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The Study of Morphological Awareness for English Learners

Jane Beeninga
beeninga.janie@gmail.com

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The Study of Morphological Awareness for English Learners

A Project Presented to
The Graduate Faculty of
Minnesota State University Moorhead

By

Jane Beeninga

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Abstract

English Learner (EL) students in American schools are becoming increasingly common, but there does not seem to be enough support for these students. This is causing EL students to fall behind in content areas such as reading (Richards-Tutor et al., 2016). The purpose of this study was to investigate what barriers are keeping EL students from succeeding in reading. After identifying a need for vocabulary instruction, the researcher will be conducting a morphological awareness intervention to improve EL students' ability to figure out unknown words.

Morphological awareness is the understanding of a word's smaller units such as prefixes, suffixes, and roots. After conducting this action research, the researcher will be able to determine if a morphological awareness intervention improves the skill of solving unknown words while independently reading.

Key Words: English learners, morphological awareness, morphology, reading comprehension, morphemes, language

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CHAPTER 1

INTRODUCTION

Introduction

Overall student achievement in American schools is dependent on the reading achievement of English Learner (EL) students due to the growing number of this group of students (Ardasheva & Tretter, 2013). EL students are expected to learn content and language simultaneously. Without the right support, EL students have been academically falling behind, specifically in reading comprehension (Richards-Tutor et al., 2016). The reading comprehension, or ability to understand text, of EL students is an ongoing problem that teachers are trying to solve (Zhang & Shulley, 2017). Teachers need to learn how to effectively teach this group of students, with the right training and supports, in order to improve EL student performance (Silverman et al., 2014).

Brief Literature Review

Researchers have begun to analyze best practices in supporting EL students in reading comprehension. One teaching model called Sheltered Instruction Observation Protocol (SIOP) has been known to be highly effective in supporting EL students. SIOP implementation involves incorporating both language and content instruction in a general education classroom (Short et al., 2012). Daniel and Conlin (2015) analyzed the effectiveness of SIOP and its relation to reading performance. They found that although SIOP improved EL students' oral language, it did not help their reading comprehension.

Other researchers began to investigate vocabulary as a potential barrier to reading comprehension for EL students. It is known that vocabulary knowledge is an important factor in a student's development of reading skills. EL students, generally, know less words and word

meanings than their English speaking classmates (Reed et al., 2016). Because language comprehension comes before reading comprehension, explicit instruction in vocabulary will give EL students a solid foundation for reading (Hui Jiang & Logan, 2016).

Through researching and observing vocabulary instruction and interventions, it was determined that although a focus on vocabulary was necessary, simply teaching key words and their definitions was not enough for a student's overall reading comprehension (Wood et al., 2018). Wood et al. (2018) made this conclusion when recognizing that incorporating morphology had a significant effect in understanding vocabulary words while reading. Morphology "refers to the word meaning-making process by decomposing morphologically complex words into morpheme constituents," such as roots, prefixes, and suffixes (Zhang & Shulley, 2017, p. 170). Other researchers, like Richards-Tutor et al. (2016), also determined that morphological analysis was more successful in helping EL students comprehend texts than vocabulary or comprehension strategies.

Statement of the Problem

This research focuses on barriers to EL students' reading comprehension and what is holding these students back from reading achievement. The National Center for Educational Statistics show that 7% of elementary English learners reach proficiency on reading assessments compared to 38% of English speaking elementary students (Richards-Tutor et al., 2016). The inability to understand or figure out unknown words may be the cause of this problem, as research shows that "gaps in academic language for students from linguistic minority backgrounds... may contribute to risk for poor academic achievement" (Townsend, 2012, p. 281). In order to improve the academic performance of EL students, specifically in reading comprehension, there must be a focus on academic language, or vocabulary knowledge.

Morphological awareness may be the best approach to improve vocabulary knowledge because it helps students truly understand the meaning of words and word parts (Davidson & O'Connor, 2019).

Purpose of the Study

The purpose of this study is to identify an intervention that will improve EL students' word learning skills, in order to support their reading comprehension. The researcher, an English Learner teacher for a Title I elementary school, started to notice that her EL students' reading comprehension scores were well below their native speaking peers. In the spring of 2021, 18% of the EL students at her school reached proficiency in reading according to the Minnesota Comprehensive Assessments (MCA) reading test. In order to better support EL students, the researcher began researching the root of this issue, as well as strategies she can implement to improve the reading comprehension of the EL students in her building. She learned that vocabulary knowledge is key to reading comprehension. In order for students to improve their understanding of unknown vocabulary words, morphological analysis must be taught and applied (Crosson et al., 2019).

Research Question

How does morphology instruction affect English learner students' ability to figure out unknown words?

Definition of Variables. The following are the variables of study:

Variable A (Independent Variable) – All study participants will receive morphology instruction in a small group setting from the Reading Excellence: Word Attack & Rate Development Strategies (REWARDS) Intervention (Archer et al., 2006). The teacher will prepare classroom activities involving grade level root words, prefixes, and suffixes.

Variable B (Dependent Variable) – Each participant’s knowledge and retention of root words, prefixes, and suffixes will be measured on a final test. Students will match word parts with their meanings as well as define words containing prefixes and suffixes.

Significance of the Study

This study is most important for EL students, who are expected to achieve at the same rate as native-English speaking students, despite being given little accommodations for their language needs. Implementing research-based support for EL students will help to eliminate barriers that previously stood in the way of performing well on state-mandated tests, which affects their eligibility to graduate (Short et al., 2012). If students are taught morphology, it will help them to independently solve unknown words when reading. Implementing strategies that will help students understand word meanings will not only help them in reading, but also other content areas as well.

Secondly, this study will inform teachers of ways to support their EL students, training that is currently lacking in American schools. Teacher development is needed since schools have found themselves “struggling to support the learning needs of this diverse group of students” (Ardasheva & Trotter, 2013, p. 324). It will also help teachers to understand why their EL students are underachieving and to better understand English language development.

Finally, researching the barriers that affect EL academic performance will inform theory, practice and policy around EL students (Ardasheva & Trotter, 2013, p. 323). Additionally, this research will be beneficial in understanding the connection between morphological awareness and text comprehension. For both educators and educational researchers, “understanding the mechanism behind morphological awareness as a source of difficulty in reading comprehension will enrich the understanding of word-to-text integration in reading comprehension processes”

(Zhang and Shulley, 2017, p. 170). If there is additional research that proves the effectiveness of morphology instruction, it will be beneficial for the entire education field.

Research Ethics

Permission and IRB Approval.

In order to conduct this study, the researcher will seek MSUM's Institutional Review Board (IRB) approval to ensure the ethical conduct of research involving human subjects (Mills and Gay, 2019). Likewise, authorization to conduct this study will be sought by the school district where the research will take place (See Appendix E and F).

Informed Consent.

Protection of human subjects participating in research will be assured. Participant minors will be informed of the purpose of this study via the Method of Assent (See Appendix A, B, and C) that the researcher will read to participants before beginning the study. Participants will be aware that this study is conducted as part of the researchers' Master Degree Program and that it will benefit her teaching practice. Informed consent means that the parents of participants have been fully informed of the purpose and procedures of the study (Rothstein & Johnson, 2014). Confidentiality will be protected through the use of pseudonyms (e.g., Student 1) without the utilization of any identifying information. The choice to participate or withdraw at any time will be outlined in both, verbally and in writing.

Limitations.

There needs to be more research behind morphological awareness and its link to text comprehension. Even though there is sufficient evidence that shows poor readers lack morphological awareness, "it is not fully understood why weakness in morphological awareness leads to poor text comprehension" (Zhang and Shulley, 2017, p. 170). It could be true that there

is not enough evidence that morphological awareness will increase comprehension for EL students. There also may be more factors that influence EL students' inability to fully comprehend text, even if they master morphological awareness. These factors include the timing of the study and students' current home environments. This study is being conducted during the COVID-19 pandemic. The study participants spent many of the past two years engaging in distance learning, which may have a negative impact on their reading comprehension. Due to the pandemic, their situations at home may be less stable than usual, which also may cause lower academic performance. Finally, the small sample size and lack of diversity among participants may be a limitation. Of the fifteen participants, all except four speak the same first language. This may show biased results for this specific group of EL students; whereas students of other languages may perform differently.

Conclusions

This chapter identifies potential reasons behind poor reading comprehension and academic performance of EL students. It acknowledges that EL students need more support in the classroom and that teachers do not yet have the knowledge or skills to adequately support these students. It is determined that vocabulary knowledge is crucial for EL students' text comprehension. Through researching interventions that support vocabulary knowledge, morphological instruction was found to be the most effective way to teach word learning strategies to EL students. This research will be beneficial for EL students, teachers of EL students, and the educational field, which is seeking more information about instructing EL students and connections between morphological awareness and text comprehension. The next chapter will elaborate on research conducted on poor reading comprehension of EL students.

CHAPTER 2

LITERATURE REVIEW

Introduction

English learner (EL) students are underperforming in reading comprehension compared to their native speaking peers (Babayiğit & Shapiro, 2020). Reading comprehension is the ability to understand text. Not enough teachers have been trained or are aware of evidence-based practices to support EL students (McIntyre et al., 2010). With little or no accommodations, these students are expected to reach proficiency on mandated and standardized tests (Short et al, 2012). According to McIntyre (2010), EL students in American schools are growing in numbers, and schools need to identify more effective ways in supporting these students.

This review focuses on reasons why comprehending texts is difficult for EL students, as well as interventions and supports to improve their reading comprehension. The research narrows in on gaps that affect EL students' ability to comprehend texts. These gaps include vocabulary knowledge and more specifically, morphological awareness.

The purpose of this research is to determine how to improve EL students' ability to figure out unknown words, known as morphological awareness. Morphological awareness is a crucial step in reading comprehension. This study's hope is that if students are taught to independently solve unknown words, it can aid in understanding what they are reading.

Classroom Supports

Not enough classroom teachers have the knowledge to adequately support their EL students. Scaffolds in the classroom must be helpful but teachers should be wary of giving too much support, therefore holding low expectations for their EL students. By finding a perfect

balance of support, students will be able to meaningfully participate in discussions and assignments.

Scaffolding

A researcher in a third grade classroom began to notice that many EL students were raising their hands eager to participate, only to say “I forgot” when called on. Sarah Capitelli (2016), the researcher, wanted to explore what is holding these students back from participating in a whole class setting, and if the classroom environment has anything to do with this lack of participation. By studying these third grade EL students in a six month intervention, Capitelli (2016) learned the use of “I forgot” was a “front,” meaning these students wanted to participate but did not have the support to successfully do so. Students saying “I forgot” were the lowest achievers in the class due to few opportunities to participate. The reason for this is lack of classroom support as well as difficulty comprehending.

Although it is important that teachers are aware of the scaffolds necessary for their EL students, there is such a thing as “over scaffolding,” or scaffolding in a way that does the learning for the student. This results in passive learning as opposed to active learning (Daniel et al., 2015). Sentence stems are a positive classroom support to encourage participation from EL students, but they must be written effectively. Claudia Rodriguez-Mojica and Allison Briceño (2018) studied how to create scaffolded sentence starters that would support learning without giving the students too much. By observing fourth grade EL students, Rodriguez-Mojica and Briceño (2018) identified that the best way to make a sentence starter is by modeling the type of language needed to be used to display learning of the content. This will allow EL students to show their understanding of the content objective and give them the confidence to use the language appropriate for this communication.

Scaffolding is important in supporting EL students in reading comprehension. Teachers must figure out how to scaffold without interfering with authentic engagement. Shannon Daniel (2015) studied how teachers over-scaffold vocabulary for reading comprehension, with the hope that teachers adjust their scaffolding techniques. After a three year project in elementary schools involving mini lessons, vocabulary instruction, and collaboration, Daniel (2015) described the best classroom scaffolds as open ended questions, paraphrasing and elaboration, and scaffolding authentically.

Sheltered Instruction Observation Protocol

A popular, evidence-based classroom support for EL students is the Sheltered Instruction Observation Protocol (SIOP). Within SIOP, language and content instruction are provided in a general education setting. There are eight components within the SIOP model, “Lesson Preparation, Building Background, Comprehensible Input, Strategies, Interaction, Practice and Application, Lesson Delivery, and Review and Assessment” (Short et al., 2012, p. 337).

Although there are many benefits to SIOP, findings have shown a lack of reading improvement as a result (Short et al., 2012). Using a quasi-experimental approach, Short et al. (2012) wanted to study the effectiveness of SIOP for sixth through twelfth grade EL students across two similar districts. The research showed that SIOP mainly focuses on productive skills, as opposed to the receptive skills necessary for reading comprehension.

Shannon Daniel and Luke Conlin (2015) noticed flaws in the SIOP model and wanted to study how to make the model more student-centered. The hope was to encourage more student thinking, as opposed to teacher talk, in order to improve comprehension. By studying a pre-service teacher, they had many suggestions as to how to better engage with student thinking. Teachers must ask for elaboration, revoice student thinking, and encourage students to build

upon each other's thinking. Teachers must also actively reflect on the lesson delivery and if students were making connections to key vocabulary, engaging with supplemental materials, and applying higher order thinking skills.

Questions have been raised about the connection between SIOP and literacy achievement. By studying three teachers in a midwestern elementary school, Ellen McIntyre (2010) noticed a lack of reading improvement from EL students. Conclusions of this finding show that in order to effectively support EL students in reading, teachers must go beyond core classroom support.

Vocabulary Instruction

It has been argued that vocabulary knowledge has much to do with reading performance. According to Selma Babayiğit and Laura Shapiro (2020), "there is an association between EL learners' weaknesses in vocabulary and grammar and their underperformance on...reading comprehension" (p. 79). Unfortunately, not enough attention is given to vocabulary in the reading classroom (Biemiller & Boote, 2006). Vocabulary instruction and extended interventions have been shown to improve EL students' reading comprehension.

Vocabulary's Effect on Reading Comprehension

Through a study on factors that affect EL students' reading achievement, it was discovered that a student's English proficiency was a high contributing factor (Ardasheva et al., 2013). EL students need strong L2 knowledge in order to comprehend texts. A large part of English proficiency is academic vocabulary, word use, and grammar knowledge.

Wood et al. (2021) studied the relationship between academic word use and reading comprehension for diverse learners. Research shows that knowledge in academic language predicts performance in reading achievement (Townsend et al., 2012). Many EL students only have access to academic vocabulary in a school setting. This is limited compared to native

speaking peers who may hear and use these words in other contexts. Through word recognition tasks, completing sentences with the appropriate word, syntactic knowledge, and reading comprehension tasks, EL students used academic words less frequently and had less variety in words used. This shows a significant need for vocabulary and academic language support for diverse learners.

Vocabulary Instruction

One way to support EL students' vocabulary development involves classroom discussion of key vocabulary. By studying two hundred seventy four students, Silverman et al. (2014) described strategies to talk about vocabulary while teaching reading. Providing definitions as well as teaching students how to understand new words have positive effects on vocabulary knowledge. Context clues, a common strategy for learning unfamiliar words, was found to be unsuccessful for EL students, as too much time is spent discussing the situation as opposed to discussing the word itself. Teaching inferences was another way to discuss and figure out new vocabulary words.

Academic vocabulary is more difficult for EL students to learn due to the abstract nature of many of these words (Sibold, 2011). Therefore, it is important to have explicit instruction about academic vocabulary. Sibold (2011) explored ways to expand EL students' vocabulary knowledge through direct instruction and other activities. Their direct instruction suggestions involve classroom supports such as word walls, realia, connecting to prior knowledge, visuals, context clues (despite other sources saying this strategy is ineffective), and the avoidance of the dictionary. Sibold (2011) emphasizes that repetition is key when teaching vocabulary. They also list engaging activities such as "Signal word of the day," academic vocabulary journals, graphic organizers, and quick writes.

There are many classroom activities that support EL students' vocabulary development, but August et al. (2018) wondered if extended instruction might be more beneficial than classroom embedment. By implementing an intervention for ten weeks with one hundred eighty seven EL students, it was discovered that although both extended and embedded instruction were beneficial for EL students' vocabulary development, EL students were advantaged more through extended instruction due to larger gains. This shows the need for extra practice or interventions in order to best gain vocabulary knowledge.

Vocabulary Interventions

There are existing interventions that support language in order to improve reading comprehension, although there are not many. One existing intervention was researched by Hui Jiang and Logan (2019). This intervention, called *Let's Know!* was aimed to improve students' vocabulary, monitoring, and text comprehension by explicitly teaching language skills. It was concluded that explicit instruction in vocabulary, grammar, inferencing, text structure knowledge, and self-monitoring, all features of language comprehension, are necessary for reading comprehension.

Another intervention that has been studied was an e-book with intensive vocabulary instruction. Wood et al. (2018) wanted to see the effects of vocabulary instruction in a digital format on EL students from low-socioeconomic backgrounds. By receiving e-book readings three times a week for ten to twelve weeks, two hundred eighty eight kindergarten and first grade Spanish-speaking students were given explicit instruction in words that occurred multiple times in the e-books. Students focused on four English words per book. Although researchers expected engagement to be high, they did not find any increase in definition skills.

The prediction that vocabulary interventions are the most effective continues to be contradicted. Through synthesizing past studies, such as case studies, qualitative research, descriptive studies, and quasi-experiments, Richards-Tutor et al. (2016) aimed to provide guidance on implementing vocabulary interventions. They tested their theory with eight EL students for ten to sixty minutes per session. Through their research, they found that the most beneficial intervention involved phonological awareness and phonics instruction, as opposed to explicit vocabulary strategies.

Morphology Instruction

Findings from the vocabulary interventions studied highlights the importance of understanding word parts as opposed to direct vocabulary instruction. Richards-Tutor et al. (2016) learned that since definition instruction was ineffective, morphology may be a more effective way to develop vocabulary. Silverman et al. (2014) stated “if students are taught to break down words into meaningful parts and analyze how these words are used, they may be able to learn new words and improve language proficiency” (p. 48).

Influence of Morphology on Reading Comprehension

The effect of morphology on reading comprehension became apparent to researching teams. In order to learn more about this, Zhang and Shulley (2017) assessed students in the areas of incidental word learning, vocabulary, morphological awareness, and memory. EO (English only) students showed more success in figuring out unknown words than EL students. EL students needed instruction in morphological problem solving skills, not vocabulary knowledge, to overcome this. EL students also often looked at words as a whole and lacked the skill of breaking words down to figure out the meaning. This explains the difficulty EL students have in comprehending vocabulary and text.

Reed et al. (2016) sought to figure out the relationship between vocabulary, spelling, and reading comprehension. With the knowledge that emphasizing morphemes within words helps retention of words and improves reading proficiency, and that there is a connection between poor reading and poor spelling, they took an analytic approach to test these correlations. Their research showed that print-based vocabulary knowledge was more effective than oral teaching. They also found an indirect relationship between spelling and reading comprehension, with morphology being the connecting factor.

Instruction and Interventions

Morphology is important because the ability to decipher a word's morphological units gives one the ability to learn meanings of unknown words (Bowers & Kirby, 2010; Crosson & McKeown, 2016; Crosson & Moore, 2017; Goodwin, 2016). Specifically, since roots often carry a lot of information about a word, a morphological breakdown of roots can contribute to learning vocabulary words. A study by Crosson et al. (2019) aimed to see the effects of learning latin roots and its effect on figuring out unfamiliar words. Eighty four EL students were placed in two groups: a vocabulary intervention with roots and a vocabulary intervention without roots. After ten weeks, they discovered that although latin roots did not make a difference in retention of the target academic words, it did help in breaking down and understanding unknown words.

Another morphology intervention that has been studied involves morphological awareness and semantic relationships. Filippini et al. (2012) wanted to determine if there was an effective intervention to teach students how to learn new words by making language explicit. Knowing that “when teachers highlight the smallest meaningful units of language structures (e.g., phonemes, graphemes, morphemes, and even semantic features), learners can make connections among words through various systems of language” (Filippini et al., 2012, p. 15).

They focused on vocabulary plus phonological awareness development intervention. By studying ninety seven first graders at a Title I school, sixty being EL, they analyzed results from vocabulary pulled from an expository read aloud passage. To understand these words, they were taught roots, inflectional endings and derivational suffixes. Students also had practice putting these word parts together. From this, they noted that “a supplementary, explicit, intensive early literacy intervention focused on vocabulary development, PA and decoding can effect change... As anticipated, students who received vocabulary-plus instruction outperformed those who did not on a measure of target word vocabulary” (Filippini et al., 2012, p. 22).

Lack of vocabulary knowledge is a contributing factor to poor reading comprehension. Teaching students to break down words into their word units is a way to increase vocabulary knowledge. Davidson and O’Connor (2019) knew this, and decided to study positives of morphological instruction for EL students to figure out unknown words. In an urban Title I school in Southern California, these researchers investigated nine fourth and fifth grade EL students with reading difficulties. They used a single-case design study. Findings showed that there is a functional relationship between vocabulary scores and the intervention, showing large benefits to using this method in the future.

Theoretical Framework

The basis of reading comprehension comes down to word knowledge. Students must know the correct meaning of words to understand the context of a passage. If students come across unknown words, similarly, they must understand the correct word part meanings to figure out the meaning of the whole word. The teacher, or the conductor of the study, has a job to lead students to the correct meaning of words. This can be supported by the positivism theory, which states there is one reality, or right answer, which lies “outside of a person” (Peca, 2000, p. 3).

Berger and Luckmann (1966) state that “the reality exists regardless of the person's desires and he is known as the object of knowledge by another person” (Peca, 2000, p. 3). No matter what a student believes a word means, the correct meaning must be told to the student. This reality can be taught, learned, and therefore measured.

Research Question

How does morphology instruction affect English learner students’ ability to figure out unknown words?

Conclusions

Contributions of this literature include ways to support English learner students inside and outside of the classroom with reading comprehension. It breaks down the root of the cause, understanding unknown vocabulary terms, and even gives suggestions about types of intervention to improve word solving skills. Unfortunately, there needs to be more studies to identify effective strategies and interventions. The literature available now is not sufficient to determine the best way to solve reading comprehension issues among EL students, but most researchers lead to morphological awareness.

Strengths of this literature include a universal concern for EL students’ reading comprehension, determining the appropriate time and age to start intervening with EL students, and an overall understanding of morphology instruction as a highly beneficial solution. Weaknesses include limited research on morphological awareness. According to Wood (2021), there is also not much research on academic vocabulary use. The education field would benefit from more information on academic language and morphological awareness as a solution to reading comprehension challenges. Next steps would include other supports in reading comprehension that would follow morphological awareness, such as identifying context clues

and other types of word work. The next chapter will discuss how morphological awareness will be introduced and instructed to English learners in order to work towards stronger reading comprehension.

CHAPTER 3

METHODS

Introduction

English learner (EL) students could be performing better in reading comprehension. Reading comprehension refers to the understanding of text. Teachers of these students need to acquire the skills and knowledge to effectively teach these students (Silverman, 2014). Vocabulary knowledge is the missing link to fully comprehending text. Due to their multilingual backgrounds, EL students generally have less vocabulary knowledge than English-only speakers (Reed et al., 2016). Limited vocabulary knowledge as well as lack of word-learning strategies poses a significant barrier to independent comprehension. This study focuses on a specific word-learning strategy called morphology instruction. Morphology instruction involves the teaching of word parts such as roots, prefixes, and suffixes. The goal is that applying morphology will give EL students the tools they need to independently figure out unknown words while reading, which will aid in their overall understanding of the text.

Research Question

How does morphology instruction affect English learner students' ability to figure out unknown words?

Research Design

This research follows a quantitative approach, specifically under the umbrella of experimental research. Experimental research is when the researcher manipulates all variables but one. The researcher has control over the independent variable in order to determine the outcome regarding the dependent variable (WSSU, n.d.). In this study, the researcher will manipulate the roots, prefixes, and suffixes chosen, how to instruct these word parts, the

activities and review conducted in order to learn and retain these word parts, as well as the final assessment. Since the researcher wants to see the effect of morphology instruction, the only variable the researcher will not manipulate is the actual retention of the word parts as well as the participants' application of morphology to unknown words.

The ontological stance is that there is one, single reality. Since part of English language instruction involves learning the correct English meanings to words and word parts, there can only be one correct meaning of word parts. If there are multiple meanings for a word part, the student will have to choose the correct meaning of the specific word based on its other word parts as well as the context of the sentence. This falls under pragmatism, as participants will have to problem solve to reach the correct answer.

The epistemological stance, involving the interactions between the knower and the known, relies on the teacher to student relationship. Students learn from someone who they trust and whom they have a relationship with. Teachers will get to know their students and their learning styles to determine the best way to instruct them. This also falls under pragmatism because the reality, or the correct meaning of words, can be achieved or learned through multiple approaches. The teacher will choose the best instructional activities based on their specific students' learning styles as well as the best researched approach.

The nature of value, or the axiological stance, falls on the EL teacher, who is the researcher. The researcher has seen firsthand how their students struggle to comprehend text and believes more needs to be done to support these students. Since the researcher's beliefs influence actions, it would make sense that they would take action to improve EL students' academic performance. This also falls under pragmatism due to conversations the researcher will have with

the participants about why they are learning morphology and why it is important for their academic success.

All three stances fall under pragmatism. The researcher, trying to solve the issue of reading comprehension among EL students, researched all potential barriers to this issue. Then, multiple interventions and means of instruction were analyzed, until they narrowed in on vocabulary instruction. After this research, it was determined that morphological instruction was the best solution of all.

Setting

This study will take place in a PK-5 elementary school in a midwestern suburb. The population of the city is sixty-one thousand and is known for its shopping areas, ski hills, and other recreational attractions. The elementary school is a part of a large district with eight thousand six hundred three students. The school has four hundred sixty-six students; ninety-four being EL students. The school's racial demographics consist of the following: 32.4% white, 47.8% Black or African American, 9.3% Hispanic/Latino, 7.9% Two or more races, 2.0% Asian or Asian/Pacific Islander, 0.4% Native American or Alaska Native, and 0.2% Native Hawaiian or other Pacific Islander (U.S. News, 2020). The school is a Title I school and 57% of families are considered economically disadvantaged. Two hundred eighty-four students receive free or reduced lunch.

Participants

Participants will be fifteen fourth and fifth grade EL students. All participants are at an English level of two, three, or four. WIDA English levels range from one to six, with proficiency being at a level four point five with levels of at least three point five in all four modalities: listening, speaking, reading, and writing, determined by the ACCESS (Accessing

Comprehension and Communication in English State-to-State) test. 60% of students are girls and 40% of students are boys. 73% of the students' native language is Somali. 0.06% of students have a native language of Cantonese. 0.13% of students have a native language of Spanish and 0.06% of the students' native language is Amharic.

Sampling. Criterion sampling was used to choose the participants. These students were chosen because they meet the criteria of being English learners as well as being at similar English levels. These are also the students that need more reading support in the classroom. Most of these students have mastered many English skills and are ready for specific reading interventions. The students meet in three separate groups with the teacher at different times in the day, two groups consisting of only fourth graders and the other consisting of only fifth graders.

Instrumentation

Students will receive instruction from Activities G-J in the Reading Excellence: Word Attack & Rate Development Strategies (REWARDS) Intervention (Archer et al., 2006). After all instruction has been concluded, students will take a final test that will consist of two parts. The first part will be a matching section where students will pair word parts with their correct meaning. This is to collect data on retention of word parts. The second part involves applying word part knowledge. Students will read a word consisting of word parts they know and write or orally state what they believe the meaning of the word is. The reason for this second section is to collect data on whether or not students are able to apply their word part knowledge to figuring out unknown words, which supports the research question, *How does morphology instruction affect English learner students' ability to figure out unknown words?*

Data Collection.

The teacher will have no part in this test. The teacher will distribute the test, explain directions, and grade the tests when they are completed. If the students choose to orally state their answers for Part Two, the teacher will write their answers.

Data Analysis.

In this quantitative study, the researcher will analyze data by taking the scores of the group and finding the mean and median values, as well as the range and mode of the scores. The researcher will find these values for both parts of the test. The researcher will compare these values from the pretest to the post test to see if there was significant growth.

Research Question and System Alignment.

Table 3.1 provides a description of the alignment between the Research Question and the methods used in this study to ensure all variables have been accounted for adequately.

Table 3.1.

Research Question Alignment

Research Question	Variables	Research Design	Instrument(s)	Technique	Source

How does morphology instruction affect English learner students' ability to figure out unknown words?	IV: Morphology Instruction DV: Ability to solve unknown words	Quantitative Experimental Pragmatism	IV: REWARDS Intervention, Activities G-J, Lessons 1-8, 10 Morphology Intervention Activities DV: Morphology post-test, all presented in the Appendix	Instruction: Introduction to root words, prefixes, and suffixes Games and activities Assessment: Part One: Matching section Part Two: Application	4th and 5th grade English Learner students Sample size: 15 students
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Procedures

The data collected consists of scores for Part One (prefixes and suffixes) and Part Two (application of words) of the final assessment. The data will be collected in the EL class at the elementary school. This assessment should take one class period of thirty minutes to complete. Students will take this assessment after six weeks of morphology instruction and practice. This instruction will consist of initial teaching of word parts, separated into prefixes and suffixes from the REWARDS Intervention, as well as the instruction of words consisting of these same morphemes. After initial instruction, students will work on activities to help their retention of the word parts. These activities will involve matching games, Jeopardy, “Trash Basketball” (students answer a review question on a piece of paper, and if they get it right, they get to throw their

paper in the trash for points), and “Face Off” (the teacher holds up a card with a prefix, suffix, definition, or word in front of two students, and whoever gives the correct answer first gets the point). The reason for using games is due to the SIOP feature of practice and application, which claims that games are the best way to engage EL students (Echevarría et al., 2017). They will also learn the process of figuring out unknown words, which involves “(1) read the word, (2) look for a prefix/suffix, (3) find the base word, and (4) say the meaning of the [prefix or] suffix first, then the base word” (Davidson & O’Connor, 2019, p. 400).

Ethical Considerations

Individual participants will not be named. They will be referred to as “fourth grade students” and “fifth grade students.” The elementary school or city will not be named, either, to further protect participants. Parents of participants have been informed of the study and have approved their child’s participation.

Conclusions

This chapter explains the methodology of this study involving morphology instruction to EL students. It lists the research question and research design. The chapter goes into depth about the participants and the setting that the study will be taking place. Finally, the researcher explains how the instruction will be conducted, what the assessment consists of, and how data will be collected and analyzed. The next chapter will include final results of the study.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

Description of Data

English Learner (EL) students are becoming more common in American public schools. Necessary training must take place in order to connect with and effectively teach these students (Short et al., 2012). Teachers feel that they have had insufficient training thus far and are seeking ways to support their EL students. Teachers at the researcher's school have been requesting more resources for their ELs. From implementing EL strategies in their literacy curriculum, to being trained in and implementing Sheltered Instruction Observation Protocol (SIOP), and introducing co-teaching, these teachers are still finding that their EL students are underperforming compared to English speakers.

Reading comprehension for EL students is a particular concern and is the purpose for this study. Research has narrowed in on an emphasis on vocabulary instruction, and more specifically, breaking down vocabulary words into their morpheme constituents (Silverman et al., 2014). From working with other teachers to find the best intervention, the researcher found and decided to use a fluency intervention called Reading Excellence: Word Attack & Rate Development Strategies (REWARDS) and adapted it with an intensive focus on prefixes, suffixes, and root words, specifically for EL students (Archer et al., 2006).

Data Collection

The study involved a pretest, six weeks of daily instruction, and a post test for three groups who met at different times in the day. The first group consisted of seven fourth grade students with English levels of three to four. The second group consisted of two fourth grade students with English levels of two to three, one of these students being a Special Education

(SPED) student. The third group consisted of six fifth grade students with English levels of three to four. The groups in this study are considered “developing” (level three) and “expanding” (level four), meaning they are past beginning levels and are at the correct levels to understand morphology. Each group received morphology instruction for thirty minutes per day for six weeks. Instruction was taken from the REWARDS Intervention, Lessons 1-8 and Lesson 10, Activities G-J (Archer et al., 2006). Activity G involves introducing prefixes/suffixes in words. Activity H includes a list of twenty one words with prefixes and suffixes previously learned. Students must circle prefixes and suffixes, as well as “loop” the syllables in each word. Lastly, students perform a ten second “Rapid Read.” Activity I includes three vocabulary words using the meanings of the prefixes or suffixes from the lesson. It also includes two special vocabulary words which include a prefix/suffix, but does not use the meaning of the prefix/suffix. This activity gives students an understanding of how prefixes and suffixes are used in the English language. Finally, Activity J is a spelling portion in which students need to break apart the word and spell each morpheme.

Between lessons, the researcher created review activities for further practice with the morphemes and words. Review activities included matching games, Jeopardy, “Trash Basketball,” and “Face Off.” Engagement is crucial for ELs, so these review days were very important for the recalling of morphemes and definitions. According to Echevarría et al. (2017), there are a few SIOP features that support this claim. First, Component 2: Lesson Preparation, Feature 6 says that meaningful activities are the best way to provide practice opportunities for ELs. EL students must be engaged in learning 90-100% of the time, according to Component 8: Lesson Delivery, Feature 25. The review activities provided plenty of engagement for students to review their learning. SIOP says that a comprehensive review is equally important for ELs,

supported by Component 9: Review and Assessment, Feature 27: A Comprehensive Review of Key Vocabulary. The researcher also included cumulative review days, in which students would review all prefixes/suffixes learned thus far. After about seven weeks of instruction and review, students in all groups took a post test consisting of the same questions as the pretest.

Results

Research Question: How does morphology instruction affect English Learner students' ability to figure out unknown words?

Table 1 represents the results of the first part of the test. The mean, median, range, and mode were calculated for both the pretest and the post test. Part One consisted of ten questions. Five questions asked students to match the prefix to the correct meaning. The remaining five questions asked students to match the suffix to the correct meaning. The average score for the pretest was 2.47 out of 10, and the average score increased on the post test to 6.67 out of 10. Similarly, the median for the pretest was 2 out of 10, and the average score on the post test was 6 out of 10. The range of scores for the pretest was 8, and the range remained unchanged after the post test, staying at 8. The highest score, the mode, of the pretest was a score of 8. The mode of the post test was 10 out of 10. Figure 1.1 shows a visual representation of the mean scores in the pretest and post test. Figure 1.2 shows the median scores for the pretest and post test. Figure 1.3 shows the range for both tests, and Figure 1.4 shows the modes.

Table 1*Part One: Matching Prefixes and Suffixes to their Definitions*

	Pretest (/10)	Post Test (/10)
Mean	2.47	6.67
Median	2	6
Range	8	8
Mode	8	10

Figure 1.1: Mean Scores

Part One: Matching

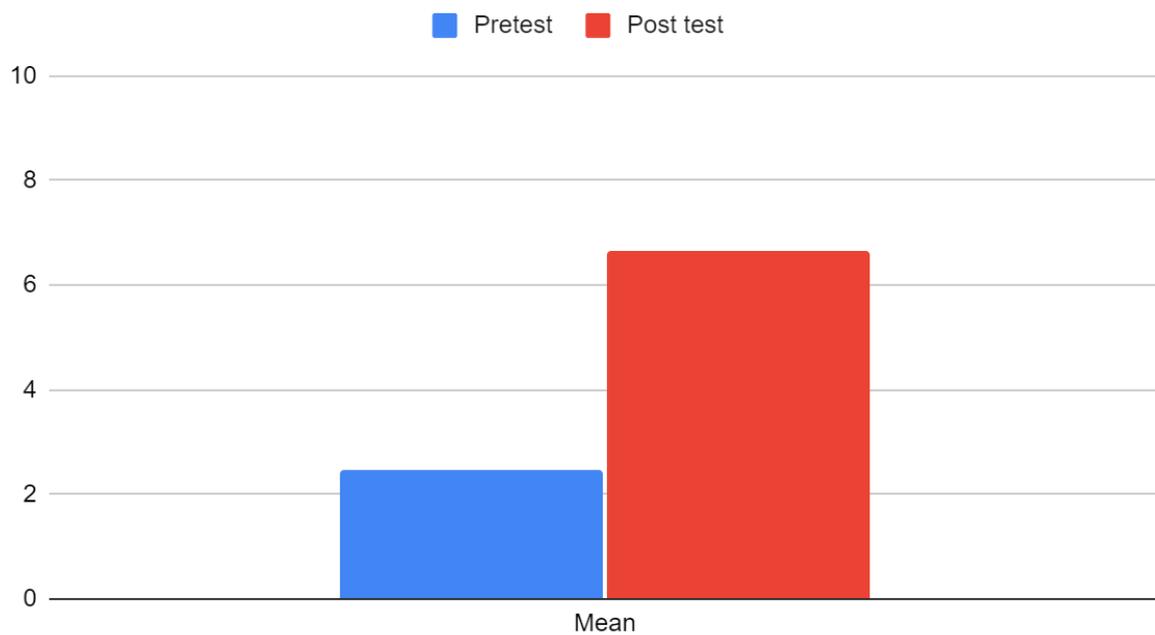
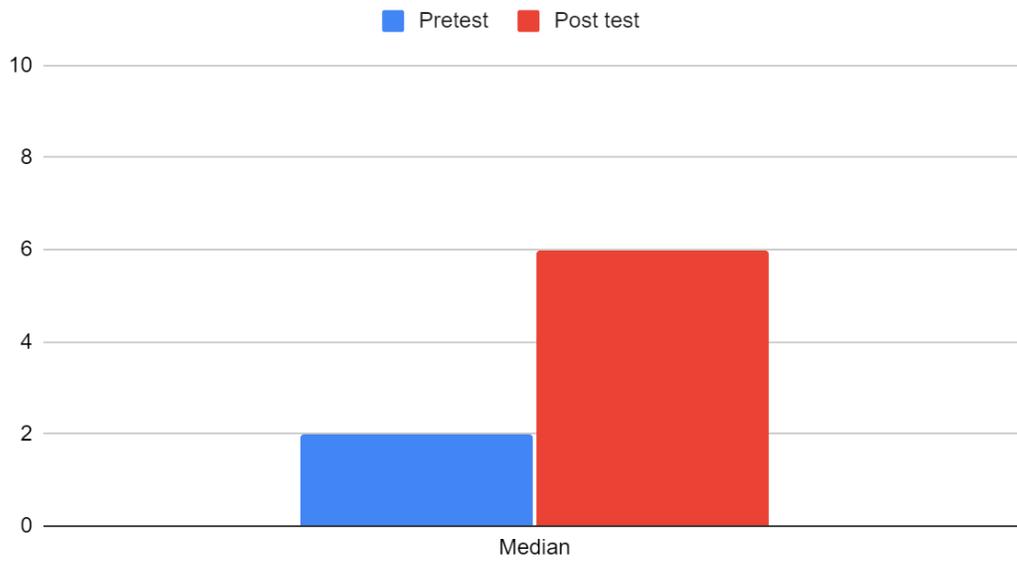


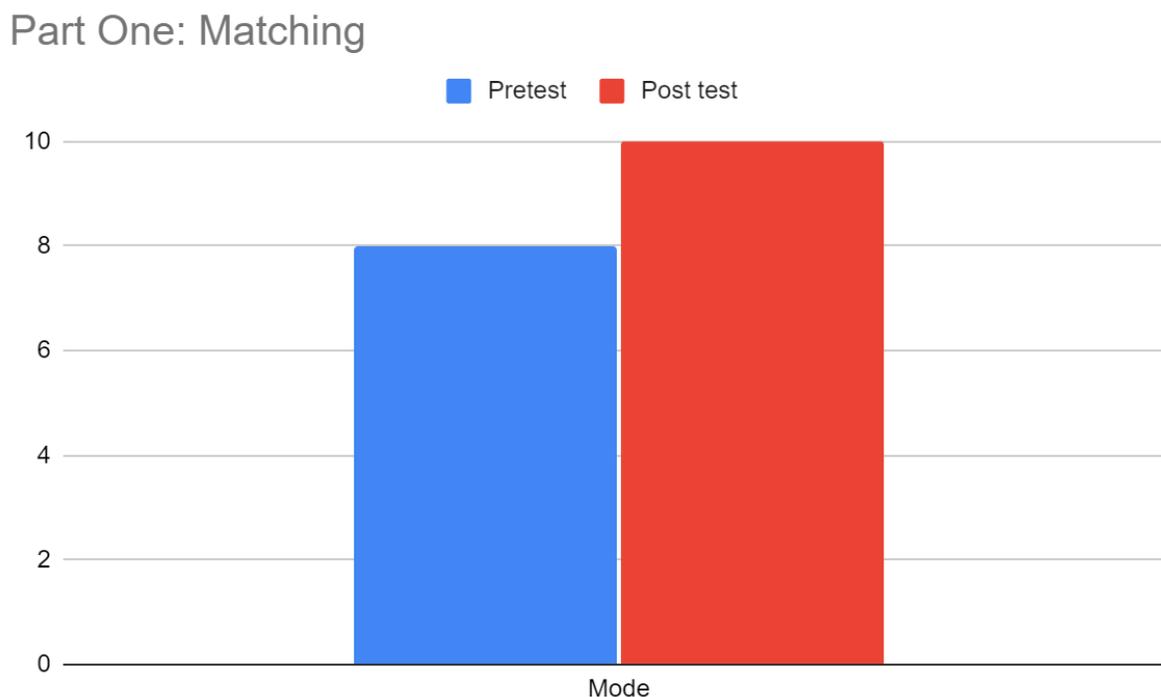
Figure 1.2: Median Scores

Part One: Matching

**Figure 1.3: Range**

Part One: Matching



Figure 1.4: Mode Scores

Below, Table 2 shows the results for Part Two of the test. In Part Two, students applied their knowledge of root words, prefixes, and suffixes to define a word. Students were given five words containing a prefix or suffix. Students were to define each word by recalling the meaning of the prefix/suffix with the root word. The average score on the pretest was 0.13 out of 5 and increased to 3.4 out of 5 on the post test. The median score on the pretest was 0, showing that most students were not able to provide the correct definition for any of the words listed. The median on the post test increased to 4, showing that it was common for students to recall most of the morphemes and apply it to the root word to provide the correct definition. The range increased from 1 on the pretest to 4 on the post test. This is because all students received a score of 0 or 1 on the pre test, and their scores ranged from a mode of 5 and a minimum score of 1 on the post test. The mode on the pre test for Part Two was 1. Figure 2.1 shows a visual of the mean

scores for the pretest and post test. Figure 2.2 shows the median scores. Figure 2.3 shows the range and Figure 2.4 shows the mode scores.

Table 2

Part Two: Application

	Pre Test (/5)	Post Test (/5)
Mean	0.13	3.4
Median	0	4
Range	1	4
Mode	1	5

Table 2.1: Mean Scores

Part Two: Application

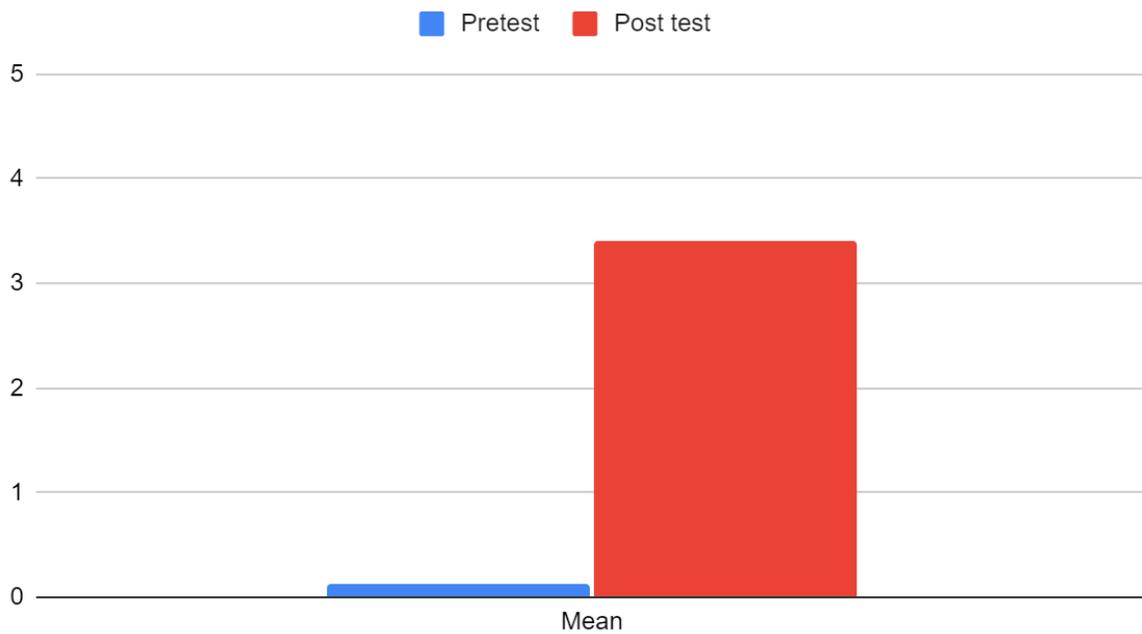
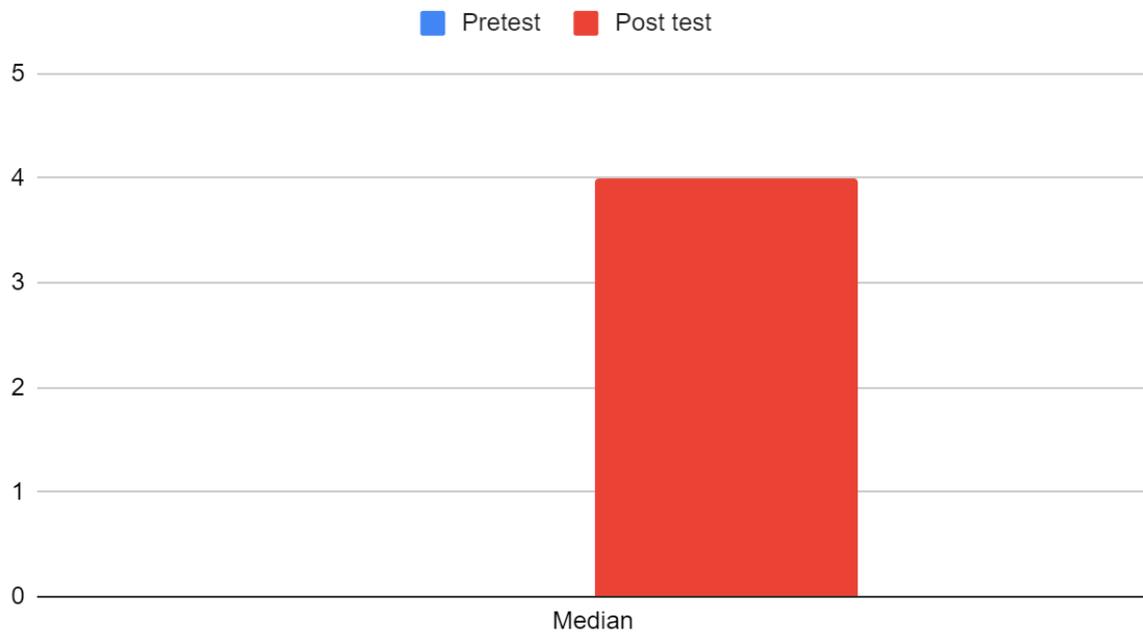


Table 2.2: Median Scores

Part Two: Application

**Table 2.3: Range**

Part Two: Application

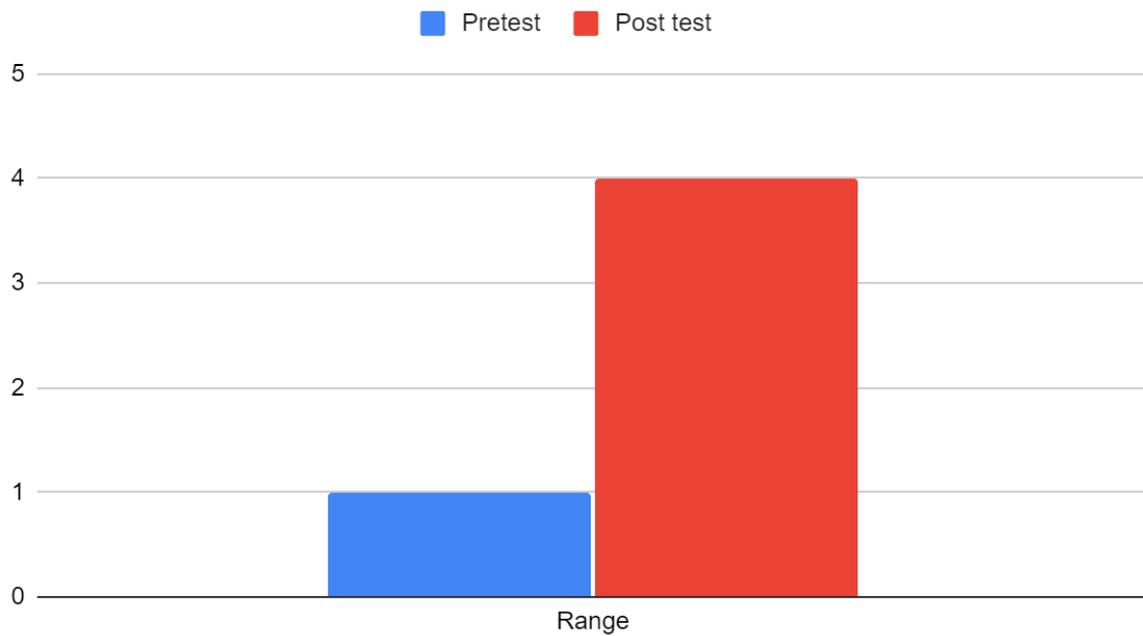
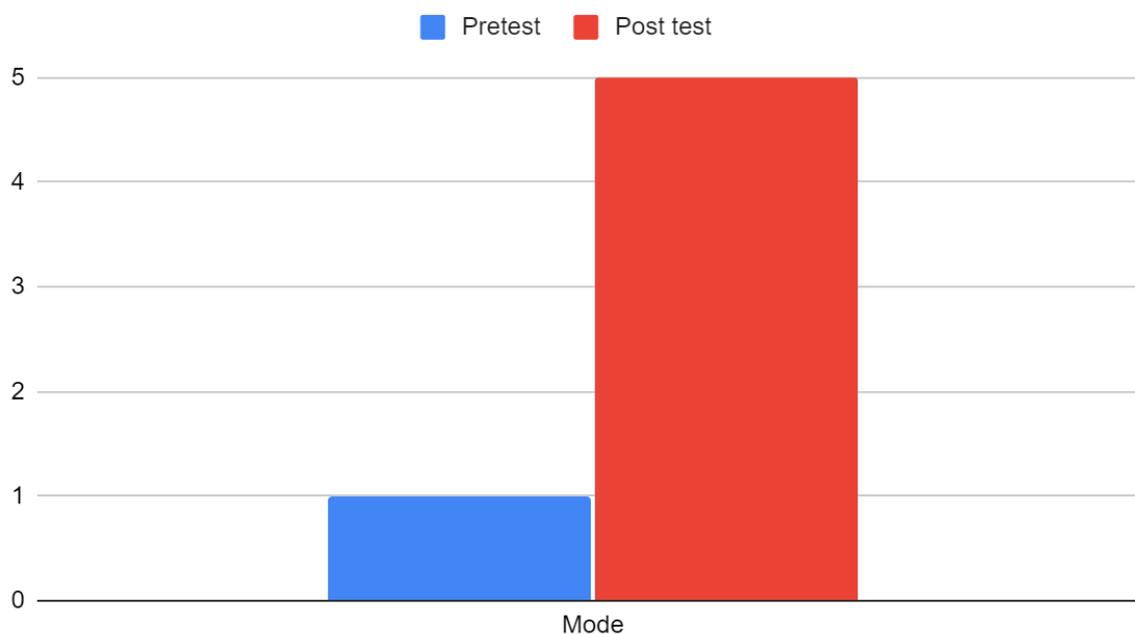


Table 2.4: Mode Scores**Part Two: Application****Data Analysis**

The results above show an increase in both word part knowledge and application of morphological awareness. From looking at the data, there was a more significant increase of recollection in Part Two: Application than Part One: Matching. The two parts of the test were very informative because it showed that students were better able to apply word part knowledge to an unknown word than to simply recall the meaning of a morpheme on its own. This may be because of the context applied to the word by including a root word (a real word with meaning). While the study provided by Silverman et al. (2014) shows that context clues (using the clues from the sentence to figure out an unknown word) are not the best way for ELs to figure out vocabulary, context itself seems to be helpful in understanding word part meanings and seeing how morphemes work when attached to a root word.

Another reason for the overall increase of word part understanding and application was the engaging review games, an impactful strategy for ELs supported by the Sheltered Instruction Observation Protocol (SIOP) Components and Features (Echevarría et al., 2017). Although the research says that SIOP strategies do not do a good enough job supporting ELs in reading, these results show that there are in fact features of SIOP that are beneficial for retention. SIOP strategies can be successful in the practicing of skills to be applied to independent reading.

There was one student who did not make any progress from the pretest to the post test, and this student is labeled as Special Education (SPED), which could explain this result. In the future, the researcher should include strategies that support both SPED and EL students to better include this population of students. The student with the highest English proficiency (4.2) scored highest in the pretest and second highest in the post test. Other than this student, there was not much correlation between overall student English proficiency and pre/post test scores.

The instrument was an adequate tool because it allowed the researcher to understand whether or not EL students were able to retain morphological information, as well as apply morphological awareness to words to figure out their meanings. Overall, with the average score of application of morphological awareness (Part II) increasing from 0% to 80%, it shows that it is beneficial for students to have morphological awareness to independently read and comprehend unknown words.

Conclusions

Based on the results of this study, morphological awareness is an important tool for EL students in independent reading. The more prefixes and suffixes they are able to identify and understand, the more they will be able to decode words as well as figure out the meaning. The

consistent review with the addition of engaging games were important strategies to practice the retention of word parts as well as apply morphological awareness to whole words.

CHAPTER 5

ACTION PLAN AND PLAN FOR SHARING

Discussion

The researcher, an English Learner (EL) teacher, noticed that her EL students' reading comprehension was lacking compared to the rest of their peers. In order to better understand reading comprehension for EL students, the researcher discovered the importance of morphological awareness. In researching morphology instruction's benefits, the researcher found a morphology intervention called Reading Excellence: Word Attack & Rate Development Strategies (REWARDS) and adapted it to be an intervention for EL students, specifically. The hope was that morphology, or the breaking up of word parts, would help EL students independently decode and understand the meaning of unknown words. The overall goal of this skill is to aid ELs' reading comprehension. The researcher found that this intervention not only helped with students' understanding of the meaning of words, but it majorly impacted their ability to decode and spell words correctly.

Action Plan

The REWARDS Intervention was very helpful in the teaching of morphological awareness and identified other important skills that go along with reading comprehension. For example, Activity H involved "looping" the syllables in words. This helped students not only identify and isolate prefixes and suffixes in a word, but it helped them break apart the word in order to decode it. The researcher found that students who struggle with decoding were able to decode larger words, reading more fluently. In the future, the researcher/teacher will follow this sequence while looping: first, the students will loop independently. Then, using a document camera, the teacher will loop the words so that the students can check their work. While the

teacher loops, she will pronounce each syllable, modeling decoding the words. After the teacher loops and decodes, the students will repeat the word after her. Finally, before the ten second “Rapid Read,” the teacher will allow time for students to practice decoding the words.

While researching reading comprehension for ELs, the researcher was curious about the Sheltered Instruction Observation Protocol (SIOP) as a support for ELs. Although the Daniel and Conlin (2015) research states that SIOP is very teacher centered, therefore not a sufficient enough support for student independent reading, the researcher found that the strategies of comprehensive review (Component 9, Feature 27), student engagement (Component 8, Feature 25), and meaningful activities (Component 2, Feature 6) were crucial in the practice and retention of morphemes (Echevarría et al., 2017). The review games played throughout the unit were the most engaging part of the unit. Students would frequently ask to play the games, and while playing, would put in maximum effort, collaboration, and interest into these activities. The researcher saw a change in daily positive behavior from her groups due to the high engagement the review games brought. Not only did these review games increase engagement, but it improved their retention of morphemes and their ability to apply morphological awareness to unfamiliar words.

The students learned many new prefixes and suffixes throughout this unit in their small group setting. The researcher also spent her days co-teaching reading with their classroom teachers, outside of the study. She would naturally review morphemes in this whole group setting. Due to previous learning in their small group, the ELs’ participation increased during these times when morphemes would be reviewed with their grade level class. Practicing in a whole group setting allowed the researcher to model and scaffold how to apply morphological awareness in their reading core class. Communicating these interventions with their classroom

teachers and applying it in reading class allows ELs to use this skill outside of the English classroom, which is one step closer to using this skill while independently reading. Not only does it help ELs in their whole group settings, but it also shows classroom teachers, looking for EL training and knowledge, how to support their ELs in the classroom.

In the future, the researcher, an EL teacher for grades three through five, will teach this intervention for all fourth and fifth grade ELs. The REWARDS intervention has twenty lessons. With the addition of review activities, nine lessons took six weeks. The researcher will split these lessons in half, teaching ten lessons in fourth grade and the remaining ten lessons in fifth grade. The researcher will teach these lessons in the beginning of the year, so students are able to apply their morphological awareness throughout the school year. It also allows the researcher to review these skills throughout the year as needed.

Plan for Sharing

In terms of the REWARDS Intervention, there is a possibility it can be used as an intervention in the special education diagnosing process for students who are not progressing academically. It is far too common to refer EL students to special education due to a lack of progress, due to little knowledge of language acquisition (Stapp, 2007). As a part of the referral process, teachers are to do six weeks of an intervention as well as progress monitoring. By adding progress monitoring into the unit, this morphology intervention can be used with EL students to determine if a lack of growth is due to language or if it truly is a learning disability. If this intervention were to be used as part of the process, the school would need to locate or purchase the intervention for each grade level, as the researcher used a fourth/fifth grade version of the intervention.

It is important the researcher informs her principal, colleagues, and teammates about her findings. It is a school-wide issue that ELs are not progressing in reading comprehension. The researcher should share her experience with retention and application of word parts, as well as the importance of review and engaging activities that went alongside the intervention.

REFERENCES

- Archer, A. L., Gleason, M. M., and Vachon, V. (2006). *Reading Excellence: Word Attack & Rate Development Strategies*. Sopris West Educational Services.
- Ardasheva, Y., & Tretter, T. R. (2013). Contributions of individual differences and contextual variables to reading achievement of english language learners: An empirical investigation using hierarchical linear modeling. *TESOL Quarterly*, 47(2), 323–351.
<http://www.jstor.org/stable/43267794>
- August, D., Artzi, L., Barr, C., & Francis, D. (2018). The moderating influence of instructional intensity and word type on the acquisition of academic vocabulary in young English language learners. *Reading and Writing: An Interdisciplinary Journal*, 31(4), 965–989.
<https://web-b-ebSCOhost-com.trmproxy.mnpals.net/ehost/pdfviewer/pdfviewer?vid=4&sid=20d9ec67-4a9d-4251-be94-da23fbf16a4e%40pdc-v-sessmgr02>
- Babayiğit, S., & Shapiro, L. (2020). Component skills that underpin listening comprehension and reading comprehension in learners with English as first and additional language. *Journal of Research in Reading*, 43(1), 78–97.
<https://doi-org.trmproxy.mnpals.net/10.1111/1467-9817.12291>
- Berger, P. L., & Luckmann, T. (1966). *The social construction of reality*. Garden City, New York: Doubleday and Company, Inc.
- Biemiller, A., & Boote, C. (2006). An effective method for building meaning vocabulary in primary vocabulary. *Journal of Educational Psychology*, 98(1), 44-62.
- Bowers, P. N., & Kirby, J. R. (2010). Effects of morphological instruction on vocabulary acquisition. *Reading and Writing: An Interdisciplinary Journal*, 23, 515–537.
<https://doi.org/10.1007/s11145-009-9172-z>

- Capitelli, S. (2016). English language learners' use of the phrase "I Forget": A window into the challenges of learning in a restrictive environment. *Multicultural Education*, 23(3–4), 14–19. <https://web-b-ebshost-com.trmproxy.mnpals.net/ehost/pdfviewer/pdfviewer?vid=6&sid=681e7e4a-7178-4f0c-86db-05f86bf5652b%40sessionmgr102>
- Crosson, A. C., McKeown, M. G., Moore, D. W., & Ye, F. (2019). Extending the bounds of morphology instruction: Teaching latin roots facilitates academic word learning for English learner adolescents. In *Grantee Submission*. Grantee Submission. <https://web-b-ebshost-com.trmproxy.mnpals.net/ehost/pdfviewer/pdfviewer?vid=3&sid=b9b9bdf3-c948-4ead-83f6-8d87547ad067%40pdc-v-sessmgr01>
- Daniel, S. M., Martin-Beltrán, M. Percy, M. M., Silverman, R. (2015). Moving beyond yes or no: Shifting from over-scaffolding to contingent scaffolding in literacy instruction with emergent bilingual students.” *TESOL journal* 7.2 (2016): 393–420. <https://doi-org.trmproxy.mnpals.net/10.1002/tesj.213>
- Daniel, S. M., & Conlin, L. (2015). Shifting attention back to students within the sheltered instruction observation protocol. *TESOL Quarterly*, 49(1), 169–187. <http://www.jstor.org/stable/43893741>
- Davidson, S.J. and O'Connor, R.E. (2019), An intervention using morphology to derive word meanings for English language learners. *Jnl of Applied Behav Analysis*, 52: 394-407. <https://doi-org.trmproxy.mnpals.net/10.1002/jaba.539>
- Echevarría, J., Short, D., Vogt, M. (2017). *Making Content Comprehensible for English Learners*. Pearson.

- Filippini, A. L., Gerber, M. M., & Leafstedt, J. M. (2012). A vocabulary-added reading intervention for English learners at-risk of reading difficulties. *International Journal of Special Education*, 27(3), 14–26. <https://files.eric.ed.gov/fulltext/EJ1001055.pdf>
- Hui Jiang, & Logan, J. (2019). Improving reading comprehension in the primary grades: mediated effects of a language-focused classroom intervention. *Journal of Speech, Language & Hearing Research*, 62(8), 2812–2828. https://doi-org.trmproxy.mnpals.net/10.1044/2019_JSLHR-L-19-0015
- McIntyre, E., Kyle, D., Chen, C., Muñoz, M., & Beldon, S. (2010). Teacher learning and ELL reading achievement in sheltered instruction classrooms: Linking professional development to student development. *Literacy Research and Instruction*, 49:4, 334-351. <https://doi-org.trmproxy.mnpals.net/10.1080/19388070903229412>
- Peca, K. (2000). Positivism in education: Philosophical, research, and organizational assumptions. <https://search-ebshost-com.trmproxy.mnpals.net/login.aspx?direct=true&db=eric&AN=ED456536&site=ehost-live>
- Reed, D. K., Petscher, Y., & Foorman, B. R. (2016). The contribution of vocabulary knowledge and spelling to the reading comprehension of adolescents who are and are not English language learners. *Reading and Writing: An Interdisciplinary Journal*, 29(4), 633–657. <https://web-b-ebshost-com.trmproxy.mnpals.net/ehost/pdfviewer/pdfviewer?vid=4&sid=a834edb3-85e3-4971-b347-d67fce030d2d%40sessionmgr103>
- Richards-Tutor, C., Baker, D. L., Gersten, R., Baker, S. K., & Smith, J. M. (2016). The Effectiveness of reading interventions for english learners: A research synthesis. *Exceptional Children*, 82(2), 144–169. <https://files.eric.ed.gov/fulltext/ED589017.pdf>

- Rodriguez, M. C., & Briceño, A. (2018). Sentence stems that support reading comprehension. *Reading Teacher*, 72(3), 398–402.
<https://doi-org.trmproxy.mnpals.net/10.1002/trtr.1705>
- Short, D. J., Fidelman, C. G., & Louguit, M. (2012). Developing academic language in english language learners through sheltered instruction. *TESOL Quarterly*, 46(2), 334–361.
<http://www.jstor.org/stable/41576050>
- Sibold, C. (2011). Building English language learners' academic vocabulary: Strategies and tips. *Multicultural Education*, 18(2), 24–28.
<https://web-b-ebshost-com.trmproxy.mnpals.net/ehost/pdfviewer/pdfviewer?vid=7&sid=985c3e31-fe0c-4876-8f3e-691adffab4d8%40sessionmgr102>
- Silverman, R. D., Proctor, C. P., Haring, J. R., Doyle, B., Mitchell, M. A., & Meyer, A. G. (2014). Teachers' instruction and students' vocabulary and comprehension: An exploratory study with English monolingual and spanish-english bilingual students in grades 3-5. *Reading Research Quarterly*, 49(1), 31–60.
<https://doi-org.trmproxy.mnpals.net/10.1002/rrq.63>
- Stapp, Y. (2007). Distinguishing Sources of L2 Development Problems in K-12: Language Deficit, Cognitive Deficit, and Cognitive Distance. *Forum on Public Policy Online*, 2007(1).
- Townsend, D., Filippini, A., Collins, P., & Biancarosa, G. (2012). Evidence for the importance of academic word knowledge for the academic achievement of diverse middle school students. *The Elementary School Journal*, 112(3), 497–518. <https://doi.org/10.1086/663301>

U.S. News (2020). *Best Elementary Schools*. U.S. News and World Report.

<https://www.usnews.com/education/k12/minnesota/gideon-pond-elementary-215315>

Wood, C., Fitton, L., Petscher, Y., Rodriguez, E., Sunderman, G., & Lim, T. (2018). The effect of e-book vocabulary instruction on Spanish-English speaking children. *Journal of Speech, Language, and Hearing Research*, 61(8), 1945–1969.

<https://web-a-ebshost-com.trmproxy.mnpals.net/ehost/pdfviewer/pdfviewer?vid=6&sid=cf27e210-d660-4b77-9b66-bfe2e770d607%40sessionmgr4008>

Wood, C. L., Schatschneider, C., & Veldink, A. (2021). The relation between academic word use and reading comprehension for students from diverse backgrounds. *Language, Speech, and Hearing Services in Schools*, 52(1), 273–287.

<https://web-b-ebshost-com.trmproxy.mnpals.net/ehost/pdfviewer/pdfviewer?vid=8&sid=b9b9bdf3-c948-4ead-83f6-8d87547ad067%40pdc-v-sessmgr01>

WSSU (n.d.). *Key Elements of a Research Proposal Quantitative Design*. Winston-Salem State University. https://www.wssu.edu/about/offices-and-departments/office-of-sponsored-programs/pre-award/_Files/documents/develop-quantitative.pdf

Zhang, J., & Shulley, L. (2017). Poor comprehenders in English-only and English language learners: influence of morphological analysis during incidental word learning. *Journal of Research in Reading*, 40(2), 169–183.

<https://doi-org.trmproxy.mnpals.net/10.1111/1467-9817.12100>

Appendix A Informed Consent: Group 1

February 10, 2022

Dear Parent or Guardian,

Your child has been invited to participate in a study to see if morphology instruction will improve their ability to figure out unknown words.

Your child was selected because he/she is an English learner in my small group. If you decide that your child will participate, please understand that your child will be asked to do the following, and these are typical classroom activities that involve no risk to your child.

1. Your child will be doing learning activities and games that will teach word parts including prefixes, suffixes, and root words. We will be doing these activities during our small group English time, which is from 10:30-11:00am.
2. Students will be given a pre and post test to see how they retain their word part knowledge, these tests will not affect their grades at all.

Although Principal _____ has granted me permission to conduct this study, since this information is being used to help me complete my master's degree at Minnesota State University Moorhead, I need to have parental consent to use this information in my final paper that I am required to do as part of my degree. If I didn't need this information to complete my master's degree, I would be conducting the same type of research in my normal everyday lessons and I would not need signatures. If you sign this form, you are giving me consent to use the information I gather. All information that is used will be confidential, no names will be used. Please also note that your child can choose to not participate at any time without any consequences.

Please feel free to ask any questions you have regarding this study. You may contact me here at school _____ or by email at _____. You may also contact my advisor, Kristen Carlson at _____ or by email at _____.

You will be offered a copy of this form to keep. You are making a decision whether or not your child will participate. Your signature indicates that you have read the information provided above and have decided your child will participate. You may withdraw your child at any time without prejudice after signing this form should you choose to discontinue participation in this study.

Signature of Parent or Guardian

Date

Signature of Investigator

Date

Appendix B Informed Consent: Group 2

February 10, 2022

Dear Parent or Guardian,

Your child has been invited to participate in a study to see if morphology instruction will improve their ability to figure out unknown words.

Your child was selected because he/she is an English learner in my small group. If you decide that your child will participate, please understand that your child will be asked to do the following, and these are typical classroom activities that involve no risk to your child.

1. Your child will be doing learning activities and games that will teach word parts including prefixes, suffixes, and root words. We will be doing these activities during our small group English time, which is from 12:05-12:25pm.
2. Students will be given a pre and post test to see how they retain their word part knowledge, these tests will not affect their grades at all.

Although Principal _____ has granted me permission to conduct this study, since this information is being used to help me complete my master's degree at Minnesota State University Moorhead, I need to have parental consent to use this information in my final paper that I am required to do as part of my degree. If I didn't need this information to complete my master's degree, I would be conducting the same type of research in my normal everyday lessons and I would not need signatures. If you sign this form, you are giving me consent to use the information I gather. All information that is used will be confidential, no names will be used. Please also note that your child can choose to not participate at any time without any consequences.

Please feel free to ask any questions you have regarding this study. You may contact me here at school _____ or by email at _____. You may also contact my advisor, Kristen Carlson at _____ or by email at _____.

You will be offered a copy of this form to keep. You are making a decision whether or not your child will participate. Your signature indicates that you have read the information provided above and have decided your child will participate. You may withdraw your child at any time without prejudice after signing this form should you choose to discontinue participation in this study.

Signature of Parent or Guardian

Date

Signature of Investigator

Date

Appendix C

Informed Consent: Group 3

February 10, 2022

Dear Parent or Guardian,

Your child has been invited to participate in a study to see if morphology instruction will improve their ability to figure out unknown words.

Your child was selected because he/she is an English learner in my small group. If you decide that your child will participate, please understand that your child will be asked to do the following, and these are typical classroom activities that involve no risk to your child.

1. Your child will be doing learning activities and games that will teach word parts including prefixes, suffixes, and root words. We will be doing these activities during our small group English time, which is from 3:20-3:50pm.
2. Students will be given a pre and post test to see how they retain their word part knowledge, these tests will not affect their grades at all.

Although Principal _____ has granted me permission to conduct this study, since this information is being used to help me complete my master's degree at Minnesota State University Moorhead, I need to have parental consent to use this information in my final paper that I am required to do as part of my degree. If I didn't need this information to complete my master's degree, I would be conducting the same type of research in my normal everyday lessons and I would not need signatures. If you sign this form, you are giving me consent to use the information I gather. All information that is used will be confidential, no names will be used. Please also note that your child can choose to not participate at any time without any consequences.

Please feel free to ask any questions you have regarding this study. You may contact me here at school _____ or by email at _____. You may also contact my advisor, Kristen Carlson at _____ or by email at _____.

You will be offered a copy of this form to keep. You are making a decision whether or not your child will participate. Your signature indicates that you have read the information provided above and have decided your child will participate. You may withdraw your child at any time without prejudice after signing this form should you choose to discontinue participation in this study.

Signature of Parent or Guardian

Date

Signature of Investigator

Date

Appendix D Instrumentation

Name: _____

Part I: Match the word part with its meaning.

Prefixes	
1. __b__ mis-	a. in/into or not
2. __e__ dis-	b. wrong
3. __c__ com-	c. with or together
4. __a__ im-	d. out of
5. __d__ ex-	e. not
	f. opposite
Suffixes	
6. __e__ -ate	a. A person who
7. __d__ -less	b. Full of
8. __a__ -ist	c. Doing or being
9. __f__ -sion	d. Without
10. __c__ -sive	e. Act on
	f. The act of

Part II: Use your knowledge of root words, prefixes, and suffixes to determine the meaning of the following words.

1. misfit

Meaning: _____ [wrong fit] _____

2. exclude

Meaning: _____ [to leave someone out of a group] _____

3. wonderful

Meaning: _____ [full of wonder] _____

4. protection

Meaning: _____ [the act of protecting] _____

5. argument

Meaning: _____ [the action or process of arguing] _____

Appendix E IRB Approval

Institutional Review Board



DATE: February 2, 2022

TO: Kristen Carlson, Principal Investigator
Jane Beeninga, Co-investigator

FROM: Dr. Robert Nava, Chair
Minnesota State University Moorhead IRB

ACTION: APPROVED

PROJECT TITLE: [1864711-1] The Study of Morphological Awareness for English Learners
SUBMISSION TYPE: New Project
APPROVAL DATE: February 2, 2022
EXPIRATION DATE:
REVIEW TYPE: Exempt Review

Thank you for your submission of New Project materials for this project. The Minnesota State University Moorhead IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Exempt Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to the Minnesota State University Moorhead IRB. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to the Minnesota State University Moorhead IRB.

This project has been determined to be a project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of .

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact the [Minnesota State University Moorhead IRB](#). Please include your project title and reference number in all correspondence with this committee.

This letter has been issued in accordance with all applicable regulations, and a copy is retained within Minnesota State University Moorhead's records.

Appendix F
Administrator Approval

[REDACTED]

Thursday, January 13, 2022

To whom it may concern,

This letter is to grant Jane Beeninga permission to conduct an action research study at [REDACTED] during the 2021-2022 academic year. I understand that this study poses no risk to those persons involved or to the [REDACTED]. I also understand that all information received will be kept confidential and will only be used for purposes of this study.

Sincerely,

[REDACTED]

Principal, [REDACTED]