

Northwestern College, Iowa

**NWCommons**

---

Master's Theses & Capstone Projects

Education

---

Fall 2021

## How Visual Phonics Impacts English Language Learners in Kindergarten

Ashlyn Wendland

Follow this and additional works at: [https://nwcommons.nwciowa.edu/education\\_masters](https://nwcommons.nwciowa.edu/education_masters)

 Part of the [Education Commons](#)

---

**How Visual Phonics Impacts English Language Learners in Kindergarten**

Ashlyn Wendland

Northwestern College

An Action Research Project Presented  
in Partial Fulfillment of the Requirements  
For the Degree of Master of Education

**Abstract**

The purpose of this action research study was to determine how visual phonics impacts English language learners in kindergarten. The participants included 14 kindergarten students, that attend Prairie Elementary in Worthington, Minnesota. Students participated in approximately ten to fifteen minute daily visual phonics over a nine-week period. The pretest and posttest assessment data for this study was collected using an assessment tool of ESGI (Education Software for Guiding Instruction). The study found that the implementation of visual phonics to be successful with impacting letter and letter sound recognition. The researcher recommends further studies to be conducted including length of study, increased sample size, more research on the topic, and the study of previous school exposure to validate the results of this study.

*Keywords:* visual phonics, English language learners, movement, phonics, phonemic awareness

## Table of Contents

|   |    |
|---|----|
| Abstract.....   | 2  |
| How Visual Phonics Impacts English Language Learners in Kindergarten..... | 4  |
| Review of the Literature .....  | 6  |
| What is Visual Phonics?.....  | 6  |
| What We Need to Know About English Language Learners .....                | 8  |
| Phonemic Awareness and Phonics.....                                       | 10 |
| Incorporating Movement.....   | 11 |
| Methods.....  | 13 |
| Research Question.....  | 13 |
| Participants .....  | 13 |
| Measurement Tools .....   | 13 |
| Procedure.....  | 14 |
| Ethics .....  | 15 |
| Findings.....   | 16 |
| Data Analysis .....   | 16 |
| Discussion.....   | 18 |
| Summary of Major Findings .....   | 18 |
| Limitations of the Study .....  | 19 |
| Further Study.....  | 20 |
| Conclusion .....  | 21 |
| References.....   | 22 |

### **How Visual Phonics Impacts English Language Learners in Kindergarten**

Kindergarten lays the groundwork for a strong academic future. Kindergarten is a crucial year for learning a variety of new skills that will carry throughout a student's entire lifetime. One of the skills that becomes an important part of their learning is the recognition of letters and sounds. To become a reader and a writer, students must be able to recognize and know their letters and sounds. The knowledge of alphabet recognition plays a key role in a student's learning and without it, it can cause academic delays that can play a role in a student's success in school. With poor knowledge of letter names and sounds, kindergarten students have a higher probability to struggle with reading and slowly be classified as having reading disabilities (Piasta and Wagner, 2010).

Many students come to kindergarten without any knowledge of their letters or sounds. Students that come to kindergarten have either been to all-day everyday preschool, half-day preschool, or no preschool at all. Students that have come from preschool have greater knowledge of their letters, sounds, and even their own names compared to students that had no prior schooling. In ISD 518 in Worthington, Minnesota, there are many diverse families who speak a variety of different languages that are not English. Not only does this become a challenge but many of these students have little to no knowledge of the English language and did not attend preschool. Many challenges can occur throughout their academic life when students enter school with little to no English and are expected to be academically on track with the Minnesota State Standards. How can you expect a student with no English to be academically on track with other peers when they don't know the language they are trying to learn about? In the state of Minnesota, the standards that Kindergarten students need to know by the end of the year include 0.3.0.1, which states students are expected to "Recognize and name all upper- and lower-

case letters of the alphabet” (Minnesota Academic Standards, 2021) and 0.3.0.3 expects students to, “Demonstrate basic knowledge of one-to-one letter sounds correspondences by producing the primary or many of the most frequent sound for each constant” (Minnesota Academic Standards, 2021). Although these standards apply to be known by the end of the year, if they are barely achieving these by the end of the year other standards that are needed such as writing and reading will not be achieved due to being far behind with their knowledge of letters and sounds. As we take a dive into the research, we will uncover what this action research can provide to help with providing the best practices and strategies for students to be academically successful in kindergarten.

The purpose of this action research study is to provide research and data to prove how English language learners are positively impacted by the practice and repetition of visual phonics in the classroom. This practice is not only beneficial for English language learners but all learners in a classroom. Visual phonics is “a multisensory strategy that represents all of the sounds of English with a hand shape cue and a corresponding written symbol. It is not a program or a curriculum, but rather a strategy representing a sound in a concrete visible way” (Montgomery, 2008). Through the practice of visual phonics, students can learn through seeing the letter, image, and sound. Visual phonics can provide a kinesthetic movement to help engage and help students memorize their letters and sounds in an engaging and easier way. The development of this practice encourages students to use their hand motions to see and hear the sounds they are learning. Visual phonics can be put into perspective with not only the written language but also the power of language known as sound (Visual Phonics page, n.d).

This research analyzes data from a group of kindergarten students. The purpose of this study is to understand the positive impact visual phonics has on English language learners. The

researcher provides the implementation of visual phonics to all students in a classroom as a standard practice used at the school with collecting data through ESGI to track the progress of letter and sound recognition. Research collected includes peer-reviewed journals and scholarly articles from DeWitt Library from Northwestern College.

### **Review of the Literature**

#### **What is Visual Phonics?**

Visual phonics is known as the shorter version of See the Sound/Visual phonics (Montgomery, 2008). Visual phonics is known as a multisensory strategy that uses hand shape cues with a written symbol for all sounds in English. The purpose of visual phonics is to represent sounds in a visible concrete way (Montgomery, 2008). The alphabet is made up of 26 letters and about 45 phonemes, in visual phonics there are 46 different hand cues for each sound including silent /e/ (Woolsey, Satterfield, & Roberson, 2006).

Visual phonics was initially created by a mother to help teach her deaf children to access visual, written, and tactile forms for the sounds they were not able to hear (Woolsey, Satterfield, & Roberson, 2006). The purpose for creating this was initially for deaf children to give the opportunity to have a system to be in conjunction with the spoken language and augment auditory information with multisensory of hand cues for phonemes in the English language (Trezek et al., 2007). Woolsey et al. (2006) state that alphabet knowledge and phonemic awareness are the two immense indicators for being successful in reading in the early years of school. A strong predictor of young students' reading ability is through phonological awareness skills (Narr, 2008). The approach of visual phonics provides a different and stable foundation for phonemic awareness by focusing on sounds and making them more concrete and tangible

(Cihon, Gardner, Morrison, & Paul, 2008). Narr (2008) explains in his article, phonemic awareness skills are known as sound identification, blending, manipulation, and segmenting.

Visual phonics can be used not only for students who are deaf or hard of hearing, but also as a literacy skill development (Montgomery, 2008). The point of understanding the true fashion of how visual phonics works is explained through the article of Montgomery. Montgomery (2008) states the movement of the hand cue of each letter strongly correlates with the written symbol and how its positioned when producing the sound and movement. The kinesthetic movement represents the sounds articulating from the mouth. Thus, the example provided by Montgomery states, “flicking the index finger off of the thumb emulates the release of the tongue from the alveolar ridge when producing /t/ - the sound represented by letter t” (Montgomery, 2008).

Visual phonics is known as a strategy program and not a reading curriculum or any form of communication (Woolsey, Satterfield, & Roberson, 2006). When incorporating visual phonics into instruction in the classroom it is important to do it in an explicit way. When providing visual phonics in explicit instruction, it can then provide not only support for alphabet knowledge, but reading improvements in the categories of print awareness, encoding, sound-letter correspondence, spelling, punctuation, abbreviations, acronyms, comprehension, fluency, written composition, and English semantics and syntax (Woolsey, Satterfield, & Roberson, 2006).

Visual phonics is a tool that helps form foundational skills to support academic success. To learn how beneficial visual phonics can be in the classroom with the foundational skills of the alphabet it is important to take into consideration “Visual phonics is indeed changing the literacy landscape and the way we look at connecting sound and print” (Montgomery, 2008).

### **What We Need to Know About English Language Learners**

The definition of English Language Learners is described as students that first learned how to speak, read and/or write in a different language other than English (Guo & Georgiou, 2019). English Language Learners (ELL) are increasing in today's school system. Our nation constitutes about 9.2% of English language learners in public elementary schools and is continuously growing rapidly (Hall, Steinle, & Vaughn, 2019). Documentation proves ELL students are coming into school with weaker English literacy skills compared to their native English-speaking peers which causes the risk of falling behind academically (Guo & Georgiou, 2019).

In the United States, lower academic achievements are demonstrated among English language learners more than English only students (Hall, Steinle, & Vaughn, 2019). English language learners fall behind their English only peers causing a significant achievement gap (Short, Fidelman, & Louguit, 2012). Many EL's do not have the same opportunities as English only students. This includes not having access to books, libraries, and a variety of different experiences that can influence their success academically. EL's are also more likely to have families who are near or below poverty (Hall, Steinle, & Vaughn, 2019).

Students coming to school with limited language skills tend to lack any type of background knowledge which plays a part in their academic success. Oral language and vocabulary are crucial for English language learners. A beneficial strategy for ELLs is oral vocabulary. Building oral vocabulary gives ELLs the opportunity to be successful with their literacy skills (Barr, Eslami, & Joshi, 2012). Building larger and stronger vocabularies in the early years promotes more success. "Vocabulary knowledge is a major building block in

children's early literacy development. It provides the foundation for learning to decode and comprehend text" (Silverman, 2007). Students acquire vocabulary skills from adults, their environment, pretend play, and books. Students who grow up in homes that lack these skills in rich language and literacy skills do not develop the appropriate vocabulary for their academic needs (Silverman, 2007). In many cultures, the key to success is language.

Zhang states, "An effective approach to support ELL's is to integrate literacy strategies into content instruction" (Zhang, 2017). Developing content literacy gives English language learners the opportunity to grow in their foundational skills. Research by Short, Fidelman, & Louguit studied the SIOP Model (Sheltered Instruction Observation Protocol). This model includes the best practices for academically teaching English and improving achievement for students. Throughout this study, teachers implemented SIOP into planning and instruction. Teachers used different components of SIOP such as build background, comprehension, interaction, practice, review, and assessment. With implementation and research of SIOP this strategy gives EL's the opportunity to be alert in lessons. The practice of SIOP gives English language learners a chance to learn oral language, develop background knowledge, and vocabulary. The study found promising results for ELLs to succeed academically (Short, Fidelman, & Louguit, 2012).

According to the article written by Rahn, Wilson, Egan, Brandes, Kunkel, Peterson, & McComas "Upon entering kindergarten, English learners face the combined tasks of learning to understand, speak, and read English. Students may also experience more significant challenges when learning to read because of issues with acculturation, linguistic isolation, and lack of prior literacy experiences in their native language or English" (Rahn, Wilson, Egan, Brandes, Kunkel, Peterson, & McComas, 2015). English Language learners face many adversities every day. These adversities affect ELL's success in academics.

### **Phonemic Awareness and Phonics**

Phonemic awareness and phonetic skills play a huge role in the early years of students. Literacy skills are important for students to acquire to become readers. Areas that are critical to the influence of phonemic awareness are alphabetic knowledge and oral vocabulary (Ouellette & Haley, 2013). Learning to read and write is an important component of alphabet recognition. (McGee & Richgels, 1989) The skills of letter-sound correspondence, identifying syllables, alphabetic principles, identifying vowels and their phoneme, segmenting, and rhyming are all beneficial in the development of children literacy skills. Phonemic Awareness is known as “the ability to identify and manipulate individual speech sounds” (Ashby, Dix, Bontrager, Dey, & Archer, 2013). Weak phonemic awareness makes applying letter-sound mapping to identifying printed words more difficult for children. A predictor of early decoding and word recognition is also known as phonemic awareness (Ashby et al., 2013).

Phonics instruction plays a key role in a child’s life. Phonics instruction teaches early learners the alphabetic system making it essential for learning to read and write (Ehri & Flugman, 2018). “Phonics involves blending and segmenting phonemes with letters” (Bradley & Noell, 2018). A nonnegotiable to effective reading instruction is understanding the relationship between letters and sounds. Phonics instructions prevents reading difficulty for students who are at risk and students who have reading difficulties. In Kindergarten and first grade students, spelling is increasing due to phonics instruction (Bradley & Noell, 2018). The influence of phonics leads students to success in future years.

Promoting early literacy skills helps students develop their foundational skills at an early age. Cognitive foundations are developed from early literacy skills which are needed before learning to read and write. Some skills that are needed for early literacy include: oral language,

letter knowledge, phonological awareness, concepts of print, early reading, writing, and spelling. Meaningful writing skills such as handwriting promote a child's literacy skills (Elimelech, & Aram, 2020). Increasing more early literacy skills for alphabetic print include reading and environmental print. These improve the knowledge of letter knowledge to pull in more interests for students (McGee & Richgels, 1989).

### **Incorporating Movement**

Movement is important and beneficial for all children. Children are recommended to participate in about 60 minutes of physical activity everyday (Webster, Michael, Russ, Egan, 2019). The integration of gesture, dance, and a variety of movement into the classroom can boost students' academic learning. "Early findings suggest that engaging students in such activities has a positive effect on their motivation, engagement, and learning, while also helping them become more physically active overall" (Lindt & Miller, 2017). Integrating movement allows achievement in both academic and physical education. Increases in reading fluency and mathematics have been results due to movement. A teacher may promote more student activity and interest by incorporating movement into the classroom. Lindt and Miller (2017) found effectiveness in five movement strategies. These included dancing to learn, applying movement to content assessment, moving among stations around the room, ordering and organizing, and representing with actions. These strategies have a positive impact on students' physical ability and learning. (Lindt & Miller, 2017)

Young children have the innate need to move. Movement starts at a very young age with using their eyes to track movements. Movement allows children to learn through spatial awareness at a young age. These movements mature as a child get older. Movement allows

preparation for children for life by building confidence and social skills (Gehris, Gooze, & Whitaker, 2015). Movements are inclined to help with the human body and the ability to focus on different degrees of learning. Movement provides a positive effect on student learning and even the development of a child through their early learning years.

Incorporating movement into a child's day gives their brain the opportunity to continue to grow and flourish. The term movement for learning comes from the ability of physically moving to boost and stimulate the brain. Kilbourne, Scott-Webber, & Kapitula (2017) state neuroscientists believe that movement and cognition are immensely connected. "There is a growing body of evidence that student interaction and engagement impact learning, and there is a need to change away from a didactic, teacher centered method of teaching to an active and more student-centered one" (Kilbourne, Scott-Webber, & Kapitula, 2017). The positive relationship between movement and learning gives many benefits to students in the classroom.

Movement enhances student learning, school performance, behavior, and academic achievement (Webster, Michael, Russ, Egan, 2019). An article states "physical activity stimulates immediate chemical change in the brain that increase attention and may enhance cognitive performance" (Mullender-Wijnsma, Hartman, de Greeff, Bosker, Doolaard, & Visscher, 2015). When movement is occurring, it allows learning by permitting the brain to be fully activated to integrate information. Movement allows a linkage of the body and the mind to help improve student learning. By incorporating movement into the classroom, it allows students to process their learning from instruction and become academically more successful.

## **Methods**

### **Research Question**

How does visual phonics impact English language learners?

### **Participants**

The participants in this study were kindergartners at Prairie Elementary, located in Worthington, MN. The community in Worthington consists of an extremely diverse population due to a variety of operations that attract a large number of migrant workers, these include pork and beef packaging plants, and various other manufacturing jobs. The population of Worthington is currently at 12,975 people. Prairie Elementary is a part of Independent School District 518 which consists of students from kindergarten through twelfth grade that include an elementary school, middle school, high school, and learning center. Prairie Elementary is considered a large school. There are twelve kindergarten classrooms, eleven first grade, ten second grade, nine third grade, and nine fourth grade classrooms.

In this action research project, the participants were kindergarten students ages 5 and 6 in a classroom of 21 students. All students received the intervention, but due to the study, the focus of this research is based on 14 students, seven males, and seven females. Twelve students were identified as Hispanic, and two students were Karen. In addition, one of these students received special education services and all 14 students were identified as English Learners who received English language services. Of the participating students, multiple home languages were identified as Spanish, Mam, and Karen.

### **Measurement Tools**

The data collection was used to find the relationship between independent and dependent variables. The independent variable in this research was the daily practice of implementing

visual phonics with kindergarten students. The dependent variable is the measurement of the student's ability to recognize letters and sounds. The tool used to measure the dependent variable was assessments on ESGI (Education Software for Guiding Instruction). ESGI was used for pre- and post-assessment data. The data collected through ESGI shows the baseline data as well as the posttest data to show growth over time. Two assessments were used for this practice, the first assessment is All Letters (upper case and lower case mixed), and the second assessment is Letter Sounds (lowercase letters). Both assessments used on ESGI were quantitative. This research is quasi-experimental due to not having a control group for this practice because all students are receiving this practice, but the data is focused on English language learners.

### **Procedure**

The purpose of this action research was to see how visual phonics impacts English language learners. The researcher used a standard-based practice to implement to all students but focused on the data of students who are English language learners (ELL). To understand where all students are with their recognition of letters and sounds, a pretest/baseline was performed. This data was collected before the practice of visual phonics was used in the classroom. After baseline data were taken, the practice of visual phonics began. The practice has taken place over nine weeks with intention of using this practice all year long.

While all students are present in the kindergarten classroom, visual phonics was introduced to students in a large group setting. Visual phonics is a daily routine that takes approximately ten to fifteen minutes. Visual phonics uses a multisensory approach to learning phonics. "A person using See the Sound/Visual Phonics hears the sound (auditory), reproduces the feeling of the sound with a hand cue (kinesthetic), and writes a symbol depicting the hand cue (visual)" (Visual Phonics page, n.d). Visual phonics benefits all students including ELL.

To begin visual phonics, the researcher introduces a video of an RTI teacher who all students are familiar with. This video shows the teacher, Mrs. Raymo, doing visual phonics. She starts with the letter A and goes through the alphabet. Students start by watching the video to learn about what visual phonics is. As she goes through the video she says the letter, the picture, and the hand cue of the sound. At Prairie Elementary, with a high percentage of Hispanic students, the pictures for our visual phonics are correlated with Spanish words so that the pictures are similar in both English and Spanish for students to remember. (See Figure 1.) For example, our visual phonics for the letter F is a fruit because in Spanish fruit is fruta. After watching the video of Mrs. Raymo as an introduction, the researcher had the students listen and mimic the practice of visual phonics. Each morning after the morning meeting, the researcher would grab the visual phonics cards and for the first few weeks started with the I do, we do, you do strategy to reiterate the practice of visual phonics. The researcher continued the practice of visual phonics with gradually becoming more independent for learning their letters and sounds. The researcher communicated with the students on how important it was to listen and model visual phonics to help them eventually become readers.

### **Ethics**

This action research requires an IRB approval. The practice of visual phonics is a standard practice used at Prairie Elementary. The use of a standard practice allows for the IRB approval to be exempt. All the research and data for this practice are protected for students that do not affect any ethical issues. This practice has no risk for students because even if it were not a part of this research project students would still be receiving this practice.

## Findings

### Data Analysis

To determine the effect of how visual phonics impacted English language learners, baseline data was taken, and a posttest was given to show the growth of recognition of letters and sounds. The researcher collected data with two different assessments which consisted of Letters (upper case and lower case) and letter sounds (lower case). The researcher documented the findings in ESGI to record their baseline and progress. A dependent t-test was used for both assessments.

For the recognition of letters (upper case and lower case letters) a dependent t-test revealed that there was a statistically highly significant difference in the pretest scores of ( $M = 16.57$ ,  $SD = 16.19$ ,  $n = 14$ ) as compared to the posttest findings of ( $M = 24.64$ ,  $SD = 19.6$ ) following the practice of visual phonics with a strong effect size,  $t(13) = -4.64$ ,  $p < .001$ . Visual phonics had a positive impact on students recognizing and identifying their upper-case and lower-case letters. There was an 8.07 difference in means.

For the recognition of letter sounds on lower case letters a dependent t-test revealed that there was a statistically highly significant difference in the pretest score of ( $M = 4.14$ ,  $SD = 6.19$ ,  $n = 14$ ) compared to the posttest finding of ( $M = 8.92$ ,  $SD = 7.12$ ) following the use of visual phonics with a strong effect size,  $t(13) = -3.88$   $p = .001$ . Visual phonics had a positive impact on students with recognizing their letter sounds. There was a 4.78 difference in means.

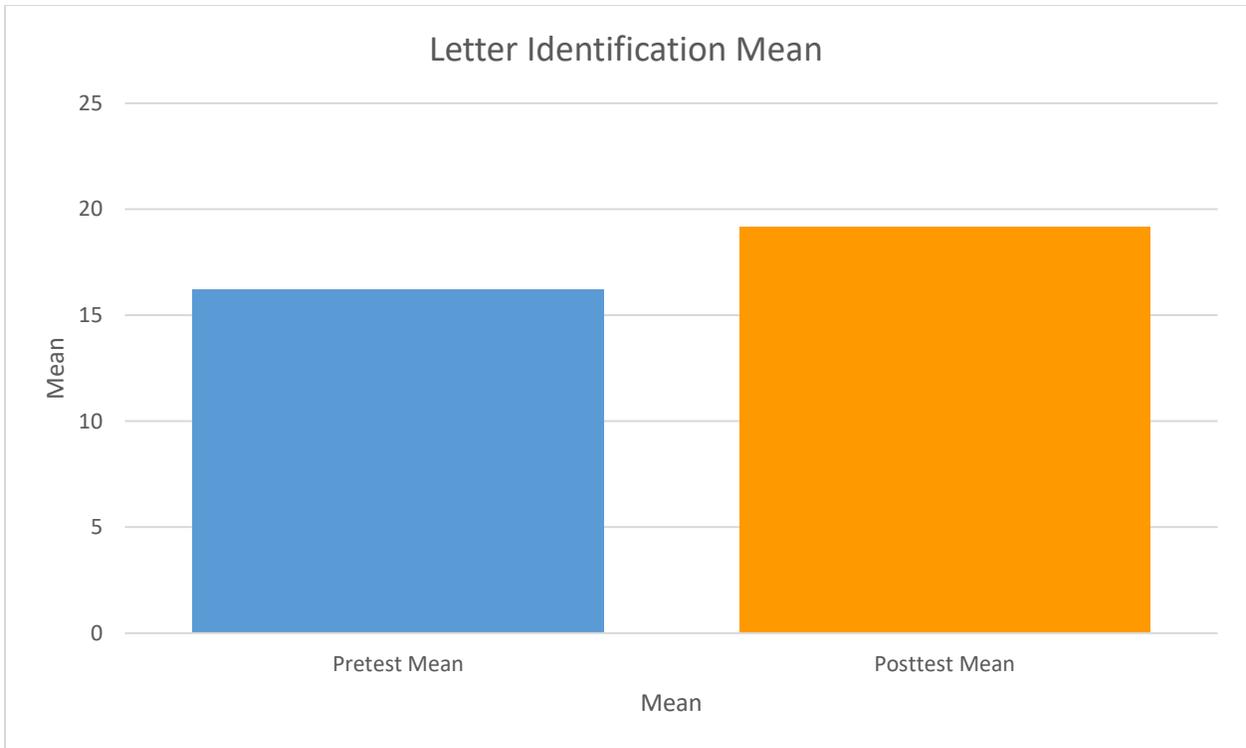


Figure 1. Mean Difference Letter Identification (n=14)

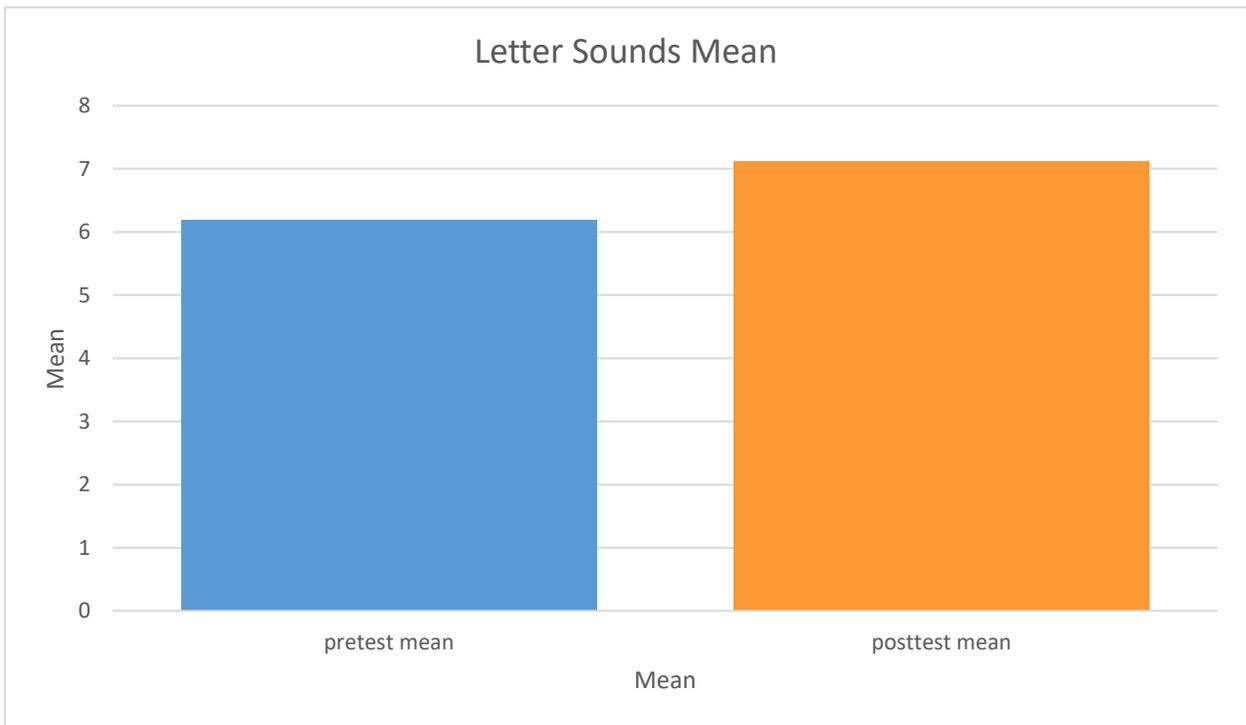


Figure 2. Mean Difference Letter Sounds (n=14)

## Discussion

### Summary of Major Findings

The purpose of this research was to see how visual phonics impacts English language learners. The results of the dependent t-test indicates that the implementation of visual phonics increases the knowledge of letters and letter sounds for English language learners. In preparation to start visual phonics in the classroom, data for pretest/baseline was taken to understand where these English language learners fell. Following the intervention, a posttest was given to see the gains the ELLs accomplished. When comparing pretest data to posttest data, the mean increased in letters by 8.07 points and increased in letters sounds by 4.85 points.

Although the data does not show how the participants used their visual phonics skills when taking the post-assessment, the researcher observed how the participants were using the skills they learned through this strategy to help them with identifying the letters and sounds. For example, when student #3 was completing the letter sound assessment, the letter c was shown and the researcher asked, “what sound does this letter make?” the student then proceeded to motion the hand cue for letter c (jerking a cupped hand forward once) while saying the sound of /c/. This intervention of visual phonics shows a positive impact on the participants to use the kinesthetic movement to help identify their letters and sounds.

The researcher was glad to see the positive results of how visual phonics impacted English language learners. All of the participants increased their recognition of letters (uppercase and lowercase) and letter sounds (lowercase). Although some students only increased by either one or two points, they still showed growth from their pre-assessment. The researcher was excited to see the students show this amount of growth in a nine-week period. The participants

showed more confidence when identifying letters rather than feeling uncertain. The students were positively impacted throughout this study. The researcher is continuing to implement this intervention strategy in the classroom daily.

### **Limitations of the Study**

Throughout the implementation of the research, it was apparent that limitations were present. One limitation of the study was the sample size. This research involved only 14 students to receive data, this can result in having difficulties relating to other researchers that may be implementing a similar study and their results.

Another limitation of the study is previous exposure to education. This is comparative to the students who had the opportunity to have exposure to letters and sounds before entering kindergarten to the students that have had zero. Out of the 14 students, only four students attended preschool.

An additional limitation is the lack of previously attained data on the given topic. There is only a limited amount of research for visual phonics. There is no information that puts together visual phonics and English language learners to support this study. There is research on visual phonics and English language learners individually, but not together, which causes a hindrance in the study.

Visual phonics intervention took place over a nine-week period. Although students participated in the practice of visual phonics, the results may have been altered if they were given a longer period and the opportunity to have more practice. If the study would have taken

course over an entire school year, the results may have differed significantly as the participants would have practiced more consistently over a nine-month period rather than just nine weeks.

### **Further Study**

Although the researcher is continuing to implement the intervention of visual phonics daily, there is future research that could be conducted. The researcher would like to conduct this study throughout an entire year of kindergarten. The researcher would observe and show data throughout their entire learning process to recognize letters and sounds from when they start kindergarten to when they end. Assessments would show the data of growth through the entire year using ESGI.

Future research could include using this study again but taking it a few steps further and looking into students who have had previous schooling and to those who have not. It would be interesting to see if there is more growth from one group from the other or vice versa. Future research could help determine results of where students fall and if they need more opportunities and practice to be more successful.

Additional research that could be conducted for this study includes having a larger sample size. The effect of having larger sample sizes can make the results of the study be more reliable and precise. Future research could also compare ELL students to non-ELL students to see if there is any significance in growth. These areas would be important to address since there is limited to no research involving these specific strategies.

### **Conclusion**

The researcher wanted to determine the impact of visual phonics on English language learners in kindergarten. The findings of this study suggest that visual phonics positively impacts English language learners and their recognition of letters and sounds. The results represent the increase of letters and sounds from the intervention of daily visual phonics. Kindergarten is a crucial year for learning the foundational skills of literacy. With the implementation of visual phonics, it allows for English language learners to gain these foundational skills needed for their academic learning. The researcher modeled and motivated the participants during this study.

This study included four different categories of research that included: visual phonics, English language learners, phonemic awareness and phonics, and incorporating movement. All of these played a part in this study to help with understanding how important visual phonics is for English language learners and their learning.

This study gives the validity to encourage the practice of visual phonics for teachers to use with their students. The correlation visual phonics has on recognizing letters and sounds gives students an opportunity to grow in their foundational skills. The participants can connect sound and print to make it possible to recognize letters and sounds. Visual phonics gives students the ability to learn their letters and sounds through a multisensory strategy and gives a better meaning to connecting to phonics.

### References

- Ashby, J., Dix, H., Bontrager, M., Dey, R., & Archer, A. (2013). Phonemic Awareness Contributes to Text Reading Fluency: Evidence From Eye Movements. *School Psychology Review, 42*(2), 157-170.  
<http://ezproxy.nwciowa.edu/login?url=https://www.proquest.com/scholarly-journals/phonemic-awareness-contributes-text-reading/docview/1415379571/se-2?accountid=28306>
- Barr, S., Eslami, Z. R., & Joshi, R. M. (2012). Core Strategies to Support English Language Learners. *The Educational Forum, 76*(1), 105-117.  
<http://ezproxy.nwciowa.edu/login?url=https://www.proquest.com/scholarly-journals/core-strategies-support-english-language-learners/docview/926834061/se-2?accountid=28306>
- Bradley, R. L., & Noell, G. H. (2018). The Effectiveness of Supplemental Phonics Instruction Employing Constant Time Delay Instruction for Struggling Readers. *Psychology in the Schools, 55*(7), 880–892. <https://doi.org/10.1002/pits.22148>
- Cihon, T. M., Gardner, Ralph, I., II, Morrison, D., & Paul, P. V. (2008). Using Visual Phonics as a Strategic Intervention to Increase Literacy Behaviors for Kindergarten Participants At-Risk for Reading Failure. *Journal of Early and Intensive Behavior Intervention, 5*(3), 138-155. <http://dx.doi.org.ezproxy.nwciowa.edu/10.1037/h0100428>
- Ehri, L. C., & Flugman, B. (2018). Mentoring Teachers in Systematic Phonics Instruction: Effectiveness of an Intensive Year-Long Program for Kindergarten through 3rd Grade

- Teachers and their Students. *Reading and Writing*, 31(2), 425–456.  
<https://doi.org/10.1007/s11145-017-9792-7>
- Gehris, J. S., Gooze, R. A., & Whitaker, R. C. (2015). Teachers' Perceptions about Children's Movement and Learning in Early Childhood Education Programmes. *Child: Care, Health & Development*, 41(1), 122–131. <https://doi-org.ezproxy.nwciowa.edu/10.1111/cch.12136>
- Elimelech, A., & Aram, D. (2020). Using a Digital Spelling Game for Promoting Alphabetic Knowledge of Preschoolers: The Contribution of Auditory and Visual Supports. *Reading Research Quarterly*, 55(2), 235–250. <https://doi.org/10.1002/rrq.264>
- Guo, K., & Georgiou, G. K. (2019). Are Reading Interventions for English Language Learners Effective? A Meta-Analysis. *Journal of Learning Disabilities*, 52(3), 220–231.  
<https://doi.org/10.1177/0022219419825855>
- Hall, C., Steinle, P. K., & Vaughn, S. (2019). Reading Instruction for English Learners with Learning Disabilities: What Do We Already Know, and What Do We Still Need To Learn? *New Directions for Child and Adolescent Development*, 2019(166), 145–189.  
<https://doi.org/10.1002/cad.20302>
- Kilbourne, J.R., Scott-Webber, L., & Kapitula, L. R., (2017). An Activity-Permissible Classroom: Impacts of an Evidence-Based Design Solution on Student Engagement and Movement in an Elementary School Classroom. *Children, Youth and Environments*, 27(1), 112–134.  
<https://doi.org/10.7721/chilyoutenvi.27.1.0112>
- McGee, L. M., & Richgels, D. J. (1989). “K Is Kristen’s”: Learning the Alphabet from a Child’s Perspective. *The Reading Teacher*, 43(3), 216–225. <http://www.jstor.org/stable/20200340>

Minnesota Academic Standards: Kindergarten (2021) English Language Arts: Kindergarten Reading. <https://education.mn.gov/mde/dse/stds/>

Montgomery, J. (2008). Dave Krupke: What Exactly is Visual Phonics? *Communication Disorders Quarterly*, 29(3), 177–182. <https://doi.org/10.1177/1525740108318413>

Mullender-Wijnsma, M. J., Hartman, E., de Greeff, J. W., Bosker, R. J., Doolaard, S., & Visscher, C. (2015). Improving Academic Performance of School-Age Children by Physical Activity in the Classroom: 1-year Program Evaluation. *Journal of School Health*, 85(6), 365–371. <https://doi.org/10.1111/josh.12259>

Narr, R. F. (2008). Phonological Awareness and Decoding in Deaf/Hard-of-Hearing Students Who Use Visual Phonics. *Journal of Deaf Studies and Deaf Education*, 13(3), 405–16. <https://doi.org/10.1093/deafed/enm064>

Ouellette, G. P., & Haley, A. (2013). One Complicated Extended Family: The Influence of Alphabetic Knowledge and Vocabulary on Phonemic Awareness. *Journal of Research in Reading*, 36(1), 29–41. <https://doi-org.ezproxy.nwciowa.edu/10.1111/j.1467-9817.2010.01486.x>

Piasta, S. B., & Wagner, R. K. (2010). Developing Early Literacy Skills: A Meta-Analysis of Alphabet Learning and Instruction. *Reading research quarterly*, 45(1), 8–38. <https://doi.org/10.1598/RRQ.45.1.2>

Rahn, N. L., Wilson, J., Egan, A., Brandes, D., Kunkel, A., Peterson, M., & McComas, J. (2015). Using Incremental Rehearsal to Teach Letter Sounds to English Language Learners. *Education & Treatment of Children*, 38(1), 71-91. <http://ezproxy.nwciowa.edu/login?url=https://www-proquest->

[com.ezproxy.nwciowa.edu/scholarly-journals/using-incremental-rehearsal-teach-letter-sounds/docview/1655685201/se-2?accountid=28306](http://com.ezproxy.nwciowa.edu/scholarly-journals/using-incremental-rehearsal-teach-letter-sounds/docview/1655685201/se-2?accountid=28306)

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>

Silverman, R. D. (2007). Vocabulary Development of English-Language and English-Only Learners in Kindergarten. *The Elementary School Journal*, 107(4), 365–383.

<https://doi.org/10.1086/516669>

Trezek, B. J., Wang, Y., Woods, D. G., Gampp, T. L., & Paul, P. V. (2007). Using Visual Phonics to Supplement Beginning Reading Instruction for Students Who are Deaf or Hard of Hearing. *Journal of Deaf Studies and Deaf Education*, 12(3), 373–84.

<https://doi.org/10.1093/deafed/enm014>

Webster, C. A., Michael, R. D., Russ, L. B., & Egan, C. A. (2019). Learning to Integrate Movement in Elementary Classrooms: Field Experiences of Preservice Classroom Teachers. *Physical Educator*, 76(3), 726-755. <http://dx.doi.org/10.18666/TPE-2019-V76-I3-8753>

*What is See the Sound - Visual Phonics?* Visual phonics page. (n.d.). Retrieved October 1, 2021, from [http://seethesound.org/visual\\_phonics.html](http://seethesound.org/visual_phonics.html).

Woolsey, M. L., Satterfield, S. T., & Roberson, L. (2006). Visual Phonics an English Code Buster? *American Annals of the Deaf*, 151(4), 452–457.

Zhang, W. (2017). Quality Matters: Content Literacy for English Language Learners. *Tesol Journal*, 8(1), 166–189. <https://onlinelibrary-wiley-com.ezproxy.nwciowa.edu/doi/full/10.1002/tesj.266?sid=worldcat.org>