily whole group phonics lessons within the classroom, listened to teacher read alouds, and participated in guided reading groups as per the normal curriculum for the classroom. The two students in the control group practiced “tapping out” sounds daily during their phonics instruction and this was the only known strategy for decoding words in isolation I was aware they knew to use.

On the sixth and last day of my study, all five students were post-tested using the same words from the pre-test. Each student’s pre-test and post-test scores were reviewed to explore
their growth during the study. Two students (one student from the experimental group and one student from the control group) were also given questionnaires based on their experiences in the study. The questionnaires provided more data to ensure the quality of the research.

**Quality and Credibility of Research**

When conducting any type of research, it is imperative to ensure quality and a level of credibility within the study. The researcher ensures credibility by taking into account any complications that can arise and looking at the expected and unexpected patterns that arise from the results (Mills, 2007). To ensure credibility throughout my study, I used peer debriefing with a critical colleague who, as Mills (2007) states, is someone who helps the researcher reflect on his/her work through providing valuable insights. I also took detailed notes during lessons as I was an active observer during the study. I collected detailed data to ensure my research was context bound. In addition, I applied triangulation to this study to warrant credibility of the study and quality of all my research. According to Mills (2007), triangulation is a practice where the researcher compares multiple forms of data and different techniques with one another so to cross-check the data.

Credibility refers to the researcher’s ability to look at all patterns that arise from the data and take these into account (Mills, 2007). By using a critical colleague I was able to address credibility. I conversed with my colleague via email. My critical colleague offered insights into my data that helped me reflect on my own work. In addition, I was an active observer in this study which allowed me to take detailed notes during my observations. Through my field notes and daily interactions with the participants, I was able to identify persistent behaviors and characteristics that surfaced. I crossed-checked all my data, known as triangulation, to ensure a level of credibility.
I also ensured transferability during my research. Transferability refers to researcher’s believing that everything they study is context bound and not to develop statements that can be generalized to larger groups of people (Mills, 2007). I developed descriptive, context-appropriate statements throughout my study through detailed field notes and daily journaling. I wrote notes that were descriptive to the participants’ growth, behaviors and attitudes, as well as the overall setting of the study. These notes help an outsider visually see the context of my study.

The stability of the data, known as dependability (Mills, 2007), was another important criteria to ensure during my study. I overlapped methods of data through review lessons, pre-testing and post-testing, and using my critical colleague to gain a further understanding and a deeper insight as to what was actually happening within my study. I also chose two participants at the end of the study to complete a researcher-made questionnaire to gain further insight on the participants’ views of the study. I used multiple methods so that the weakness of one method was compensated by the strength of another (Mills, 2007). Another strategy to help ensure dependability is the establishment of an ‘audit trail’ (Mills, 2007). An audit trail allows the researcher to have an external person ‘audit’ the study’s data collection, written descriptions, and artifacts (Mills, 2007). My critical colleague was my auditor as she reviewed my written descriptions of my data collection and data analysis. In addition, I used a reading teacher from Lyonsville to audit my participants’ artifacts and give me new insights as to what the artifacts revealed.

Finally, I ensured confirmability during my research. According to Mills (2007), confirmability is the neutrality or objectivity of the data that has been collected. Triangulation, the use of a variety of methods for the purpose of cross-checking information, was how I guaranteed confirmability within my study. I collected multiple forms of data (pre-tests, post-
tests, field notes, and questionnaires) to cross-check data and interpret any patterns I found. In addition, I exercised reflexivity by keeping a journal in which I recorded my own reflections of the study on a daily basis. Journaling allowed me to constantly reflect on my research question, think about the research process, and formulate new questions on my topic

**Informed Consent and Protecting the Rights of the Participants**

Before I began my research, I collected assent and consent from all participants to protect their rights. Each student, when asked to participate in this study, gave me an answer of ‘yes’. Because participants in this study are young children, an affirmed ‘yes’ is enough consent from each student. In addition, I gave each parent a consent form to sign. Each student’s parent received a consent letter that explained my research study in detail. Each parent needed to confirm his/her child’s participation and turn in a signed consent form in order for their child to partake in the study. It is important to note that all parents were aware that names would remain anonymous in this research and all identifying marks would be removed from any artifacts collected. I replaced all five students’ names with pseudonyms so confidentiality is established.

**Data Collection**

As mentioned above, I used multiple forms of data collection throughout this study. I pre-tested five students on a list of nonsense words and scored them out of eight. Any student who scores a zero was eligible to participate in this study, as they show to have had no experience with the test words and can therefore show growth over the four day study. The five students in the study were grouped into two groups- experimental group and control group. I actively observed students in both groups each day during the study as we worked in small groups for 20 minutes. I observed and noted their behaviors in a journal for record keeping purposes. I based
each lesson on observations from the previous day. At the conclusion of the study, I gave two
students the same questionnaire to gain insight into their learning and thoughts throughout the six
day study. In addition, I post-tested each student individually on day six on the same eight
words I used for the pre-test. This was done in order to show growth. At the end of the study, I
was able to analyze all my data and conclude credible results based on trends I saw happen
throughout the study.

Data Analysis

After my initial collection of data, I compiled my pre-tests/post-tests, journal of field
notes, and student questionnaires to code and look for themes. While coding, I noted any growth,
or lack of growth, each student made. I started by taking a look at students’ pre-tests and post-
tests. I first compared growth between students within the experimental group, then compared
growth between the two students in the control group. I also looked at students’ academic level
compared to their growth over the six day study. I coded my field notes next. I highlighted key
words from each group’s daily lessons and looked for trends. In addition, I highlighted any
student behavioral attributes I noted and how students responded to the activities. Lastly, I coded
the two questionnaires. To code the questionnaires, I highlighted students’ feelings, vocabulary
used to describe the lessons, and overall attitude towards participating within my study. I then
took all my coded data and compiled lists with similar highlighted words/attributes.

Once all the data was coded, three themes emerged. The first theme was how students
identified and used sounds within words presented. I found students in both the experimental
group and the control group to use numerous decoding skills. Another theme that surfaced was
the students’ application, or lack thereof, of rime analogies. Lastly, I found students’ learning
behaviors to effect their participation in daily lessons as well as their overall achievement in the study.

**Findings and Discussion**

Beginning readers’ ability to read is largely dependent on their word recognition skills. To answer the question of how the use of rime analogies, as a part of phonics instruction, helps beginning readers recognize new words I set up an experimental group and a control group to explore the topic of rime analogies. The experimental group explicitly learned rime analogies through viewing words, listening to the words, and repeated practice with the rimes. The control group listened to the researcher read aloud text that included the rime analogies and received their instruction in the way of whole language. To measure student growth from day one to day six of the study, the students were observed interacting with the rimes, texts, and researcher, pre-tested and post-tested on a list of eight nonsense words containing the four rime analogies, and given a questionnaire to access their thinking and learning from the study. The assessments used by the researcher helped gain insight as to whether the students in the experimental group were able to apply their knowledge of new rime analogies, and as to whether the students in the control group picked up the rime analogies through read alouds without the explicit phonics instruction. As mentioned above, three themes emerged within all the data I collected during my research. These themes captured what was going on during the six day study and are supported by multiple forms of data, or triangulation.

All five participants’ scores can be found in Table 1 below. These scores reflect their pre-test and post-test score. The numbers seem straight-forward, but there was a lot of information I was able to gain from digging deep into the data.
Table 1

Research Participants’ Pre-test and Post-test Scores

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Group</th>
<th>Pre-test Score</th>
<th>Post-test Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack</td>
<td>Experimental</td>
<td>0/8</td>
<td>7/8</td>
</tr>
<tr>
<td>Kadi</td>
<td>Experimental</td>
<td>0/8</td>
<td>6/8</td>
</tr>
<tr>
<td>Natalie</td>
<td>Experimental</td>
<td>0/8</td>
<td>4/8</td>
</tr>
<tr>
<td>Sean</td>
<td>Control</td>
<td>0/8</td>
<td>0/8</td>
</tr>
<tr>
<td>Ava</td>
<td>Control</td>
<td>0/8</td>
<td>1/8</td>
</tr>
</tbody>
</table>

Sound Identification Strategies Used in Decoding New Words

A. Experimental Group

Sound identification/decoding were the focus of each lesson in my study for the experimental group. On each of the four lesson days, the students in the experimental group were exposed to new rime analogies in multiple formats. Students viewed the rime in a word, orally repeated the rime and word with the researcher, and then chorally practiced three words on flashcards that included the rime analogy of the lesson. On the second, third, and fourth day of lessons, students also reviewed flashcards containing rime analogies from previous lessons. After the practice of viewing and reciting rime analogy words, students listened to the researcher read a book that contained words with the lesson’s rime analogy and were encouraged to orally tell
any words they heard that ended in a rime. A ‘word twist’ game was also played by students at the end of the lesson during three of the four lessons due to time constraints.

The degree to which the three students, Jack, Kadi, and Natalie, in the experimental group demonstrated decoding of words varied widely. It can be assumed the students’ large variation or decoding skills was due to the fact they were all reading at different levels and had been exposed to different decoding strategies through interactions with their Kindergarten teachers, their current 1st grade teacher, and any other teacher with whom they have worked with (i.e. reading teacher, speech teacher, and parents). Students were taught that each rime analogy contained three letters who came together to make a new sound. It was also noted in each lesson that the vowels were long vowels and said their names in each rime analogy. No other ways of decoding were enforced or encouraged. Visual cues and texts were used to reinforce the structure of the rime analogies. Any decoding strategies used beyond this were strategies the students had attained outside of the study. The researcher found it very interesting as to how students in both the experimental group and the control group engaged in decoding the nonsense words in the pre-test and post-test. During the pre-test of eight nonsense words, Jack made no effort to sound out or chunk the words. His only response was “tough one” (Student artifact, February 28th, 2012) when he viewed the nonsense word ‘leat’. During daily lessons, Jack put forth effort and was able to figure out new words that included the day’s rime analogy (field notes, March 2nd, 2012). Jack would often point to a word we were practicing on flashcards and use his finger to underline the rime. In addition, Jack would make up songs with the words we practiced on flashcards (field notes, March 1st, 2012). During the read aloud part of each lesson, Jack would quickly shout out words he heard that included the day’s rime analogy, and he would also close his eyes and try to spell the word. Jack’s attempt at spelling words in his brain back the claim by
Ehri and Rosenthal (2007) that, “spellings help to secure pronunciations of words in memory by connecting graphemes to phonemes” (p. 396). When I post-tested Jack on the last day of the study, I noticed him using two different sound identification strategies. Jack was able to identify the rime analogy in most of the nonsense words. Jack would say the first sound in the word and tap that sound on his fingers (Student artifact, March 6th, 2012). Tapping out each sound in a word is a strategy Jack learned in the phonics program his classroom uses daily. After Jack tapped the first sound, he would take his finger and scoop it in the air as a way of visually blending the rime analogy. The researcher did not practice this with any of the students during the study, so this was a strategy Jack invented to help him remember the rime as a chunked sound (Field notes, March 1st, 2012). When Jack got to the very last word on the post-test, he tapped the first sound (/w/), and then seemed unable to call upon the sound of the rime (/ -oat/). He then replaced the nonsense word with a familiar word, saying “want” (Student artifact, March 1st, 2012; field notes, March 1st, 2012). Jack made large growth from pre-test to post-test. Not only was Jack able to recall the sounds in each rime analogy, but he also visually cued himself to remember that the rime blended to make one sound. During this study, Jack quickly picked up on new skills. Jack is an above-average reader in his 1st grade classroom, and this probably played a large part into how advanced his phonological skills are. He was able to segment phonemes in words, as well as find and verbally produce rime analogies in real words and nonsense words. Jack’s success in decoding new words is parallel to research on explicit phonics that states a child’s ability to manipulate, segment, and blend sounds within a word is an essential step in learning to read. (Christensen & Bowey, 2005; Cassidy & Smith, 2004; Connelly, Johnston, & Thompson, 2001; Daly, Chafouleas, Persampieri, bonfiglio, & LaFleur, 2004; Holmes 2009;
McKay & Thompson, 2009; Savage & Carless, 2004; de Graff et. al, 2009; Walton et. al., 2001; Walton & Walton, 2002).

Kadi, much like Jack, made little effort to decode any word on the pre-test (Student artifact, February 28th, 2012). Kadi attempted the initial sound on two of the eight words, but said, “no” or “hmm..next!” as a response to the other words (Student artifact, February 28th, 2012). During lessons, Kadi quickly picked up the rime analogy of the day. However, when we would review the previous day’s flashcard words, Kadi would often try to tap out each sound on her fingers, forgetting that the rime at the end of the word made one sound. During the third lesson on March 2nd, I prompted Kadi to try another strategy instead of tapping out each sound in the word “fake”. Kadi responded with, “But you say it’s okay when we do this in reading table?” (Field notes, March 1st, 2012). When I post-tested Kadi, she showed growth from her pre-test results. Kadi would say the initial sound in each word, then used her index finger to find and underline the rime. Kadi seemed to need this visual cue to remind her that the three-letter rimes made one sound. Kadi said the initial sound in the nonsense word and underlined the rime within the word with four of the eight words. When she read the word ‘pake’, she scooped her finger in the air and said ‘-AKE’, much like Jack did during his post-test. Kadi seemed to have a better understanding of long vowel sounds by the end of the study. Kadi said the long vowel sound correctly in seven of the eight words on the post-test. When Kadi read the word ‘noat’, she said the initial sound /n/, then gave the ‘o’ a short sound and the ‘a’ a long sound. She tried to make sense of her sounds and when she blended these sounds together she said, “not now?” (Student artifact, March 6th, 2012). Kadi read the word ‘woat’ as ‘won’t’; however, her attempt did yield the correct long vowel sound. Kadi tried to make sense of this word by relating it to a word that is known to her. Attempting to connect an unknown word to a known word is a crucial first step
in decoding for beginning readers. Research shows that students who are exposed to explicit phonics make more spoken and regular pronunciation responses than students taught using implicit phonics methods (Cassady & Smith, 2004; Conrad & Levy, 2011; Mesmer et. al., 2010). Kadi’s inability to grasp and hold on to the rime analogies and her reverting to tapping out each sound is comparable to research done on phoneme segmentation (Cassady & Smith, 2004; Conrad & Levy, 2011; Ehri et. al., 2009). This research on phoneme segmentation claims that beginning readers find it easier to sound out individual sounds in words more so than chunking larger units of sounds together. Kadi showed she has solid grapheme-phoneme identification and phoneme segmentation skills; however, Kadi lacked the ability to acquire large-unit sound chunks such as rime analogies throughout this study.

When I pre-tested Natalie, she seemed to have little confidence in herself and would often look at the alphabet hanging in the room for support, though she rarely gave me a sound. Natalie attempted the initial sound in two of the eight nonsense words. For the word ‘mide’, she gave me the /n/ sound, and for the word ‘woat’, she gave me the /w/ sound (Student artifact, February 28th, 2012; Field notes, February 28th, 2012). During lessons, Natalie would mumble the words or refuse to repeat the words presented to her on flashcards. I would encourage her to touch the rime in each word. Even after lots of modeling of this behavior, Natalie struggled to point out a rime analogy in a given word (Field notes, March 5th, 2012). Though research by Ehri and Rosenthal (2007) state that, “spellings help to secure pronunciations of words in memory by connecting graphemes to phonemes” (p. 396), I did not see any spelling connections with Natalie, who showed many signs of low phonological awareness. Natalie was able to identify the rimes when listening to the read aloud book each day. It appeared that she was able to make the sound connection in her head, but unable to make the sound to letter connection on paper.
Natalie needed lots of support when completing the ‘word twist’ game as she often mixed up letter sounds. Jack and Kadi were always willing to help her. She would often say the initial sound wrong, but say the rime correctly. This behavior is consistent with research that argues beginning readers find it easier to break a word apart by onset-rime and find the rime easier to vocalize than the onset (Booth & Perfetti, 2002; Goswami & Mead, 1992; Savage & Carless, 2004). Natalie showed many inconsistencies throughout the lessons in the study (Field notes, March 6\textsuperscript{th}, 2012). When I post-tested Natalie, she showed growth from her pre-testing results. Natalie was able to correctly pronounce four of the eight nonsense words on the post-test. Natalie used an interesting strategy to decode the words. She would tap the initial sound, then slide her thumb down her forearm and say the rime (Student artifact, March 6\textsuperscript{th}, 2012). Natalie decoded four words this way on her post-test. Unlike her pre-test, Natalie was able to identify all initial sounds correctly. When Natalie read the word ‘mide’ on the post-test, she said, “mice”, and when she read the word ‘pake’, she said “pancake”. It appears Natalie was using the sounds in these words that she could recall and connected them with words she already knows. Natalie’s attempt at connecting an unknown word to a known word in her schema is an explicit phonics beginning skill and an important pre-reading skill (Cassady & Smith, 2004; McKay & Thompson, 2009). On two of the words on the post-test Natalie confused the vowel sounds. In the word ‘hake’, Natalie gave the ‘a’ a short sound and the ‘e’ a long sound. When she got to the word ‘noat’, she gave the ‘o’ a short sound and the ‘a’ a short sound (Student artifact, March 6\textsuperscript{th}, 2012). In both of these words, she tapped each sound on her finger, similar to what Jack did on his post-test. Natalie’s attempts at solving unknown words show she lacks early reading skills. Before a student can begin to isolate sounds and then blend them together, he/she must have acquired alphabetic principles needed to correlate graphemes to phonemes (Conrad &
Levy, 2011, Ehri et. al., 2009). Natalie’s constant reliance on the alphabet chart shows she still needs time practicing grapheme-phoneme relationships; however, it is apparent Natalie has been exposed to phoneme segmentation through tapping sounds and is attempting to use this skill to decode new words. Natalie struggled on her pre-test and post-test due in large part to her low level of phonemic awareness.

All students in the experimental group showed growth from pre-test to post-test. From these results we can interpret that the three students in the experimental group acquired and benefited from explicit phonics instruction. I found these three students to use both rime analogies and phoneme segmentation to decode unknown words—though only the strategy of rime analogies was modeled and encouraged. Since all students had been exposed to direct phonics instruction within the classroom via Fundations, it can be assumed the students’ background in tapping out each sound in a word helped them acquire rime analogies. This is consistent with research that claims students who are taught phoneme segmentation before being exposed to larger sound-units results in higher accuracy of word reading, which is in part due to the students’ ability to transfer familiar phonemic sounds from a known word to unknown words (Daly et. al., 2004; Mesmer et. al., 2010).

**B. Control Group**

Both Sean and Ava in the control group used limited strategies for sound identification in the sound identification and decoding of the pre-test and post-test nonsense words. On the pre-test, Sean guessed at one word (hair/hake), gave the initial sound for another word (/g/ in the word ‘geat’), and replied, “no” or “I don’t know” when prompted to read the words on the list (Student artifact, February 28th, 2012). During lessons, Sean was often distracted and needed to be refocused. Because he was distracted easily, it was difficult for Sean to sit and listen
attentively to the stories (Field notes, March 5\textsuperscript{th}, 2012). During one lesson Sean identified all the words that had an initial /r/ without being prompted to do so (Field notes, February 29\textsuperscript{th}, 2012). During Sean’s post-test, he gave the initial sound of two words, though one was not correct (/j/ for /g/), and told me that ‘woat’ was a “weird word” (Student artifact, March 6\textsuperscript{th}, 2012). It is obvious from Sean’s interactions that he lacked the decoding skills needed to solve unknown words. Since Sean was part of the control group, he was not exposed to explicit phonics like the experimental group. Thus, it can be interpreted that his lack of decoding and focus was due in large part to lessons that were not structured around a systematic way of learning new words and appeared to have had no meaning to Sean. Sean’s inability to decode the unknown words supports research that states young readers need to be taught explicit ways to decode words since the implicit method of guessing to decode is a less than effective strategy (Holmes, 2009).

Ava made no attempt at orally identifying sounds on her pre-test. She appeared apprehension to talk and very nervous (Field notes, February 28\textsuperscript{th}, 2012). During lessons, Ava would ask questions about what the characters were doing or where they were (Field notes, March 2\textsuperscript{nd} and March 5\textsuperscript{th}, 2012). While I was reading the book Inside! Outside! You Decide! on the third day of lessons, Ava said, “These words are kind of the same, but they have different letters everywhere” (Field notes, March 2\textsuperscript{nd}, 2012). It appears this was Ava’s attempt at recognizing some of the words had a rhyming sound, or same rime analogy at the end. On Ava’s post-test, she read the word ‘pake’ correctly. Ava did not attempt to read any of the other nonsense words on the post-test. Ava did not say the initial sound in ‘pake’ or try to tap it out, but rather read the whole word to me. I am not sure as to how she knew this word or how she solved it, since it appeared she used a strategy quietly in her head to decode (Field notes, March 6\textsuperscript{th}, 2012). Though Ava did show signs of some phoneme segmentation throughout the study, her
lack of explicit phonics during the study hindered her ability to show growth from pre-test to post-test. Advocates for explicit phonics instruction argue that teaching young readers to manipulate, segment, and blend sounds to make words in an essential step in the process of learning to read, especially for those-like Ava- who are below-average achieving students. (Christensen & Bowey, 2005; Cassidy & Smith, 2004; Connelly, Johnston, & Thompson, 2001, Daly et. al., 2004; Savage & Carless, 2004; Walton et. al., 2001).

Both Sean and Ava’s inability to decode new words is consistent with research that shows explicit phonics programs to be more beneficial than implicit phonics programs (de Graaff et. al., 2009; Christensen & Bowey, 2005). Research by Christensen and Bowey (2005), consistent with evidence from my research, found students who participated in the explicit phonics intervention group outperformed the students in the implicit phonics intervention group in reading words. Sean and Ava’s lessons were very much set up like an implicit phonics lesson, where the focus was on the text rather than on decoding.

Application of Rime Analogies in Real Words and Nonsense Words

A. Experimental Group

I did not see any application, or knowledge, of rime analogies within the pre-test results from Jack, Kadi and Natalie. By scoring a zero out of eight, it appeared all three students had no knowledge of the rime analogies in the nonsense words nor could they say the long vowel sound in any of the words before participation in this study. Therefore, application was not seen until lessons and the pro-test.

Jack was able to apply the new rime analogy of each lesson to make new words. This was seen through songs he would make up and shared, or ‘alien words’ he would make up that
contained the rime analogy (Field notes, March 1\textsuperscript{st}, March 2\textsuperscript{nd}, and March 4\textsuperscript{th}, 2012). An example of this occurred on March 1\textsuperscript{st} when Jack’s group was explicitly taught the /-eat/ rime analogy. Jack began singing, “I like to eat, eat, eat, apples and bananas!” Jack then started singing, “eat in the street because my new candy is sweet and sticky on Miss Carnevale’s seat!” It appears from this example that Jack can listen for rimes, and think of words he already knows that have the same rime analogy, which can be viewed as a mark of application. Parallel to research on rime analogies, Jack showed he could acquire a new explicitly taught phonics skill and apply it to new words in new situations (Connelly et. al., 2001; Conrad & Levy, 2011; Holmes, 2009). Jack scored a seven out of eight on his post-test (Student artifact, March 6\textsuperscript{th}, 2012). From Jack’s scores on his pre-test and post-test, we can see Jack picked up the four rime analogies he learned over the course of the study, and was able to recognize and apply this knowledge to new nonsense words as he showed considerable growth. Jack’s strong phonemic awareness skills played a major role in helping him successfully decode new words in this study. Ehri et. al. (2009) support this claim as they have found through their own research that once a student internalizes a rime analogy, they spend less time on decoding and the blending of new words can become an easier task.

Unlike Jack, Kadi had a difficult time remembering the rime analogies from previous lessons (Field notes, March 1\textsuperscript{st}, March 2\textsuperscript{nd}, March 5\textsuperscript{th}, 2012). During lessons, Kadi would read and repeat the words on the flashcards with me. I would then model how to point and say each sound in the word. This would appear to help Kadi fluently say each word; however, I did not see this carry on to the next day. An example of this occurred on March 2\textsuperscript{nd}, 2012 (Field notes). Kadi and her two group mates were reviewing flashcards from the previous two days of lessons, which focused on the /-ake/ and the
-/eat/ rime analogies. Kadi would attempt to tap out each sound in the word presented to her on a flashcard. This occurred with the words ‘fake’, ‘take’, ‘neat’, and ‘beat’ (Field notes, March 2nd, 2012). I often prompted Kadi during lessons to look for the rime analogy and underline it with her finger as a way to visually help her remember the rime analogy. Kadi benefited from the repetitiveness of lessons as students reviewed previous rime analogies and practiced each rime analogy using flashcards, listening to books, and playing a game (Field notes, March 6th, 2012). Kadi’s success from repetitive lessons is parallel with research on rime analogies that argues the more exposure a student has the more he/she is to understanding and noticing a rime analogy in new words or nonsense words (Guokoetxea, 2005; Walton et. al., 2001). Kadi scored a six out of eight on her post-test (Student artifact, March 6th, 2012). Kadi used her finger to underline the rime in four of the words she read correctly (Field notes, March 6th, 2012; Student artifact, March 6th, 2012). For one word, ‘leat’, Kadi tapped the beginning /l/ sound then said the whole word correctly. When reading the word ‘fide’, Kadi quickly read the whole word without tapping any sounds or underlining the rime analogy. Kadi read the word ‘woat’ as ‘won’t’, changing the nonsense word to a word more familiar in her schema. Similarly, Kadi read the word ‘noat’ as ‘not now’ (Student artifact, March 6th, 2012). Kadi made significant growth from pre-test to post-test (Student artifact, February 28th, 2012 and March 6th, 2012). Kadi, and average-achieving student in her 1st grade classroom, needed lots of repetition with rime analogies to be able to internalize them and show she can independently recognize and verbally produce their sounds in new words. During lessons, Kadi did show she was able to recognize and verbally produce the sounds of the rime analogies, though she could not always internalize the skill and store the rime analogies in her memory for use the next day.
Natalie showed the smallest amount of growth in the experimental group (Field notes, March 6\(^{th}\), 2012). During lessons, Natalie showed many inconsistencies. Sometimes Natalie could correctly say and slide her finger under a given rime analogy once modeled to her. An example of this occurred on March 1\(^{st}\) and on March 2\(^{nd}\) of 2012 (Field notes, 2012). On these days, Natalie would correctly repeat the words on the flashcards once modeled for her. When I would mix the cards up, she was unable to read the words or would make words up, showing she was only memorizing the words and not using the rime analogies to help her decode (Field notes, March 2\(^{nd}\), 2012). When engaging in the game, Natalie would often say the sound of a letter incorrect (Field notes, March 5\(^{th}\), 2012). I would prompt her to find the letter on the alphabet and recite its sound using the picture clue attached to the alphabet hanging on a wall nearby. From this evidence on Natalie’s alphabetic skills, we can interpret she still needs time to practice rapid phoneme-grapheme calling before she can move on to more sophisticated phonics skills. Cassady and Smith (2004) argue that a student must have already acquired the alphabetic principles needed to correlate graphemes to phonemes before he/she can begin to segment sounds in words. Even though Natalie had a difficult time recognizing and reading the rime analogies on the flashcards and in the game, she was able to recognize the rime analogies within the books I read to her group (Field notes, March 1\(^{nd}\), 2012). An example of this occurred on March 1\(^{st}\), 2012. After reading the book *Dance! Dance to the Rhythm of the Beat!* By Cherry Carl, Natalie was able to identify five words that contained the /-eat/ rime (Field notes, March 1\(^{st}\), 2012). It appeared Natalie needed and benefited from the repetitiveness of the lessons. Natalie scored a four out of eight on her post-test (Student artifact, March 6\(^{th}\), 2012). Natalie used an interesting strategy when solving all four of these words. Natalie would say the initial sound in the word and then say the rime analogy as she slid her finger down her forearm. This
was a strategy I did not teach Natalie during this study. It appears she may have learned this somewhere else, possibility Reading Recovery, or slid the rime down her arm instead of sliding it under the words on the post-test paper (Field notes, March 6th, 2012). It is clear from this data that Natalie’s lack of grapheme-phoneme identification along with her weak phonemic awareness skills hindered her ability to perform successfully in this study. Natalie, a low-achieving student in her 1st grade classroom, appears to need much guided practice with new phonics skills before she can internalize the skill and use it independently within new words. The picture of Natalie this data paints is parallel to research that claims a student must have a strong alphabetic principles foundation before they can begin to segment, blend, or chunk sounds within words (Holmes, 2009).

All students in the experimental group showed growth from pre-test to post-test. Jack and Kadi’s direct instruction and repetitive practice surrounding rime analogies increased their ability to decode the nonsense words. Natalie, the weakest reader of the three, was able to make small gains in decoding unknown words. Contrary to my data on Natalie, Hines (2009) found low-achieving students to benefit from direct, explicit instruction focused on the rime method.

B. Control Group

Both Sean and Ava, being part of the control group, were not explicitly exposed to the rime analogies. Both students listened to stories containing the rimes analogies, but the rime analogies were never pointed out or discussed. Therefore, it can be assumed Sean and Ava’s growth over the study would be minimal. The scores from both Sean and Ava’s pre-tests and post-tests back this claim (Student artifacts, March 6th, 2012).
During lessons, Sean had a difficult time focusing on the task at hand (Field notes, March 1st, March 2nd, and March 6th, 2012). Sean often needed many prompts to focus and participate in the group’s book talk each lesson. During one lesson, Sean identified words he heard in the book that all had an initial \(/r/\) sound (Field notes, March 2nd, 2012). Sean could identify story and book elements and explain them orally (Field notes, March 5th, 2012). On his post-test, Sean scored a zero out of eight (Student artifact, March 6th, 2012). Sean made an attempt at two of the eight nonsense words on the post-test. For the word ‘hake’ Sean said ‘hair’, and for the word ‘geat’, Sean attempted the initial \(/g/\) sound (Student artifact, March 6th, 2012). Sean, an average-achieving student in his 1st grade classroom who has a solid phonemic awareness foundation, was unable to pick up on the rime analogies within the books read to him during lessons. This is parallel with research that suggests explicit phonics is needed for beginning readers to learn to segment and blend sounds (Christensen & Bowey, 2005; Cassidy & Smith, 2004; Connelly, Johnston, & Thompson, 2001; Daly, Chafouleas, Persampieri, bonfiglio, & LaFleur, 2004; Holmes 2009; McKay & Thompson, 2009; Savage & Carless, 2004; de Graff et. al, 2009; Walton et. al., 2001; Walton & Walton, 2002).

Ava appeared to be nervous throughout the lessons (Field notes, March 5th, 2012). During lessons, Ava would ask questions about what the characters were doing or where they were. Similar to Sean, Ava would engage in group discussions on story elements found in the book I read in each lesson (Field notes, March 2nd and March 5th, 2012). Sean nor Ava orally told me they heard rhyming words in the books. However, on March 2nd, 2012 Ava made a slight attempt at this. While I was reading the book Inside! Outside! You Decide! by Cherry Carl, Ava said, “These words are kind of the same, but they have different letters everywhere” (Field notes, 2012). Ava’s comment on the words was the only comment Sean or Ava made during the
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lessons that involved the words within the books. Ava scored a one out of eight on her post-test (Student artifact, March 6th, 2012). Ava correctly read the word ‘pake’ on her post-test. I was not sure how Ava knew this word or how she attempted to solve this word since it appeared any decoding took place in her head (Field notes, March 6th, 2012). It appears, from Ava’s post-test, that she did not show understanding or application of rime analogies since she was unable to read the nonsense words on the post-test, with the exception of the word ‘pake’. It can be assumed that Ava’s lack of instruction with rime analogies, compared to the experimental group, hindered her growth from pre-test to post-test. Ava, a low-achieving student in her 1st grade classroom, showed she had solid phoneme-grapheme skills and practice with phonemic awareness. Ava’s statement that some of the words in the book were ‘kind of the same’ shows her developing ability to hear rime analogies and segment the rime analogy in words. Similar to Natalie, Ava needs a strong phonemic awareness foundation before she can begin to manipulate sounds within words.

Both Sean and Ava’s small growth during the study was in large part due to the implicit phonics-modeled lessons they engaged in. Much research has found students who participate in implicit phonics programs show poor reading, spelling, and comprehension skills overall compared to students who participate in explicit phonics programs (de Graaff et. al., 2009; Christensen & Bowey, 2005; Kotaman et. al., 2002; Thompson et. al., 2009).

Learning Behaviors and Their Effects on Student Growth

All students exhibited learning behaviors that either facilitated or hindered their performance and participation on the pre-test, post-test and during group lessons. This data was collected through field notes I had taken while working with both the experimental group and the
control group, as well as reflection notes I added each night to my field notes. Focusing on the teacher, following directions, and attempting new sounds all seemed to be behaviors that increased student growth from pre-test to post-test in the experimental group (Field notes, March 6\textsuperscript{th}, 2012). However, this was not the case for the control group, due to the circumstances of the set-up of the study. No specific learning behaviors appeared to increase student growth from pre-test to post-test, as minimal growth was seen from the control group (Field notes, March 6\textsuperscript{th}, 2012; Student artifacts, March 6\textsuperscript{th}, 2012).

A. Experimental Group

Jack appeared happy and ready to participate each day during lessons (Field notes, March 5\textsuperscript{th}, 2012). I would use the word ‘focus’ as a signal ‘for eyes on teacher, mouths quiet, bodies still’. When I would say the word ‘focus’, Jack would stop what he was doing and put his eyes on me (Field notes, March 2\textsuperscript{nd} and March 5\textsuperscript{th}, 2012). Jack would raise his hand to be called on and would follow teacher directions (Field notes, March 1\textsuperscript{st}, 2012). Jack seemed to be listening attentively during instruction of new rime analogies, as he was able to independently read the flashcard words for the day after I had modeled them (Field notes, February 29\textsuperscript{th} – March 6\textsuperscript{th}, 2012). When I read a book during each lesson, Jack would keep his eyes on the pages, and appeared to be listening for rime analogies. Jack would raise his hand and orally tell the rime analogies he heard in each book (field notes, March 1\textsuperscript{st}-March 5\textsuperscript{th}, 2012). Jack enjoyed playing the game at the end of lessons and would often make up definitions for any ‘alien’ words he made (Field notes, March 2\textsuperscript{nd}, 2012). Jack’s ability to stay focused, participate, and orally engage in conversation surrounding rime analogies encouraged his growth from pre-test to post-test. He exhibited learning behaviors, such as raising hand and engaging in lessons, which allowed him to focus and acquire new skills during the study.
Kadi showed inconsistencies in her behavior (Field notes, March 1\textsuperscript{st}-March 6\textsuperscript{th}, 2012). Some days, Kadi would come to lessons with a smile on her face and ready to learn. However, other times she would be upset from a previous incident from the day and be moody and snappy with me. When Kadi was in a good mood, focused, and participated in group lessons, she appeared to grasp the rime analogy we were practicing (Field notes, March 5\textsuperscript{th}, 2012). However, when Kadi was upset and moody, this behavior seemed to effect her ability to listen during lessons. An example of this occurred on March 1\textsuperscript{st}, 2012 (Field notes). Kadi was upset because of an incident that had happened between her and another child in her 1\textsuperscript{st} grade classroom. When we began the lesson for the day, which revolved around the /-ake/ rime analogy, Kadi was unable to read the flashcard words we practiced independently and was tapping each sound out inside of chunking the rime at the end (Field notes, March 1\textsuperscript{st}, 2012). When prompted to look for the rime analogy, Kadi said, “But you say it’s okay when we do this in reading table?”, and refused to underline the rime analogy in each word as asked (Field notes, March 1\textsuperscript{st}, 2012). Kadi was one of two students from this study who completed a questionnaire on her experiences during my research. According to Kadi’s responses, it appears she did not enjoy participating in my study (Student artifact, March 6\textsuperscript{th}, 2012). Kadi answered the question “What did you like about group lessons?” with the response, “nuhding because I do not like it” (student artifact, March 6\textsuperscript{th}, 2012). When responding to the question, “Which part of each lesson was fun for you?”, Kadi replied, “Sumtims I liked the game but I liked best wen I got to pish my char in at the end” (student artifact, March 6\textsuperscript{th}, 2012). It appears from this response that Kadi did not enjoy the set-up of each lesson, but she did enjoy playing the game at the end of each lesson. It also appears from her response that she enjoyed leaving the table at the end of the lesson, as she discussed pushing her chair in which was a rule at the end of each lesson. However, it appears Kadi’s lack
of motivation and enthusiasm in the study did not effect her growth from pre-test to post-test (Student artifact, February 28th, 2012; Student artifact, March 6th, 2012). From Kadi’s behavior throughout the study, it was apparent to me that she lacked engagement because the lessons did not interest her. Though attitude was often poor, her academic results during the study showed she was still able to focus long enough to grasp new concepts.

Throughout her participation in the study, Natalie seemed to lack confidence in herself and was hesitant to participate (field notes, March 2nd, 2012; field notes, March 5th, 2012). Natalie would not take risks and try to read the new words on her own. I would often model the words twice for her and use her finger to underline the rime analogy in each word. Even after this modeling, Natalie would often refuse to say the words orally (field notes, March 1st- March 6th, 2012). During the part of the lesson where I would read a book, Natalie would appear to be listening attentively to the story (field notes, March 2nd, 2012). Through my active observations, I noticed Natalie would have her eyes on the book and laugh at silly parts in the story. She appeared, however, to have been listening for pleasure, instead of listening to find rime analogies. On the last day of lessons, Natalie chose not to participate orally at all during our 20 minutes group lesson (field notes, March 5th, 2012). When I administered the post-test to Natalie on March 6th, 2012, she again appeared to lack confidence in her abilities to solve words and hesitant to give me an oral response (field notes; active observations, March 6th, 2012). I interpreted Natalie’s lack of verbal engagement and low growth throughout the study to be caused by her weak phonological skills and limited practiced with such skills in order to help her decode, therefore making her feel uncomfortable trying something new. If Natalie would have been more active during lessons, I feel she may have gained more confidence in her grapheme-phoneme relationships since that skill was deterring her from learning rime analogies.
A. Control Group

Sean had a difficult time staying focused during each lesson (field notes, February 29th – March 5th, 2012). I would often find him staring at the wall, or fidgeting with his hands under the table (active observations, 2012; field notes, March 5th, 2012). I had to redirect Sean often and remind him to listen carefully to the story. Sometimes, Sean was able to answer questions about story elements from the books we read (field notes, March 2nd, 2012). Often times, however, I would have to repeat the question or have him remember the question and listen for the answer the second time I read the book aloud. It appears that Sean’s inability to stay focused hindered his ability to listen to my directions and answer questions pertaining to the books we read. Sean’s minimal growth from pre-test to post-test could be based on the fact he was not in the experimental group that explicitly learned the rime analogies. However, when I was administering the post-test to Sean, he seemed very antsy and I had to redirect him and point to each word many times for him to give me an answer. As his classroom teacher, I know Sean is able to recognize and orally say all sounds of the alphabet, but I saw him make minimal attempts at the initial, medial, and final sounds in the nonsense words on the pre-test and post-test (field notes, March 6th, 2012). Sean, like Kadi, completed a student questionnaire at the end of the study. Sean’s answers appear to reflect his inability to have stayed focus during lessons. Sean’s response to the question, “Which part of each lesson was fun for you?” was, “I likd larneg abowt how to dans in a bot” (“I liked learning how to dance in a boat”) (student artifact, March 6th, 2012). From this response, it appears Sean was remembering two ideas from two different books I read aloud and putting them together. Sean’s response to the question, “Which part of each lesson was hard for you?” was, “putting on my atentscop and wtcheg wtcheg wtcheg the book for a vere long tim!” (“Putting on my attent-o-scope and watching, watching, watching the book
for a very long time!”) (Student artifact, March 6th, 2012). From this response that Sean gave I interpreted that he was aware that his inability to focus on and listen to the teacher and the books being read affected how he was learning. Sean would have benefited from more engaging lessons, or lessons that were shorter than 20 minutes (active observations, 2012).

Ava appeared hesitant to participate during the first two days of lessons, but after that she took on the role of a more active participant in her learning (field notes, February 29th, 2012 and March 5th, 2012). During lessons, Ava would keep her eyes on me while I was giving directions and keep her eyes on the book while I was reading aloud (field notes, March 1st-March 5th, 2012). Ava was raise her hand to answer a question, though her answers were not always on target. During one lesson, when I asked Sean and Ava, “Tell me one thing you saw or heard the boy do in the book”, Ava replied with the title of the book (field notes March 5th, 2012). Oftentimes, Ava would make comments or connections that were not relevant or did not make sense. During one lesson, Ava told me, “That the boy kept going inside and outside his house because it was hot and I do that in the summer” (field notes, March 2nd, 2012). Ava was referring to the title of a book we read, and about the storyline where a child keeps going inside and outside a box and other objects. Her response seems to make sense; however, the child in the story was not going outside and inside of a house, nor did the pictures in the book portray this.

While I was reading a book aloud one day Ava said, “These words are kind of the same, but they have different letters everywhere” (field notes, March 2nd, 2012). It appeared to me that this response was a glimpse into Ava recognizing the rhyming words, or rime analogies, in the book.

While I read a book each lesson to Sean and Ava, Ava would often ask me to put the book down on the table so she could follow along with her eyes (field notes, March 2nd and March 5th, 2012). One day, Ava actually pointed at each word and tried to read along with me (field notes, March
On Ava’s post-test, she read one word correctly, ‘pake’ (student artifact, March 6th, 2012). Parallel to Sean’s situation, it can be assumed Ava made minimal progress from pre-test to post-test due to her lack of exposure and experience with the rime analogies. Ava’s engagement in the lessons and read-alouds may have helped her solve the word ‘pake’ on her post-test, as she may have recognized sounds from the book we read that included the /-ake/ rime analogy. Overall, Ava’s engagement in the lessons did not produce growth from pre-test to post-test. I interpret Ava’s small growth as not being a product of inability to focus and engage during a lesson, but rather her lack of exposure of phonics skills needed to show growth.

Based on all data collected on the five participants in this study, it appears explicitly teaching rime analogies to beginning readers has a positive affect. The students in the experimental group, who were exposed to four rime analogies over the course of four days, made the most progress from pre-test to post-test compared to the students in the control group. Jack and Kadi, both average to above-average students, made the most growth. Jack and Kadi’s growth was probably due to the strong phonics skills they acquired before participating in this study. Sean’s data, however, shows that even average-achieving students with a foundation of phonological awareness need explicit phonics instruction to acquire rime analogies in real words and nonsense words. Each student’s individual ability to identify sounds within words as well as their learning behaviors during lessons seemed to have a small factor in student growth. Kadi, who found the study’s lessons to be lackluster, exhibited a poor attitude during the study but did end up showing growth from pre-test to post-test. Contrary to this, Natalie, who showed little confidence in herself while decoding, did not make large gains but not solely due to her behaviors but also to the fact she lacked sound grapheme-phoneme/phonological awareness skills needed to segment and blend sounds within words. The control group, consisting of Sean
and Ava, backs a claim held by much research done on phonics instruction that students who are taught using an explicit phonics model show more progress in phonemic awareness skills, spelling skills, and reading than children taught using an implicit phonics model only (de Graaff et. al., 2009; Christensen & Bowey, 2005; Connelly et. al., 2001; Holmes, 2009).

**Implications and Conclusion**

This action research was conducted to determine how the use of rime analogies, as a part of explicit phonics instruction, can help beginning readers recognize new words. I found that a students’ prior experiences with phonics, as well as their achievement level within the classroom, played a large role in how much growth a student made during this study. Research on explicit phonics argues students need lots of practice and repetition when learning new skills; therefore, during lessons within the experimental group, I ensured multiple ways of practicing rime analogies as well as daily review of previous lessons. Through my research I have found students who participated in explicit phonics instruction (experimental group) to show more growth in decoding unknown words than students who participated in implicit phonics instruction (control group). Moreover, I have found the practice of rime analogies during phonics instruction to significantly increase beginning readers’ ability to decode nonsense words.

The research on phonics instruction and rime analogies found in my literature review, along with the research I conducted in this study, show the importance of explicitly teaching beginning readers’ phonics skills. In addition, my literature review and my own findings indicate that teaching beginning readers rime analogies helps students’ word recognition skills by explicitly teaching them large sound-units found within words. There exists a large body of research that indicates children who experience reading difficulty early on continue to fall behind
as their schooling progresses (Holmes, 2009; Hines, 2009; Ouellette & Beers, 2010; Walton et. al., 2001). This research, which parallels my own research, shows the significance of exposing all beginning readers to explicit phonics instruction. In addition to this, research found in my literature review along with my own findings suggests the teaching of rime analogies to beginning readers in order to help decode unknown words.

It is an important first step for any beginning reader to have a solid foundation in grapheme-phoneme relationships and be able to rapidly name letter/sounds out of sequence. This is the basis for all reading skills. Once a child has this foundation, they are able to acquire more phonological skills within words such as segmenting and blending sounds. I have found this to be true within the data collected in this study. The participant’s in the experimental group who made the most growth has strong phonological awareness already in place before participating in my research. In my own study, I found students to use a number of sound identification strategies (tapping, chunking, sliding finger under sounds). Students need time develop phonics skills, and this must be done explicitly. There is no ‘right’ way to teaching phonics- the teacher must understand his/her students and find what works best for the students’ needs.

Providing students with opportunities to manipulate sounds and see how they can create new words allows students to practice phonics skills and explore sounds. The use of rime analogies during phonics instruction is a beneficial practice as most beginning readers find breaking a word apart by onset-rime easier than segmenting each sound, especially if they do not have a solid grapheme-phoneme basis. With rime analogies, teachers can expose students to a multitude of new words which can then carry over into their reading skills and help acquire rapid word recognition. This in turn helps students decode new words quickly so they can spend more time on understanding the text they are reading. There are multiple ways a teacher can expose
students to rime analogies. A teacher can teach ‘word families’ as a way of introducing rimes and the how to manipulate and segment words with the same ending sounds. In addition, teachers can create games that allow students to make real words and nonsense words based on a given rime analogy. As a whole group lesson, teachers can read books with rhyming words so students can begin to listen for rimes and connect these sounds to written words.

Making phonics lessons engaging and hands-on can create a fun learning atmosphere for students. As mentioned above, creating multiple ways for students to manipulate letters and sounds allows for students to explore the ways sounds work within words. Rime analogy study can easily be made into games and activities students can engage in with a partner or small group for practice. Explicit phonics is a crucial piece in developing young readers into successful readers, and the more practice and engaging lesson are, the more likely students are to acquire these skills. Teachers can involve parents by sharing knowledge on the importance of explicit phonics. At home, parents can support their child by reading rhyming books such as Dr. Seuss to train students’ ears to rime analogies. In addition, this allows students to hear and visually see the words to make sound and word connections.

When students struggle with early reading skills, it is imperative that teachers put into practice the best methods to help students develop phonological awareness skills. Research shows that explicit phonics is a successful way to teach students these phonological awareness skills. Students need to be exposed to multiple ways of decoding so that when they begin to read they can take less time to decode and focus more on gaining meaning from text. There is lots of research that exists that supports teachers incorporating rime analogies into phonics lessons as a way of teaching students large sound-units and how these sound units can be used to make multiple words.
As a teacher of beginning readers myself, I see how much rime analogies can support young readers’ recognition of new words. The downfall I see is finding the time to explicitly teach a skill if it not already part of the school’s curriculum. Students need lots of time and repetition in order to gain rime analogies, or any phonics skill, and that can be hard for teachers to fit into their daily schedules and current curriculum.

**Conclusion**

The purpose of this action research was to examine how the use of rime analogies, as a part of explicit phonics instruction, can help beginning readers recognize new words. Through research from my literature review, my own research I conducted, and the lens of socio-cultural theory, I have been able to determine how the teaching of rime analogies helps students decode new words. The use of an experimental group and control group allowed me to see growth and compare results from participants in both groups. Explicit instruction with lots of practice and repetition allowed the students in the experimental group to show the most growth overall in this study. I also found the students who had a solid phonological awareness basis coming in to this study to make considerable growth compared to participants who lacked a basis of phonological awareness. Overall, all participants’ learning behaviors, whether positive or negative, did not have a large effect on their ability to learn and acquire a new phonics skill.

Ultimately though, there were limitations to my study. My biggest restriction was the lack of time I was able to spend on working with my participants and collecting data. Unfortunately, this study was completed in six-days. If I would have been able to study the students over a whole school year, I feel the growth each student could make would be significantly higher and their acquisition on the rime analogy skills would be stronger.
In addition, my study did not allow me to see if students could transfer their ability to decode new words containing rime analogies in isolation to in-context words. It would be an interesting next step to look at the participants’ ability to use rime analogies they acquired during this study to the reading of text.

My study also left me with questions in regards to phonics instruction. How does phonics instruction affect a student’s ability to spell unknown words? Through my study, I was able to see students visually connect a rime analogy from known words to unknown words. To solidify this statement, it would be interesting to dig deeper into my research by having students spell nonsense words that included phonics-taught skills. Another question that arises from my study is which explicit phonics method- phoneme segmentation or rime analogy study- has a greater affect on the prereading skills of low-achieving kindergarten and 1st grade students? In my own study, I used students who were above average, average, or below average achieving students. It would be beneficial for teachers of beginning readers to explore this topic and see which phonics method allows low achieving students to gain phonological awareness and build a solid foundation for reading.

Phonics is a crucial part of beginning to read and essential to literacy acquisition. For a student to be successful in reading, they must first understand letter/sound correlation and be able to segment and manipulate sounds within words. The inability to decode and quickly recognize words within text will ultimately set a child up for reading failure as they fall behind their peers in school. Educators must provide their students with explicit phonics instruction that allows them to explore sounds within words. Teaching rime analogies allows students to make visual and auditory connections from known words to unknown words- this in turn heightens students’ ability to decode new words.
References


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Appendix A- Pre-test/Post-test

Name_________________________  ___/8

Circle:
Pre-test  Post-test

hcke
geat
mide
ncoa
take
leat
tide
woat
Appendix B- Flashcards

fake  bake  heat  seat
take  cake  beat  neat
hide  side  boat  oat
ride  wide  coat  goat
Appendix C- Stories

Dance! Dance to the Rhythm of the Beat!

Written by Cherry Carl, 2006

Going to the Lake

Written by Cherry Carl
Row, Row, Row Your Boat

Written by Cherry Carl, 2006

Inside! Outside! You Decide!

An -ide family reader
Written by Cherry Carl
Appendix D- Game Example
Appendix E- Questionnaire

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Rime Analogy Research Study Questionnaire

Directions:

Read each question.
Write your answer.

1. What did you like about group lessons?
   
2. What did you not like about group lessons?
   
3. Which part of each lesson was fun for you?
   
4. Which part of each lesson was easy for you?
Carnevale 2012

5. Which part of each lesson was hard for you?


6. Did you learn anything new during our lessons?


