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Phonics in Kindergarten: Introducing Digraphs Using Scaffolding and Manipulatives

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Phonics in Kindergarten: Introducing Digraphs Using Scaffolding and Manipulatives

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University Honors Capstone

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Senior Honors Project/Thesis

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Abstract

In my capstone project, I incorporated multiple strategies that supported students' learning of and engagement with lessons on three digraphs: sh, th, and ch. My objective was not to teach to mastery, but instead to expose students to higher level literacy concepts and build their background knowledge for future lessons. Based on student artifacts, students gained multiple opportunities for exposure and practice of reading and writing words with digraphs. The assessment data does not directly support an improvement in student performance with independent writing. This capstone will highlight the instructional and assessment strategies I used, the data I collected, and my analysis of the data.

Keywords: digraphs, manipulatives, scaffolding, E-portfolio

Background

I was placed in a kindergarten classroom at Westbrook Elementary for the first half of my clinical practice. Westbrook Elementary is in the Westside Community Schools district and has 549 students and 32 certified teachers. The student-to-teacher ratio is 17:1. Westbrook Elementary is a Title I school, as 65% of the enrolled students (PK-6) are "economically disadvantaged," according to US News. 48% of the student body at Westbrook are minority students. The classroom I taught in had 18 students, one certified teacher, one classroom nurse who served a student who received medical services, and a rotation of teacher aides and paraprofessionals. I worked alongside Lacey VanRoy, an experienced teacher of 10 years who supervised and collaborated with me throughout my student teaching practice in her classroom.

Introduction

The goal of my unit was to provide my small group of students the opportunity to engage with more challenging content than they were encountering in the whole group setting. I decided to focus on digraph blends, specifically sh, th, and ch. I planned a series of interactive lessons that served as exposure to the digraphs, without expecting complete mastery due to the short timeline I was operating on. My objectives for the unit were for the students to identify, read, and write each of the three digraphs. My instructional approach involved working in small groups and strategically implementing scaffolding and the use of manipulatives. My assessment strategy involved experimenting with e-portfolios, as I initially was not sure how kindergarteners could create an electronic portfolio of their work throughout the unit. Thus, my guiding questions were, *“how does scaffolding and the use of manipulatives help engage beginning readers in higher-level texts and phonics concepts?”* And *“can e-portfolios be successfully integrated into the kindergarten classroom?”*

Before I began instruction, I administered a pre-assessment in the form of a dictated sentence. Throughout the lessons I collected student work such as lists of digraph words and handwritten sentences. I also had the students record themselves reading their work on Seesaw to upload to their e-portfolio profiles. At the end of the series of lessons, I administered a post-assessment that mirrored the pre-assessment. Mrs. VanRoy also conducted a spelling test to help me gather more data once I realized my pre- and post-assessment data was not very conducive for drawing conclusions.

Understanding of Instructional Strategies

Scaffolding

One instructional strategy I implemented in my unit was scaffolding, which is providing differentiated support to students based on their individual needs. As each of the students had unique strengths and weaknesses in decoding and encoding, I used scaffolding while they read aloud in the small group and wrote independently.

Beihuizen, et al. (2015) conducted a study to investigate the impacts of scaffolding on student achievement, effort, and their perception of teacher support during small group instruction. They found that “when the independent working time was short, low levels of contingency resulted in an increase in scores on the multiple-choice test, whereas when the independent working time was long, high levels of contingency resulted in an increase in scores” (p. 629). The authors also noted that the effectiveness of scaffolding is related to the length of independent working time as well as the levels of individual student effort (p. 616).

In my experience throughout the lessons, I noticed strong individual effort and intrinsic motivation to participate. The five students were eager to engage with my lessons by reading, writing, and discussing. Each lesson was approximately 15 minutes long and usually involved a combination of group work and independent work. For reference, I usually did not need to redirect this group of students more than three times in a 15-minute period, whereas I had to redirect other students much more frequently in other lessons or activities. Thus, I believe the effectiveness of my scaffolding was related to my students’ individual effort, plus the length of time of each lesson. Along with that, my small group model was effective for providing one-on-one support through scaffolding while still benefiting the whole group, as they got to hear my

reteaching and positive reinforcement of effort. An example of this is anytime a student mispronounced a digraph within a word, I waited to see if they would correct their error, and if they did not, I would say something to the effect of “s and h come together to say ‘sh’. That word is [fish].” If a student read a sentence with multiple errors, I would reread the sentence after them so the whole group could hear it fluently, or I would prompt the group to read it chorally with me. After each student’s turn reading aloud, no matter how many or few errors, I would always positively reinforce their participation with verbal praise.

Manipulatives

Another strategy I embedded into my unit was the use of hands-on materials, or manipulatives. Manipulatives are physical materials that give students opportunities to engage with learning in a concrete way and actively explore concepts.

Carbonneau & Marley (2014) described theoretical perspectives and classroom applications of manipulatives. They cited theorists such as Piaget, Bruner, and Montessori, who all in some way agreed that “providing young learners meaningful opportunities to physically interact with their environments is vital for successful early learning” (p. 2). They briefly introduced various contemporary studies involving manipulatives, such pairing manipulatives with high instructional guidance. Carbonneau & Marley (2014) concluded that “the papers in this special issue share the common theme that instructional manipulatives play an important role in instruction. However, this role is not fully understood across populations, treatments, and outcomes” (p. 5).

In my lessons, I implemented interactive *Power Readers* books, highlighters, and student-made digraph booklets for students to document their learning in. I noticed my students were

particularly motivated by the highlighters since they are “teacher tools” that the students do not get to use in the classroom often. My students also took on responsibility for their books and booklets by keeping them tucked in their student supply bins. At the start of each lesson, I told the group members which materials they would need, and they excitedly grabbed them before asking if we would get to use highlighters that day. Overall, I got the impression that incorporating manipulatives into my lessons positively impacted the students’ learning as they were eager to participate in each lesson, they displayed a sense of responsibility for their learning materials, and they stayed engaged during instructional time (especially when novel materials were introduced, such as the highlighters).

Understanding of Assessment Methods

E-portfolios

E-portfolios are digital compilations of one’s work. The students recorded videos of themselves reading their lists of digraph words and sentences and uploaded them to their class profiles on Seesaw (an app designed for classroom use).

Michalopoulou, et al. (2017) analyzed how students and their families responded to the implementation of electronic portfolios. They found that students and families had positive reactions to the e-portfolios, such as pride, joy, and satisfaction. One parent commented on their students’ attitude “She looks with great interest at her works and many times she asks us to read the comments made by her classmates” (p. 120). Overall, it was found that e-portfolios allowed students to engage in self-assessment and peer assessment, plus families could easily engage with their student’s work documented in the portfolio (Michalopoulou, et al., 2017).

The same findings were true for the application my students used at the end of the unit. After the students recorded themselves reading their written work, they uploaded the videos to the class profile on Seesaw, where they could be seen by their peers and families. The students excitedly rewatched their recordings and some even showed their peers. I sent a note home with my group of students, notifying their families that they could view their students' work on Seesaw. While I did not receive feedback from families, I still feel confident that e-portfolios are an effective strategy for engaging students and families alike in learning.

Tur & Zhang (2022) examined the benefits and challenges of e-portfolios and related those findings to our post-pandemic reality. Some of the noted benefits of e-portfolios are opportunities for self-reflection, inter-curricular knowledge, communication, engagement, progress tracking, and more. Some of the challenges they discussed were non-user-friendly tools, a lack of support, and privacy and copyright concerns (Tur & Zhang, 2022).

While some of the studies in Tur and Zhang's research focused on e-portfolios in higher education, I felt that the same benefits and considerations could apply to e-portfolios in early elementary education. My group of students documented inter-curricular knowledge by being able to navigate technology to record themselves reading aloud. This process also helped them track their own progress, as they knew they could only record themselves reading their digraph lists once they had found all of the target words. Overall, I felt that Seesaw was user-friendly since it is built for use in classrooms and my students had experience with it prior to my lessons.

Participants

I was placed in the Westside district at Westbrook Elementary in Lacey VanRoy's inclusive kindergarten classroom, which was a group of 18 students (ten girls and eight boys).

Three of the students had Individualized Education Plans (IEPs) and two of the students received English Language Learning (ELL) services.

For my series of lessons, I worked with a small group of six kindergarten students (three girls and three boys) who were above target in early reading skills. As seen in Appendix A, the expected composite score for the *FastBridge* kindergarten winter benchmark is 50, and these five students (plus a sixth student who was not included in my data due to frequent absences) scored between 58-65. Mrs. VanRoy had already placed her students into leveled groups before I began clinical practice in their classroom. The group of students that I worked with previously spent the last 15 minutes of small group rotations on their iPads since the other educators in the room were busy working with groups on general or interventive instruction.

Methods and Materials

Nebraska state standard LA.1.F.3a best fit the main objective of my series of lessons. LA.1.F.3a is a first-grade standard that states the students will *decode and encode words using knowledge of sound-spelling correspondence for common consonant digraphs, tri-graphs, and blends*. This advanced standard suited my group of students as they were performing at or above grade level with the kindergarten standard LA.K.F.3. This standard calls for students to *know and apply phonics and word analysis skills in decoding and encoding (spelling) words*.

Based on the *FastBridge* winter screening data (Appendix A) and my observations of these five students, I knew they had solid phonics and word analysis skills; thus, Mrs. VanRoy and I agreed they were ready for exposure to higher level texts and phonics concepts. At the start of the unit, I conducted a pre-assessment in the form of a dictated sentence. The students were asked to write a sentence that included consonant blends and digraphs to assess the students'

encoding skills. After I reviewed the sentences, I decided to focus on digraph blends because the students already had some exposure to them from their phonics curriculum.

I set three main objectives for my unit plan: (1) the students will identify, read, and write words with the sh, th, and ch digraphs, (2) the students will write three sentences, each including one of the targeted digraphs using their lists of digraph words, and (3) the students will record themselves reading their lists of digraph words and their sentences for their e-portfolios.

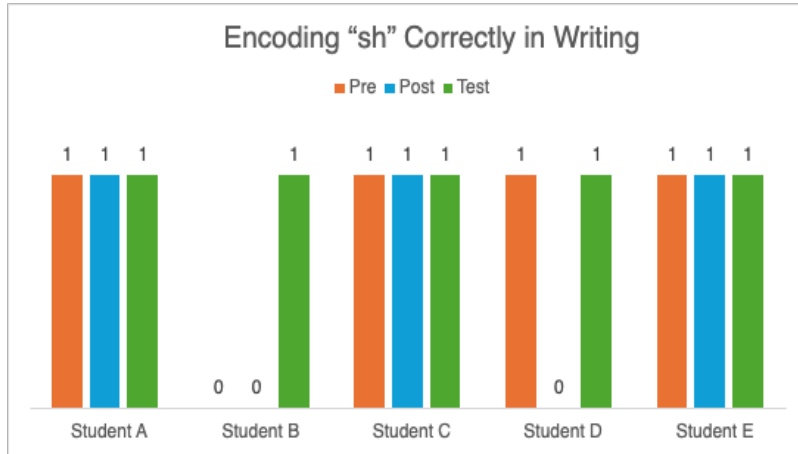
Each of my lessons involved encoding and decoding practice. More specifically, the structure of the lessons started with a small group reading of a *Power Readers* book, which are short stories for beginner readers that each have a different phonics target. For the first lesson, we read *Zap Can Fish*, which focused on the sh digraph. Each student took a turn reading a page while the rest of the students listened and tracked along, and I provided scaffolded support for decoding as needed. After the six-page story had been read, the students reread the book independently while searching for and highlighting the digraph words. They then wrote each of the digraph words from the book in their student digraph booklets. We repeated this process with *A Bath at the Pond* (th digraph) and *Itty Bitty Finch* (ch digraph). Each *Power Readers* book had between eight to ten words with digraphs in them. I counted the number of words in advance, so I was able to track whether or not the students had found all of the digraph words in each book based on their word lists in their digraph booklets.

Results/Data Analysis

Appendixes B and C show the pre- and post-assessments for this unit. Table 1 shows the data, with 1 representing “sh” spelled correctly and 0 representing “sh” spelled incorrectly.

Table 1

Assessment of Encoding “sh”



Note: The table above reports the data from the pre-assessment, post-assessment, and post-test. The data from the pre-assessment helped me recognize that most of the students already had some exposure to words with the sh digraph, and thus I was able to scaffold for the students who were inconsistent with their spelling of “sh.”

Discussion and Conclusions

Based on my observations and student artifacts, it was evident that the students achieved success in both decoding and encoding digraphs. The students progressed to higher-level texts with scaffolded support. With that being said, the assessment data does not strongly support overall conclusions about student performance, primarily due to limitations in my assessment methods. However, there was observable documented growth, particularly in the case of Student B. As seen in Appendixes B and C, Student B went from spelling *fish* without the s, then with s and h in the incorrect order, then with s and h in the correct order.

Students A, C, and E were consistent in spelling *fish* correctly on all three assessments. If I had the opportunity to teach this unit again, I would devise a more comprehensive assessment that would provide a wider variety of data points.

It was surprising to me that Student D had inconsistencies in their encoding of “sh.” As seen in Appendixes D and E, this student spelled *fish* correctly on the pre-assessment and the additional post-assessment (spelling test) but spelled it “*fihs*” on the post-assessment (dictated sentence). From my observations of Student D, I noted that they had difficulty enunciating the /sh/ sound. I concluded that encoding “sh” may have been more difficult for them.

While the quantitative data does not directly support conclusions about the effectiveness of my instructional and assessment strategies, I know from my experience teaching the series of lessons that scaffolding, manipulatives, and e-portfolios were helpful in engaging my students throughout the unit. Scaffolding personalized learning by meeting each student at their current level while providing support for decoding new words. It also facilitated individualized review of concepts for struggling students, which simultaneously benefitted the whole group. In addition, I found that the use of scaffolding fostered independence when I gradually reduced my support based on the individual needs of my students.

I found that the integration of manipulatives, such as the *Power Readers* books, effectively focused the students’ attention on a smaller set of new words per book. The highlighters made them excited about rereading and identifying the target words. Additionally, the digraph booklets served as a collection site for the students’ new words, which they later utilized as a resource for writing sentences.

The e-portfolios successfully concluded the unit by compiling and documenting student artifacts in a digital platform. The students' work was easily retrievable and could easily be shared with their teachers, peers, and families. The e-portfolios were also a great tool for self-reflection for the students.

Reflecting on the assessments I implemented in this unit; I realize I needed to revise my approach to data collection. The dictated sentence I used as a form of assessment did not provide comprehensive data, and thus I did not effectively measure student performance holistically. In my future classroom, I would implement e-portfolios as they were an interesting form of assessment that engaged my students and their families in their learning process.

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Appendices

Appendix A: *FastBridge* Data

Detailed Group Report: EarlyReadingEnglish
 2023-2024 | Westside Community Schools 66 | Westbrook Elementary | KG | Lacey VanRoy

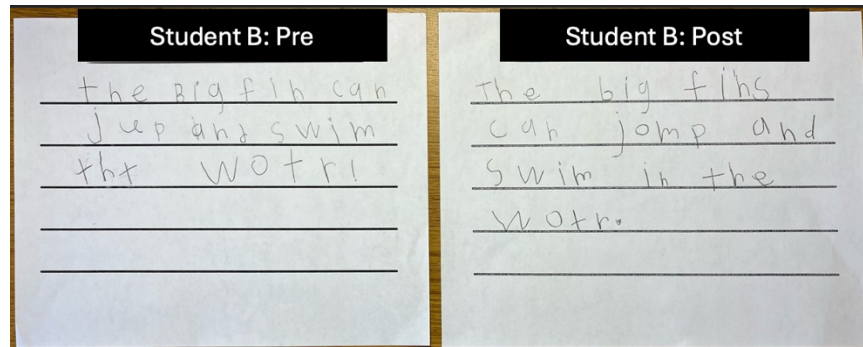
View Errors Teacher's Name: westside66_8_6079

	Student Name	Fall (FALL)	2 SM Fall (FALL)	Winter (WINTER)					
		Composite	Composite	Composite	LS	OS	NW	WS	CP
<input type="checkbox"/>	Student E	36		65	69	16	17	29	
<input type="checkbox"/>	Student A	38		62	55	16	14	34	
<input type="checkbox"/>	Student D	34	36	62	46	16	17	34	
<input type="checkbox"/>	Student F*	31 !		61	56	16	13	30	
<input type="checkbox"/>	Student B	35		59	45	16	13	30	
<input type="checkbox"/>	Student C	40		58	47	16	12	29	

Note. Appendix A: *FastBridge* Early Reading Skills data collected by Mrs. VanRoy for the fall and winter screenings. The expected composite score for winter is 50.

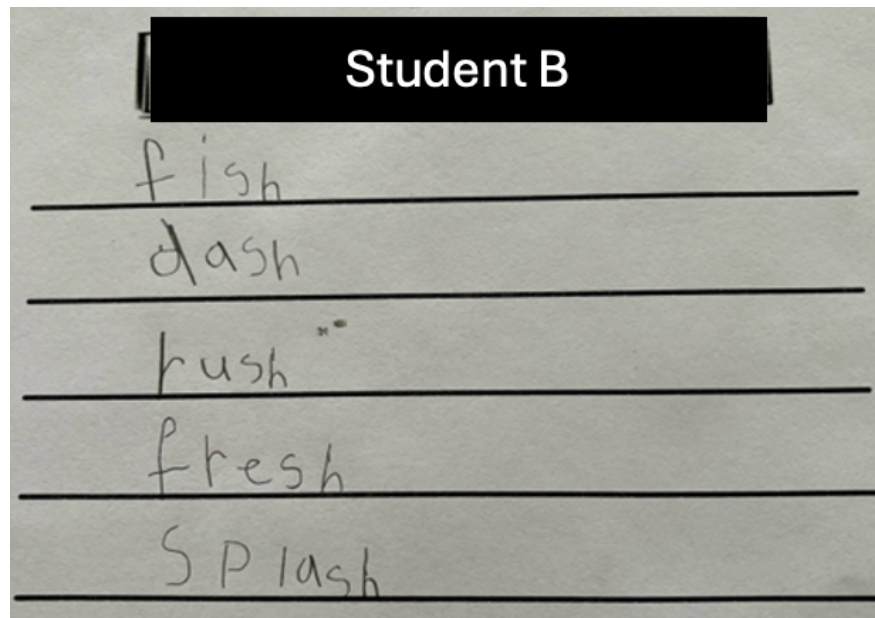
*Student F was not included in my report because I was unable to collect enough data to support conclusions due to their absences.

Appendix B: Pre- and Post-Assessment (Student B)



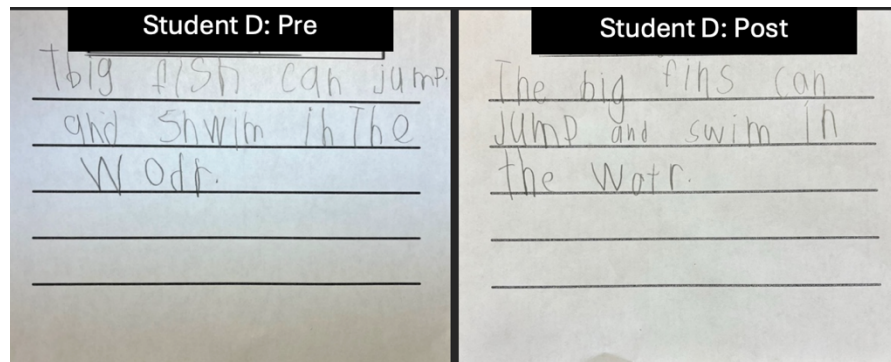
Note. Appendix B: Student B's pre- and post-assessment in the form of dictated sentences.

Appendix C: Additional Post-Assessment (Student B)



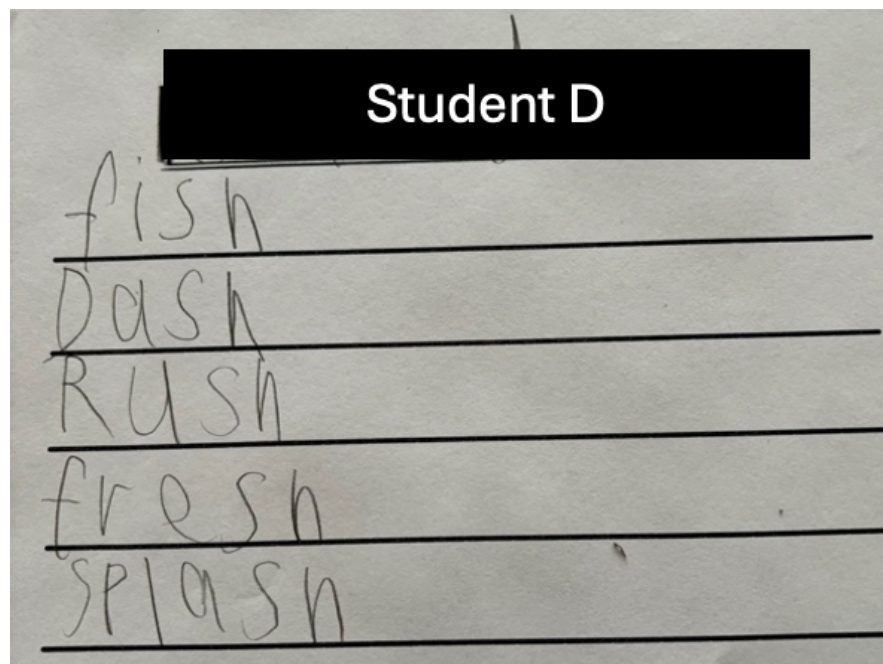
Note. Appendix C: Student B's additional post-assessment in the form of a spelling test.

Appendix D: Pre- and Post-Assessment (Student D)



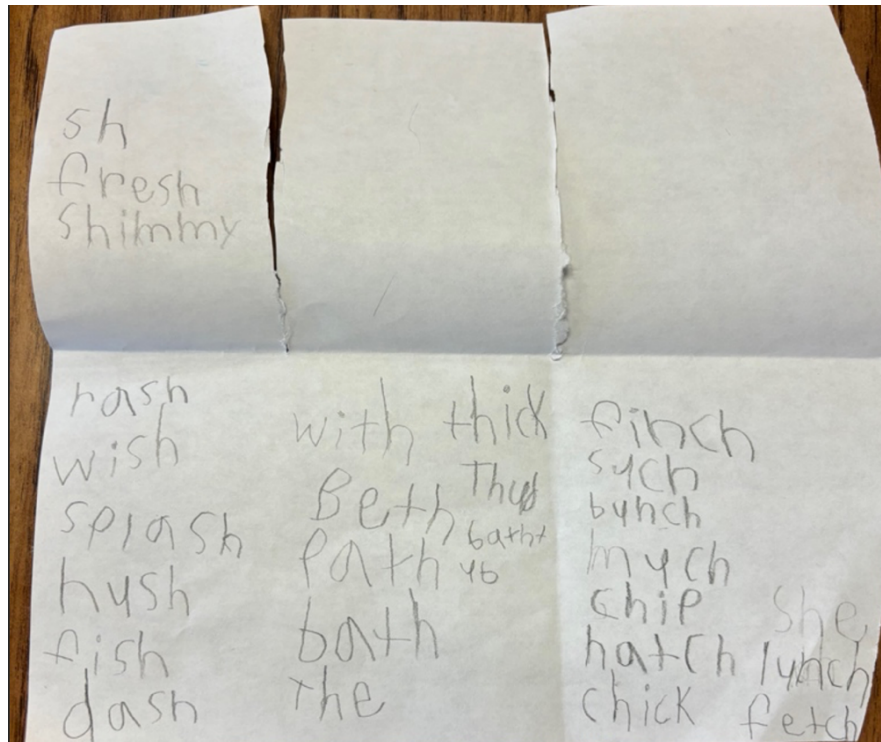
Note. Appendix D: Student D’s pre and post-assessment in the form of dictated sentences.

Appendix E: Additional Post-Assessment (Student D)



Note. Appendix E: Student D’s additional post-assessment in the form of a spelling test.

Appendix F: Student Work Sample–Digraph Booklet



Note. Appendix F: Student C's digraph booklet.