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THE CORRELATION BETWEEN PHONOLOGICAL AWARENESS, PHONEMIC AWARENESS, AND PHONICS SKILLS AND EFFECTIVE READERS IN FIRST GRADE.

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**THE CORRELATION BETWEEN PHONOLOGICAL AWARENESS, PHONEMIC
AWARENESS, AND PHONICS SKILLS AND EFFECTIVE READERS IN FIRST
GRADE.**

by

Olivia Di Dio

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Introduction

The topic for this research paper is the correlation between students' phonological awareness, phonemic awareness, and phonics (decoding) skills and the impact of those skills on becoming effective first grade readers.

When students enter first grade, they should have a basic understanding of certain skills that allow them to learn phonics. This makes it possible to become fluent readers. These skills include phonological and phonemic awareness. First grade is a crucial year for students' reading development. According to Fountas and Pinnell's levels of reading for elementary students, first grade students will grow seven levels during the school year (from level C - I). In comparison, other elementary grade levels have the expectation of growing four to five levels. Since first grade reading instruction is crucial for students' success as learners, the topics of phonological awareness, phonemic awareness, and phonics instruction are critical in understanding how students can become effective readers.

This is my ninth year teaching first grade, I have taught in three different countries, at three international schools. During this time I have worked with different reading and phonics programs. I have observed and worked with students who have struggled with learning to read, along with students who have exceeded first grade expectations for reading. I have explored and applied different strategies for teaching reading that have included phonological awareness, phonemic awareness, and phonics.

When I became a first grade teacher at The American School Foundation of Monterrey (ASFM) in 2019 I began my experience with Lucy Calkins. It started with the Units of Study for reading and writing. In the 2020-2021 school year, ASFM implemented the Phonics Units of Study in first grade. The curriculum is used as a guide rather than a script. Teachers have autonomy to adjust unit plans and to make changes to the Units of Study to meet the needs of their students. In January, 2021 I attended the Lucy Calkins phonics institute to become more familiar with the program and how to best implement it inside my own classroom.

Before attending the phonics institute I was feeling very defeated and frustrated with the Phonics Units of Study. As I got to know my students as learners, it was clear through observation and beginning of the year assessments that many students did not have phonological awareness or phonemic awareness skills needed to support the phonics program. When my students were in Kindergarten they had learned phonics through the Lucy Calkins' Phonics Unit

of Study. It became clear that they still had not mastered the phonics skills necessary for success in first grade. To support my students' learning needs, I began to use supplementary lessons in phonological awareness and phonemic awareness to start each lesson.

When attending the phonics institute I learned about the what, how, and why of the program. I learned how to manipulate the program to fit my students needs and learned through one of the authors leading a session that some lessons need revising. As I built a stronger understanding of the program, I took note of the missing pieces that I would need to continue to add to support my learners.

The goal of this study was to get a better understanding of the impact of phonological awareness, phonemic awareness, and phonics decoding by gathering data throughout the course of the 2021-2022 school year as first grade students were engaged in instruction to become effective readers.

The 19 students in this study are first graders at The American School Foundation of Monterrey, Mexico (ASFM). Of the 19 students, 17 are English Language Learners (ELL) whose primary language is Spanish. These students speak in Spanish while at home, in sports, and in almost all social situations. However, their academic instruction in first grade is given primarily in English. All 19 students in this study have been at ASFM prior to first grade and have received instruction in English. The students' were together in Kindergarten where they learned with a teacher that is an English as a Second Language (ESL) speaker completely via zoom. These dynamics are important to this study as phonological awareness and phonemic awareness can begin to be acquired through exposure of the spoken language with proper syntax.

The two first grade students in this study who do not fit into the description above are students whose parents speak English at home and prior to Kindergarten have received learning in the United States of America. These two students have different educational experiences than their 17 peers prior to ASFM that have influenced their learning of phonological awareness, phonemic awareness, and phonics development.

A typical day for the first grade students in this study is to receive the majority of their learning instruction in English from their homeroom teacher. This instruction includes; reading, writing, phonics, math, science, and Social Emotional Learning (SEL). Students' specialist classes such as Art, Music, Physical Education, and Technology are also typically taught in

English. For forty-five minutes a day students go to Spanish class, where they are learning reading, writing, and some history in Spanish.

During this study the school year schedule fluctuated from online learning to in person learning. For the first month of school, students were receiving online learning via zoom with two hours of instruction a day. Students then received hybrid learning, half of the day was in person with half of their peers. During the hybrid model, students were in school for four hours a day with the homeroom teacher, with a one hour break for snack and recess. They spent the rest of their day online at home receiving Spanish and specialist classes via Zoom.

For the majority of the year following hybrid learning students were in person Tuesday - Friday for seven hours a day, Monday students were online via Zoom for two hours. When in person Tuesday - Friday a typical day for first graders started at 8:00 am and ended at 2:20 pm. During the day students are with their homeroom teacher, except for two forty-five minute blocks where they attend a specialist class and a Spanish class.

Review of Literature

In 2019 the The National Assessment of Educational Progress (NAEP) found that only 35% of fourth graders were proficient readers. According to an article titled *Phonemic Awareness vs. Phonics* written by Marjorie Bottari, a literacy specialist for Heggerty, an educational program that provides programs in literacy instruction, there are two major instructional contributors to this literacy gap (June 2020). The first being that students are not explicitly taught phonemic awareness or phonics, resulting in students memorizing words as whole units. The result of this is that students are not equipped with strategies to decode words in text as they become more complex. The second contributing factor is that students are taught phonemic awareness and phonics, but only with a basic level of instruction in blending and segmenting. The result is that children are unable to read effectively and/or fluently with complete comprehension of the text. They are too focused on decoding each word, that the content of the text becomes lost.

The National Council on Teacher Quality (NCTQ) found that only 20 states in the United States of America have teacher testing that ensures teachers knowledge on the Science of Reading. They concluded that many teachers in the early grade levels do not have the knowledge of best practices to instruct their students in phonics, reading, and comprehension. This is

another factor that contributes to the learning gap in students' ability to read effectively in later grades.

In *What is Phonological Awareness and Phonemic Awareness* Bottari (2020), explains the importance of the complementary nature of phonological awareness, phonemic awareness, and phonics instruction in elementary reading instruction. The ability to hear and manipulate sounds and phonological awareness, is the foundation of literacy. After phonological awareness is phonemic awareness, which is the ability to break apart words into phonemes (individual sounds). Lastly, phonics instruction begins. Bottari concluded that in order for students to start learning phonics, they need to have been explicitly taught phonological awareness and phonemic awareness. Both phonological awareness and phonemic awareness focus on hearing and the manipulation of sounds. These are precursors to phonics instruction, or learning that letters and groups of letters represent the sounds. All of which are needed for students to become effective, independent readers.

Lucy Calkins' Units of Study for reading, writing, and phonics is a common balanced literacy approach, meaning that some phonics is taught but it is often limited or incomplete. This program is used by schools and educators around the world, including The American School Foundation of Monterrey (ASFM). Education Weekly (EdW) has reported that these Units of Study do not explicitly teach phonological awareness or phonemic awareness. Rather the balanced literacy approach teaches reading through visual cues, along with using the context and syntax of the sentence to decode words, resulting in students looking at the beginning letter and guessing the unknown words (Schwartz, 2020).

In an article for EdW, Schwartz quotes Wiley Belvins, an expert in phonics instruction, who explains that in her practice she has observed that it takes four to six weeks for students to master a new phonics pattern and even longer to apply it to their reading and writing practices. The article also discusses the importance of differentiating instruction for individual students, explaining that students who come in with phonological awareness and phonemic awareness do not need more instruction in these areas, while students without these skills need explicit instruction in these areas to be successful in phonics learning and application.

An EdW study found that the Lucy Calkins' program is the third most widely used curriculum in the United States and is also used in over 30 other countries, including Mexico. When reviewing the Lucy Calkins balanced literacy approach to reading and writing,

EdW explains that decades of research has shown that students need explicit instruction in speech sounds and their correspondence to written letters. This is contradictory to what Lucy Calkins has been promoting for years. In fact, Lucy Calkins has continually downplayed the importance of these foundational skills and continues to push instruction strategies that have been disproven (Schwartz, 2020).

In the past few years, states have begun to change their legislation and expectations for teachers in grade K-3, requiring more education in the Science of Reading, pushing Lucy Calkins curriculum and balanced literacy approaches out of the classroom.

In 2019, Arkansas passed legislation to remove the programs like Lucy Calkins and Fountas and Pinnell from schools, along with any programs that support cueing instruction rather than explicit instruction in literacy (Hanford, 2020). Other states have begun to do the same, as the literacy gap in readers continues to get larger. The approach of instruction that focuses on cueing teaches students to look for picture clues and guess words based on the beginning sound, resulting in students' brains being unable to explicitly learn sound patterns, the skills needed for decoding. In response to these legislative changes, Lucy Calkins has made statements inferring that her balanced literacy program needs "rebalancing"(Hanford, 2020).

Research Purpose

The purpose of this study was to get insight related to the literacy instruction and the connection between phonological awareness, phonemic awareness, and phonics for fluent reading. The research includes examinations of students' prior knowledge of phonological awareness, phonemic awareness, and phonics decoding skills, along with their ability to read grade level text. Students received daily instruction in literacy through modified Lucy Calkins' Units of Study in reading, writing, and phonics. Some adaptations and supplemental resources were used to support this curriculum. As the data was collected the instructor made adjustments to the instruction to fill gaps in phonological awareness, phonemic awareness, and phonics decoding skills to give students the tools needed to be effective, fluent readers.

Research Questions

- Is there a correlation between first grade students' phonological awareness and phonemic awareness abilities and their phonics decoding skills and their ability to read text effectively?
- Do first grade students need phonological awareness and phonemic awareness to be effective readers?
- Does the knowledge of phonological awareness and phonemic awareness mean first grade students will be able to learn phonics decoding skills for reading more efficiently?

Hypothesis

- There will be a correlation between first grade students' knowledge of phonological awareness, phonemic awareness, and phonics decoding. These skills will be parallel when assessed in the beginning, middle, and end of the school year. Students who score high, average, or low in one area will score high, average, or low in all areas.
- First grade students need knowledge of phonological awareness and phonemic awareness to be effective readers.
- First grade students with knowledge of phonological awareness and phonemic awareness will have more success with the phonics instruction when paired with phonological awareness and phonemic awareness instruction.

Variables

Dependent Variables

1. Phonological awareness and phonemic awareness as measured by the Assessment of Phonological Awareness by Lucy Calkins
2. Phonics decoding skills as measured by Phonic Blending word list by Lucy Calkins
3. Reading levels as measured by formal running records.

Independent Variables

1. Lucy Calkins Phonics Units of Study
2. Instruction by teacher and researcher

Methodology

In the beginning of the research process, the descriptive design model was used to gather demographic information about the first grade students inside the classroom. This was obtained through a survey given to parents asking for information about their child's educational background, home life, and parents' literacy observations. The researcher also gathered data from the students' Kindergarten teacher through a questionnaire to learn more about the students' previous education in phonological awareness and phonics. This also included students' end of the year Running Record scores from Spring 2021.

The research design that was used inside the classroom from the researcher and teacher was the action research design. In the beginning of the school year, September 2021, pre-assessments were given in phonological awareness and phonemic awareness, phonic blending, as well as a Fountas and Pinnell Running Record to identify students' prior knowledge. Through this data, intervention and teaching of these literacy concepts was taught through whole group, small group, or individual instruction. Data was continuously and constantly collected with a combination of observations and assessments by the researcher. This data was then analyzed and the instruction was adjusted based on that analysis.

At the end of the study, students were given these assessments or similar ones with the same skills to see if there was a correlation between phonics skills and the ability to read in text to phonological and phonemic awareness knowledge. The data will also show if students are able to effectively read without strong phonological and phonemic awareness. In addition, some students might demonstrate strong phonological and phonemic awareness skills but do not have the phonics decoding skills to read text.

The instruments used to collect data were adjusted from the original proposal due to ASFM assessment expectations and so as not to over assess and overwhelm students.

The phonological awareness and phonemic awareness assessment tool that was used in place of the Heggerty assessment is *Assessing Phonological Awareness* from Lucy Calkins' Phonics Units of Study. This tool assesses the same skills as the Heggerty tool. It asks students to recognize and produce rhymes, take words apart and put words together through segmenting and blending, and manipulate phonemes by adding, deleting, and substituting.. In each of these areas the skills start with compound words, then get more complex by moving into syllables, and then to individual sounds. This assessment tool was given to students individually at the beginning of the school year, September 2021, and again at the end of the school year, May 2022.

The instrument used in place of Foundational Skills Assessment by Really Great Reading to gather data on students' phonic blending was replaced by four different phonic blending assessments by Lucy Calkins' Phonics Units of Study. At the beginning of the school year students were individually given the Kindergarten Phonic Blending word list. This consisted of 40 words with short vowels, blends, and digraphs. Half of the words were real words and half of the words were nonsense words. Throughout the school year students were assessed individually with three other phonics blending word lists focusing on different phonics patterns. These phonics patterns were silent e, vowel teams, and R-controlled vowels. Students were reassessed on previous phonic blending word lists before moving on to the next list to ensure understanding of the previous skill.

The tool that was used to measure students' effective and fluent reading abilities was the Running Record books from Fountas and Pinnell. Students were assessed with this instrument three times throughout the school year in September 2021, January 2022, and May 2022. For this study we will look at their beginning of first grade results from September 2021 and their ending results from May 2022. The reason for omitting the data collected in January 2022, is due to an observation that the expected level G book provided from Fountas and Pinnell had many phonic patterns that had not been explicitly taught at this time of year. This resulted in many students' levels being considered below the Fountas and Pinnell expectation. Students had shown significant growth on the phonic blending instrument and through the researchers observation of students reading abilities in decodable text. Since the Fountas and Pinnell books do not align with the phonics instruction, it is an inaccurate representation of student performance. The chart below from Fountas and Pinnell is provided by the Running Record program for teachers to monitor growth compared to grade level expectations.

Fountas and Pinnell										
Instructional Text Level Goals										
GRADE	MONTHS OF THE SCHOOL YEAR									
	1	2	3	4	5	6	7	8	9	10
K	-	-	-	A	A/B	B	B	C	C	C
1	C/D	D	E	E/F	F	G	G/H	H	I	I
2	I/J	J	J	J/K	K	K/L	L	L	M	M
3	M/N	N	N	N	O	O	O	P	P	P
4	P/Q	Q	Q	Q	R	R	R	S	S	S
5	S/T	T	T	T	U	U	U	V	V	V

As you can see in the chart, first grade students are expected to enter first grade reading a Fountas and Pinnell level C/D. By month five, January, students are expected to be reading level G. At the end of first grade, the expectation is level I. This chart is an important reference when looking at the findings of this study.

During this study the researcher and teacher used the results of each assessment to adapt whole group instruction, create small groups, and cater to individual students' needs. The expectation at ASFM is to use the Lucy Calkins Units of Study for reading, writing, and phonics. The teacher in this study has adapted and changed many parts of the reading and phonics units for instruction based on the review of literature. One change included the amount of instructional time given to phonics vs. reading. For the majority of the year the phonics instruction was the major focus. Students received an average of 75 minutes of phonics instruction each day. The reading for comprehension instruction was less, with approximately 90 minutes of instruction per week. The reason behind this shift is to focus on phonics to provide students with the tools they will need for independent effective reading. Rather than teaching reading comprehension and expecting students to comprehend text that they are struggling or unable to read independently.

Another adaptation the researcher and teacher made was restructuring the Lucy Calkins' Phonics Units of Study to better meet students' needs. This was done by omitting, reorganizing or stretching out lessons within the units, using the Lucy Calkins' Phonics Units of Study as a guide rather than an instructional script. In addition, the teacher added phonological awareness and phonemic awareness lessons to the phonics learning each day, as the Lucy Calkins' Phonics Units do not have explicit phonological awareness and phonemic awareness embedded in the units.

The phonological awareness and phonemic awareness lessons were given using tools such as Elkonin Boxes. Explicitly teaching the sounds before, during and after showing the letters that corresponded. For example, when looking at the word *teacher* students would study the sounds. First by counting syllables and then by counting the sounds with the Elkonin Boxes. In the word *teacher* we hear two syllables and four sounds, but the word has seven letters. Students were explicitly taught digraphs, vowel teams, and R-controlled vowels along with the understanding that each syllable in a word must have a vowel. With this knowledge students can then represent the sounds using the sound to syllable knowledge they have learned.

When looking at words that do not follow the typical sound and/or spelling patterns the Lucy Calkins' Phonics Units of Study calls these words snap words. Throughout the five units provided for phonics, some lessons have snap words for teachers to show and for students to memorize. The research from the review of literature discredits this approach, so the researcher and teacher restructured the teaching approach of the 120 snap words provided. Instead of asking students to memorize these words at what is observed to be random times throughout the year, the words were reorganized based on sound patterns and explicitly taught during the phonics lesson it matched.

Instruments

Beginning of the Year

[Assessment of Phonological Awareness](#) by Lucy Calkins' Phonics Units of Study for first grade will be administered to all students in the study. This assessment, though titled *phonological awareness*, is an in depth assessment that measures both phonological awareness and phonemic awareness through a variety of questions. This assessment was administered to each student individually.

[Assessing Phonic Blending](#) by Lucy Calkins' Units of Study for the end of kindergarten will be administered to all first grade students in the study, individually. Students who miss 10+ in the first set of words will stop the assessment after the first set and will be given the [Letter Sounds Assessment](#).

Running Records by Fountas and Pinnell, will be administered to all students in the study individually. Teacher and researcher will cover the pictures in the book while the students read the text, revealing pictures after the page is read. To ensure students are decoding words and not using pictures to guess.

Middle of the Year

Assessing Phonic Blending by Lucy Calkins' Units of Study.

Unit 2, Mystery of the Silent e - November 2021

Unit 4, Vowel Teams - March 2022

Unit 5, R-Controlled Vowels - May 2022

Running Records by Fountas and Pinnell, will be administered to all students in the study individually. Students will be given a leveled book to read until instructional level, number of

appropriate errors as indicated by the scoring sheet. The appropriate level for the middle of first grade is level G.

End of the Year

[Assessment of Phonological Awareness](#) by Lucy Calkins' Phonics Units of Study for first grade will be administered to all students in the study. This assessment, though titled *phonological awareness*, is an in depth assessment that measures both phonological awareness and phonemic awareness through a variety of questions. This assessment was administered to each student individually.

Running Records by Fountas and Pinnell, will be administered to all students in the study individually. Students will be given a leveled book to read until instructional level, number of appropriate errors as indicated by the scoring sheet. The appropriate level for the middle of first grade is level I.

Project Timeline

Approve study with parents and administrators - August 2021

Historic and Descriptive research - August 2021

Parent Surveys - sent home first week of school

Kindergarten teacher survey

Pre-assessment - September 2021

Assessment of Phonological Awareness

Phonic Blending (Kindergarten list)

Fountas and Pinnell Running Records

Analysis of data and instruction - September - December 2021

Mid-Year Assessments

Assessing Phonic Blending by Lucy Calkins Units of Study.

- Unit 2, Mystery of the Silent e - November 2021
- Unit 4, Vowel Teams - March 2022
- Unit 5, R-Controlled Vowels - May 2022

Fountas and Pinnell Running Records

Analysis of data and instruction - January - May 2022

End of Year Assessments - May 2022

Assessment of Phonological Awareness
 Fountas and Pinnell Running Records
 Final Data Analysis - May / June 2022

Findings

At the beginning of the study the researcher asked the 19 families of the students what language was spoken at home, to get information about what students' social language is outside of the classroom, as well as to understand how much exposure students have had to English. It was stated that 17 of the 19 students speak Spanish at home, of these 17 students two of them also speak a third language, Portuguese, occasionally at home and/or get Portuguese instruction after school. The two students who do not speak Spanish at home have relocated to Mexico from the United States of America and their primary language at home is English, but it is important to note that both of these students have either one parent or both parents whose first language is Spanish.

A questionnaire was also given to the students previous teacher, a Kindergarten teacher who taught all 19 students last year via zoom. The questionnaire asked five questions about phonological awareness and phonics instruction provided by the teacher during the 2020 - 2021 school year, here are the answers:

Question:	Response:
Did you teach phonological awareness explicitly? If yes, what types of curriculum or activities?	I taught syllables, rhyme, phone blending, segmenting.
Did you teach phonics explicitly? If yes, what types of curriculum or activities?	Yes, I used the Phonics program Units of Study by Lucy Calkins
Approximately how often did you deliver phonics and / or phonological awareness instruction a week?	3 times a week for 30 minutes
What assessments, if any, did you use to monitor the learning of phonics and / or phonological awareness?	Letter Name and Sounds, for upper and lower case letters
Any other information about the teaching and learning of phonological awareness and phonics that is important to know?	We started teaching phonics on the understanding that students came with the knowledge, were already taught on rhyming

	words, alliteration, sentence segmentation, segmenting and blending.
--	----------------------------------------------------------------------

The first assessment students were given in September 2021, was the Assessment of Phonological Awareness by Lucy Calkins. This tool assessed a variety of phonological awareness and phonemic awareness skills. Below shows the class average percentage of success in each skill from the 19 students assessed.

Rhyme Recognition	Rhyme Production	Blending	Segmenting	Adding	Deleting	Substituting
89.5%	73.7%	91.5%	78.9%	84.2%	76.1%	57.9%

The two areas that students were most proficient in were rhyme recognition and blending, this data matches the information provided by the students’ kindergarten teacher in her response to the questionnaire about what types of phonological awareness skills students were taught the year before the study.

Students were then assessed in their ability to read CVC and CCVC words in isolation with the end of Kindergarten Phonic Blending Assessment. This assessment consisted of 40 words and was administered to students individually. If students were unable to read the first 10 words automatically or with effort (sounding it out) the assessment was terminated. Following the Phonic Blending assessment students were assessed using the Fountas and Pinnell running record books. The chart shows how many words each student reads correctly by reading it automatically, with effort (sounding out), or self correcting. The fifth column shows if the teacher terminated the assessment due to students inability to read the first set of ten words. The last column of this chart shows the individual students' Running Record scores from the Fountas and Pinnell books. BA stands for Below A, which means that the student was unable to read the level A book. In the column “Read Automatically” the boxes in red indicate that the student was unable to read 80% or more of the words on the assessment with automaticity.

	Read Automatically	Read correctly with effort	Misread then self corrected	Stopped	Running Record Level Sept. 2021
STUDENT A	0	7	0	at CVC	BA
STUDENT B	18	10	0		BA
STUDENT C	11	2	0	at CVC	BA
STUDENT D	35	1	0		G
STUDENT E	36	1	0		J

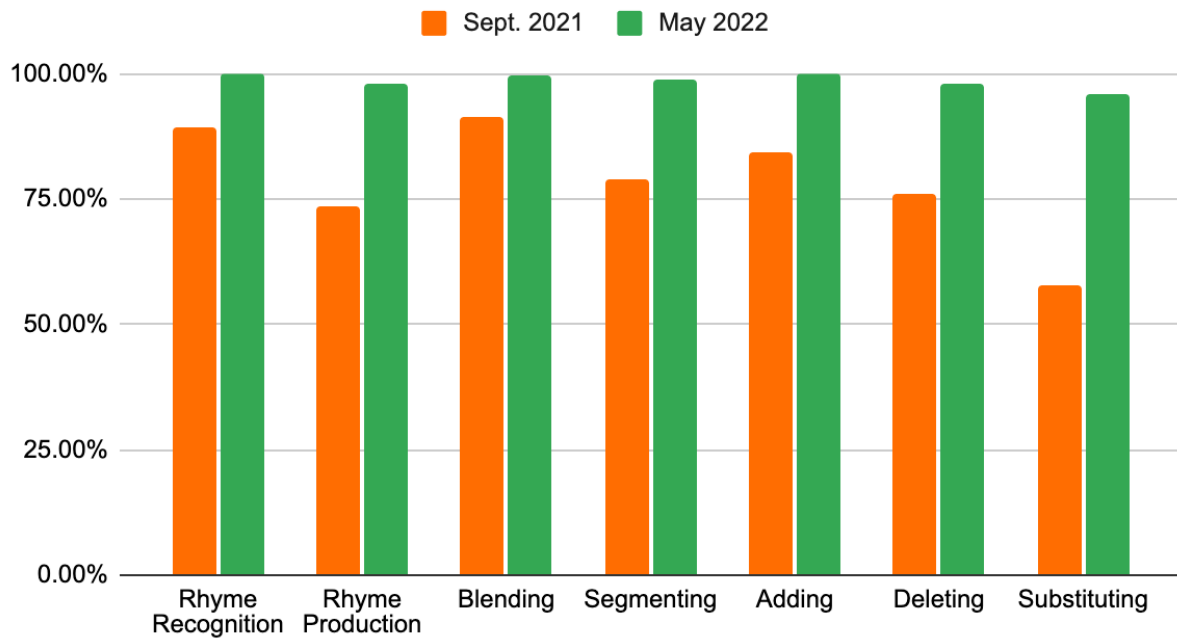
STUDENT F	39	0	0		I
STUDENT G	17	4	1		BA
STUDENT H	9	9	1		C
STUDENT I	39	0	0		J
STUDENT J	9	25	0		BA
STUDENT K	14	9	0		BA
STUDENT L	32	0	0		E
STUDENT M	12	3	0		BA
STUDENT N	36	0	0		G
STUDENT O	0	3	0	at CVC	BA
STUDENT P	27	6	0		D
STUDENT Q	11	5	0		A
STUDENT R	18	2	0		E
STUDENT S	25	0	1		D

When looking at all the beginning of year data, there are some important observations that stand out in relation to this study. Out of 19 students assessed 13 of them were unable to read 80% of the words or more automatically. These students were also at or below the expected level C/D on their running record, with the exception of Student R.

Throughout the year, students were reassessed on the phonic blending assessment above, all students scored 100% accuracy of reading the 40 words in isolation by December 2021. Students then were given phonic blending assessments with ten words three other times. These word lists matched the phonics skills that were being explicitly taught and included word lists around silent e, vowel teams, and R-controlled vowels. They were quick check-ins that provided the researcher and teacher with information to guide the instruction. By the end of the year all students scored 100% accuracy on all four phonic blending assessments.

At the end of the year students were given the phonological awareness assessment again. The graph below shows the 19 students averages from the beginning of the year, in orange, and the end of the year, in green.

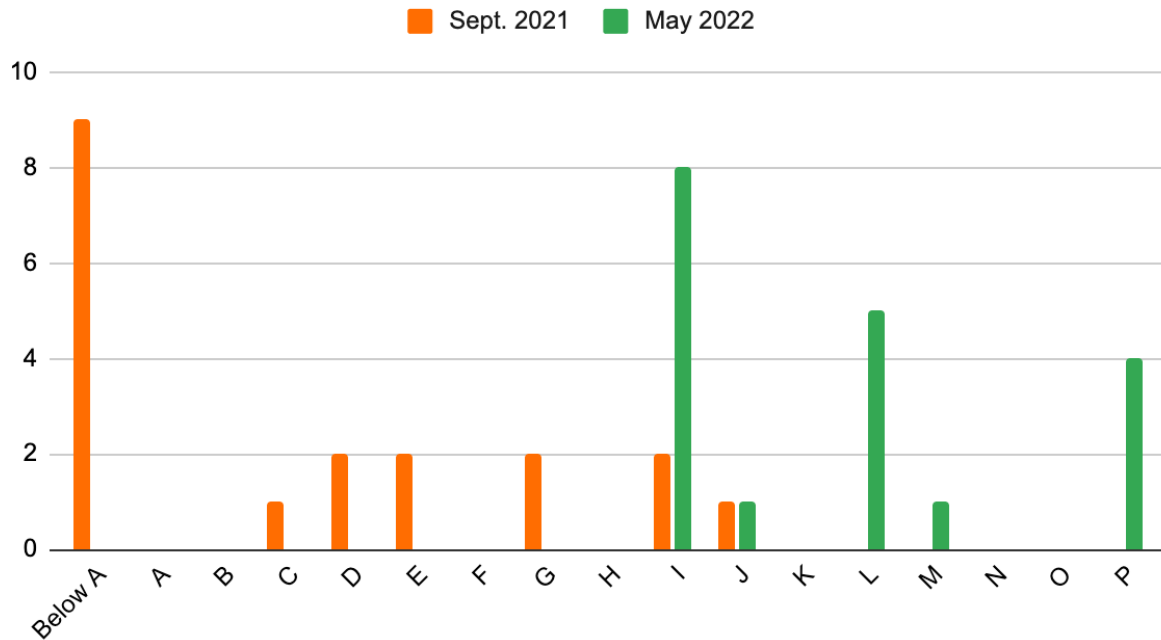
Assessment of Phonological Awareness



	Rhyme Recognition	Rhyme Production	Blending	Segmenting	Adding	Deleting	Substituting
Sept. 2021	89.47%	73.68%	91.48%	78.95%	84.21%	76.14%	57.89%
May 2022	100.00%	98.00%	99.50%	99.00%	100.00%	98.00%	96.00%

The data shows significant growth in every phonological awareness and phonemic awareness skill assessed, with no skill average being less than 95% accuracy at the end of the year. The next graph below shows students' Running Record scores from the beginning of the year to the end of the year.

Running Record Levels



When students' phonological awareness and phonemic awareness became stronger, students' reading levels also increased. This data directly supports the importance of phonological awareness and phonemic awareness skills being taught with phonics to allow students to become effective readers. As you can see from the Running Record Levels graph above there were seven students who entered first grade reading at or above the beginning of first grade expectations. Below is the individual Assessment of their Phonological Awareness data from the beginning of the year, along with their running record levels from September 2021 and May 2022.

	Rhyme Recognition	Rhyme Production	Blending	Segmenting	Adding	Deleting	Substituting	Sept. 2021 RR Level	May 2022 RR Level
STUDENT D	100%	40%	95%	90%	100%	73%	83%	G	P
STUDENT E	100%	100%	100%	90%	100%	100%	100%	J	P
STUDENT F	100%	100%	95%	81%	100%	100%	58%	I	P
STUDENT I	100%	80%	100%	86%	100%	100%	92%	J	P
STUDENT L	100%	100%	95%	90%	75%	80%	83%	E	L
STUDENT N	100%	100%	100%	100%	100%	100%	100%	G	L
STUDENT R	80%	40%	71%	43%	100%	93%	67%	E	L

Of the seven students who were able to read above the expected Running Record level for the beginning of the year four of them have skills from the Assessment of Phonological Awareness

that are below 80% accuracy. At the end of the year all of these students made significant growth on their Running Record reading level and scored 100% accuracy on all skills, except for student R who had two errors, one in rhyme production and one in segmenting.

The data and evidence from this study supports the teaching methodology, ensuring that when students are explicitly taught phonological awareness and phonemic awareness with phonics, students' ability to be effective readers increases. At the beginning of the year 9 out of 19 students were unable to read the level A text, meaning these 9 students were unable to read words and/or sentences. At the end of the year 100% of the students in this study can read a level I text or above with fluidity and comprehension.

Other Considerations

A limitation of this study is that it only looks at students in one of the eight first grade classrooms at ASFM. The teacher in this classroom is a native English speaker who has studied phonological awareness, phonemic awareness, and phonics through different course work, including the Lucy Calkins' Phonics Teachers College. Of the 19 students in this study, there were no students who have been diagnosed with a learning disability or are on an Individual Education Plan (IEP), meaning that no students in this study received outside services nor have any diagnoses that may have directly affected their learning.

To guard against any biases the other seven teachers on the first grade team were asked to complete a survey about their phonics and phonological awareness instruction, along with their students demographics, and their students' end of the year Running Record scores. That information provided a deeper understanding of the data from this study, as it showed that almost all classrooms outside of this study had students who received services for phonics and reading and/or had students with diagnosed learning disabilities. It also showed that classrooms outside of this study were spending less instructional time on phonological awareness and phonics instruction than the class in the study. The combination of these two factors have resulted in their May 2022 running record scores having more students below the expected Level I.

One challenge in this study was the use of masks during instruction and occasionally during assessments. This study focuses on sounds which can be mumbled or misinterpreted when the speaker is wearing a mask. For the assessments, the researcher and teacher used a plexiglass barrier to allow students and the teacher to be unmasked, but even without the mask the

plexiglass could also make it challenging for the teacher and students to hear one another clearly. When the teacher could not hear the students clearly or vice versa, the teacher repeated instructions or the word, which could have given students more prompting than the assessments suggested.

Recommendations

To further this study and to get more information about the topic, data should be collected on students' spelling abilities. It was observed in this study that students who started with strong reading abilities but were missing some phonological awareness skills were weaker spellers. These observations came from other assessments students performed throughout the year from the Phonetic Spelling Assessment by Lucy Calkins. Two different versions of this assessment were given to students to assess their ability to spell the phonics patterns taught throughout the units. This data is not in this study, but since phonological awareness, phonemic awareness, and phonics skills directly correlates to both reading and writing that data could give a more complex understanding of how these skills support both effective reading and effective spelling.

Another recommendation would be to start this study and instruction with students in kindergarten through second grade to see the possible benefits of the phonological awareness and phonics instruction. This study showed that phonological awareness and phonemic awareness instruction supported students' ability to become more effective readers in first grade. Extending the study beyond first grade may give more insight to the correlation between effective reading and phonological awareness, phonemic awareness, and phonics instruction.

Conclusion

This study provided phonological awareness, phonemic awareness, and phonics and effective reading data about 19 first grade students at The American School Foundation of Monterrey, Mexico. The results of this study showed that as students progressed in their understanding of phonological awareness and phonemic awareness, they became more effective readers. When students have the ability to manipulate sounds and syllables in words rather than memorizing complete words, they have greater success in reading more complex text.

Definitions

Lucy Calkins Phonics Unit of Study: a clear set of expectations and curriculum that will be given to the students. Within the program, the units will teach students the phonics skills appropriate for first grade reading development.

Fountas and Pinnell: a set of books ranging from level AA to ZZ used to assess a student's ability to read and comprehend fiction and nonfiction text. Along with a scoring guide and range in which students in each grade level should be proficient.

Phonological Awareness: the ability to hear and manipulate sounds in spoken language (ex. Rhyming, breaking apart compound words, syllables, onset rime).

Phonemic Awareness: the ability to hear, identify, and manipulate phonemes, individual sounds, in spoken words (ex. CAT, /C/ - /A/ - /T/)

Phonics: the ability to identify and use individual letters or groups of letters to represent sounds.

English Language Learners (ELL): students (or individuals) whose first language is not English but their second language that they are learning. Typically, and for this study, English is not the primary language used in social settings or at home.

CVC Words: words that follow the consonant, vowel, consonant pattern with the letter sounds in that word using the regular sound for that letter. (example: CAT, nonexample: HAS /h/ - /a/ - /z/)

Nonsense Words: words that follow a regular spelling sound pattern but are not real words that hold meaning in the English language (example: TIZ)

Differentiate Instruction: teacher instruction given to students individually or in small groups that meet the specific needs of the learners.

Small Group Instruction (SGI): instruction given to students in a small, no more than 5, heterogeneous or homogeneous group.

Supplemental Activities or Instruction: activities or instruction being given by the teacher outside of the prescribed curriculum to meet students' learning needs in a specific area.

High or Exceeding Expectations: students who have more than the expected level of understanding for first grade literacy standards.

Average: students who have the expected level of proficiency in first grade literacy and continue to meet those standards as new skills are developed and taught.

Low or Below: students who are not meeting the grade level expectations for literacy prior to first grade and possibly throughout first grade as new skills are developed and taught.

High, Average, Below labels are fluid and can change throughout the course of the school year as instruction and learning take place.

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