Route-Finding: Developing Curricular Knowledge and Impacting Practice Through a Collaborative Curriculum Mapping Process

Laura J. Reina
Utah State University

Follow this and additional works at: https://digitalcommons.usu.edu/etd

Part of the Education Commons

Recommended Citation
ROUTE-FINDING: DEVELOPING CURRICULAR KNOWLEDGE AND IMPACTING PRACTICE THROUGH A COLLABORATIVE CURRICULUM MAPPING PROCESS

by

Laura J. Reina

A dissertation submitted in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Education

Approved:

Sylvia Read, Ph.D.
Major Professor

Marla Robertson, Ph.D.
Major Professor

Scott Hunsaker, Ph.D.
Committee Member

Courtney Stewart, Ph.D.
Committee Member

Aryn Dotterer, Ph.D.
Committee Member

Laurens H. Smith, Ph.D.
Interim Vice President for Research and Interim Dean of the School of Graduate Studies

UTAH STATE UNIVERSITY
Logan, Utah

2018
Copyright © Laura Reina 2018

All Rights Reserved
ABSTRACT

Route Finding: Developing Curricular Knowledge through a Collaborative Curriculum Development Process

by

Laura J. Reina, Doctor of Philosophy
Utah State University, 2018

Major Professors: Sylvia Read, Ph.D., and Marla Robertson, Ph.D.
Department: School of Teacher Education and Leadership

Research indicates curriculum mapping is beneficial for teachers and students. However, it is not effectively implemented because there are barriers in time, support, and knowledge. This study addressed those barriers by providing teachers with professional development sessions to guide them through the process of creating a curriculum map of the K-3 English Language Arts (ELA) standards. A constructivist lens guided this work and pushed teachers to develop their own understanding of the curriculum. A community of practice helped them to challenge their understanding and arrive at shared expectations.

A qualitative case study approach examined this process through interviews prior to the professional development, notes during the professional development, observations in each classroom, and final interviews asking teachers to reflect on the work. Analysis was completed and reviewed to determine emerging themes and outcomes.
Research questions focused on the observable outcomes of this work, teachers’ perspectives of the impact on their classroom, and the role of the community of practice. The first significant theme described the role of the community of practice as a vessel to guide teachers through the vulnerable and challenging aspects of this process. Teachers needed the discussion to commit to one another through the creation of shared expectations. These expectations emerged from a common understanding and clarity gained regarding the ELA standards. New knowledge and shared goals led teachers to develop consistencies in their work. Although they focused on shared domains they were able to maintain their autonomy within their practice. The combined knowledge, consistency, and autonomy helped teachers to create a sense of intentionality in their instruction.

Findings revealed that a community of practice could be an avenue to guide teachers through this process. They filled gaps in their knowledge, built more consistency into their instruction and still maintained their autonomy. Teachers developed a sense of intentionality and increased self-efficacy about their reading instruction that they believed would lead students to improve. They embarked on a journey of route-finding as we navigated through the arduous work of developing a map to guide K-3 ELA instruction but emerged with intentionality and drive to improve practice.

(210 pages)
PUBLIC ABSTRACT

Route Finding: Developing Curricular Knowledge through a Collaborative Curriculum Development Process

Laura J. Reina

Research indicates curriculum mapping is beneficial for teachers and students. However, it is not effectively implemented because there are barriers in time, support, and knowledge. This research sought to remove those barriers and study the impact on teachers’ practice when they were able to work together to develop a curriculum map. The focus of the teachers’ map was the Kindergarten through third grade English Language Arts curriculum.

This work included a series of professional development sessions where teachers worked collaboratively to gain a greater understanding of the curriculum and develop a sequence from kindergarten through third grade. Teachers’ worked collaboratively to gain a deep understanding of what they were supposed to teach and how that would manifest in practice.

As teachers constructed their own understanding of the curriculum they made decisions about the expectations for students at each grade level and were able to discuss practices as a group. These discussions led teachers to be more intentional in their planning and instruction. They felt as though they had developed some consistency while still maintaining their freedom to teach within their classroom however they wanted.

I observed teachers in their classrooms and then met with them individually to
talk about the impact of our work on their practice. Several ideas emerged. First, they saw a need for understanding of the content, and the value of gaining that knowledge as a group. They believed that their teaching would be more intentional as a result of our work and that this intentionality would make them higher quality reading teachers. They believed that increased intentionality, along with consistency from grade to grade and shared expectations had the potential to improve student achievement. Furthermore, teachers gained greater confidence from this work which could also improve their impact as teachers.

The community of practice was essential in moving teachers through this work as it provided them a trusting group with mutual goals and a willingness to support and challenge one another. It was essential that teachers first be able to work within a community of practice before they could traverse the journey of developing a curriculum map.
DEDICATION

To Kyle, who was my Superman when he was with us, and when he was gone.

Thank you for granting me permission and motivation to do this when it seemed easier to stop, and for providing the cairns when I got stuck. You taught me that love is the driving force for achieving all goals.
ACKNOWLEDGMENTS

There are hardly words to express the gratitude I have for all who have helped me along this journey. It has not been an easy one, and as I plodded along there was always another hand to pull me up and push me forward.

My dissertation committee has been invaluable, they have come and gone, but each has left a distinct impression. My chairs, Dr. Sylvia Read and Dr. Marla Robertson, were quick to pick me up, turn me around, and help me move forward. They were patient with my commas and doodles, and knew just how to encourage me to improve. I am grateful for those who accepted my late night and early morning texts that often started with “quick question” and ended hours later after philosophical debates. The collective knowledge of friends and instructors in the department of Teacher Education and Leadership has been tremendously important in helping me to fill my own gaps. I have gained so much from these experts in education, and still stand in awe.

I am eternally grateful for my Edith Bowen family who served as research subjects, colleagues, and dear friends. They were my encouragement when I did not think I could do one more thing. They filled our halls with joy and learning, and invited me in their rooms to learn by their side. They are my inspiration to know and do more.

My family has been my rock, albeit precariously balanced at times, they have been solid, but none more than my love. Thank you, Art, for being the one who could carefully balance all the rocks and keep us upright even when I was tired, cranky, and
overwhelmed. Thank you for giving up so much to raise our little ones so I could go to school. To Ari and Miles, I am finally done—let us go play.

Laura J. Reina
# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>iii</td>
</tr>
<tr>
<td>PUBLIC ABSTRACT</td>
<td>v</td>
</tr>
<tr>
<td>DEDICATION</td>
<td>vi</td>
</tr>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>viii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>xii</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>xiii</td>
</tr>
<tr>
<td>CHAPTER</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Background of the Problem</td>
<td>7</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>11</td>
</tr>
<tr>
<td>Purpose of the Study</td>
<td>12</td>
</tr>
<tr>
<td>Research Questions</td>
<td>12</td>
</tr>
<tr>
<td>Significance of the Study</td>
<td>13</td>
</tr>
<tr>
<td>Definitions</td>
<td>13</td>
</tr>
<tr>
<td>Conclusion</td>
<td>15</td>
</tr>
<tr>
<td>II. REVIEW OF THE LITERATURE</td>
<td>17</td>
</tr>
<tr>
<td>Introduction</td>
<td>17</td>
</tr>
<tr>
<td>Locating the Studies</td>
<td>18</td>
</tr>
<tr>
<td>Theoretical Framework</td>
<td>18</td>
</tr>
<tr>
<td>Review of the Research</td>
<td>25</td>
</tr>
<tr>
<td>Curriculum Mapping and the Curriculum</td>
<td>25</td>
</tr>
<tr>
<td>Identifying the Gap</td>
<td>38</td>
</tr>
<tr>
<td>Barriers to Curriculum Mapping</td>
<td>46</td>
</tr>
<tr>
<td>Assumptions and Delimitations</td>
<td>52</td>
</tr>
<tr>
<td>A Review of the Methods</td>
<td>53</td>
</tr>
<tr>
<td>III. METHODOLOGY</td>
<td>58</td>
</tr>
<tr>
<td>Research Questions</td>
<td>58</td>
</tr>
<tr>
<td>Research Methods</td>
<td>59</td>
</tr>
<tr>
<td>Setting and Participants</td>
<td>64</td>
</tr>
<tr>
<td>Research Design</td>
<td>68</td>
</tr>
<tr>
<td>Chapter</td>
<td>Title</td>
</tr>
<tr>
<td>---------</td>
<td>-------</td>
</tr>
<tr>
<td>Data Analysis Procedures</td>
<td>73</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>77</td>
</tr>
<tr>
<td>Summary and Conclusions</td>
<td>78</td>
</tr>
<tr>
<td>IV. RESULTS</td>
<td>80</td>
</tr>
<tr>
<td>Preparing for the Journey</td>
<td>80</td>
</tr>
<tr>
<td>Professional Development</td>
<td>80</td>
</tr>
<tr>
<td>Our First Steps</td>
<td>82</td>
</tr>
<tr>
<td>Marking Waypoints</td>
<td>103</td>
</tr>
<tr>
<td>On the Trail</td>
<td>106</td>
</tr>
<tr>
<td>Vista Point</td>
<td>121</td>
</tr>
<tr>
<td>Conclusion</td>
<td>134</td>
</tr>
<tr>
<td>V. ANALYSIS</td>
<td>136</td>
</tr>
<tr>
<td>The Process</td>
<td>137</td>
</tr>
<tr>
<td>A Marked Trail</td>
<td>148</td>
</tr>
<tr>
<td>Summary</td>
<td>157</td>
</tr>
<tr>
<td>VI. DISCUSSION</td>
<td>158</td>
</tr>
<tr>
<td>The Role of the Community of Practice</td>
<td>158</td>
</tr>
<tr>
<td>Teacher Knowledge</td>
<td>159</td>
</tr>
<tr>
<td>Intentionality</td>
<td>159</td>
</tr>
<tr>
<td>Consistency</td>
<td>160</td>
</tr>
<tr>
<td>Autonomy</td>
<td>160</td>
</tr>
<tr>
<td>Removing the Barriers</td>
<td>160</td>
</tr>
<tr>
<td>Connecting to the Guidebooks</td>
<td>162</td>
</tr>
<tr>
<td>Implications</td>
<td>166</td>
</tr>
<tr>
<td>Limitations</td>
<td>169</td>
</tr>
<tr>
<td>Future Research</td>
<td>171</td>
</tr>
<tr>
<td>Conclusion</td>
<td>172</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>174</td>
</tr>
<tr>
<td>APPENDICES</td>
<td>185</td>
</tr>
<tr>
<td>Appendix A: Professional Development</td>
<td>186</td>
</tr>
<tr>
<td>Appendix B: Questionnaire</td>
<td>188</td>
</tr>
<tr>
<td>Appendix C: Interview: Semistructured Questions</td>
<td>190</td>
</tr>
<tr>
<td>CURRICULUM VITAE</td>
<td>192</td>
</tr>
</tbody>
</table>
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Benefits of Curriculum Mapping</td>
<td>39</td>
</tr>
<tr>
<td>2. Barriers to Curriculum Mapping</td>
<td>47</td>
</tr>
<tr>
<td>3. A Review of Methods Used in Studying the Impact of Curriculum Mapping</td>
<td>54</td>
</tr>
<tr>
<td>4. Overview of Data Collection by Research Question</td>
<td>61</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Literature review framework</td>
<td>17</td>
</tr>
<tr>
<td>2.</td>
<td>Concept map of types of curriculum</td>
<td>27</td>
</tr>
<tr>
<td>3.</td>
<td>Curriculum alignment to curriculum mapping</td>
<td>30</td>
</tr>
<tr>
<td>4.</td>
<td>A snapshot of a curriculum map that includes the essential elements, time,</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>content, standards, and assessment</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Initial steps of curriculum mapping</td>
<td>35</td>
</tr>
<tr>
<td>6.</td>
<td>Overview of the curriculum mapping process</td>
<td>38</td>
</tr>
<tr>
<td>7.</td>
<td>An excerpt from my research journal that demonstrates the three-column</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>approach and initial phases of coding</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Research design illustrating the elements of the research</td>
<td>69</td>
</tr>
<tr>
<td>9.</td>
<td>The basic reading house</td>
<td>84</td>
</tr>
<tr>
<td>10.</td>
<td>Advanced literacy house</td>
<td>86</td>
</tr>
<tr>
<td>11.</td>
<td>Kindergarten literacy skills list</td>
<td>91</td>
</tr>
<tr>
<td>12.</td>
<td>Third-grade literacy skills list</td>
<td>92</td>
</tr>
<tr>
<td>13.</td>
<td>Beginning the map</td>
<td>95</td>
</tr>
<tr>
<td>14.</td>
<td>Determining the course</td>
<td>97</td>
</tr>
<tr>
<td>15.</td>
<td>Our phonics continuum</td>
<td>100</td>
</tr>
<tr>
<td>16.</td>
<td>Artifact: Unknown trails</td>
<td>101</td>
</tr>
<tr>
<td>17.</td>
<td>Teachers gathered around our curriculum map to sequence the standards</td>
<td>136</td>
</tr>
<tr>
<td>18.</td>
<td>Emerging themes of questionnaires</td>
<td>138</td>
</tr>
<tr>
<td>19.</td>
<td>Emerging themes of the professional development</td>
<td>139</td>
</tr>
<tr>
<td>Figure</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Emerging themes of observations ................................................. 142</td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>In Carmen’s classroom, students were working in small groups to complete their <em>Word of the Day</em> ................................................................. 143</td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>Emerging themes of interviews ............................................................. 145</td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>Emerging answers to Question 1 ............................................................. 149</td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>Emerging answers to Question 2 ............................................................. 152</td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>Emerging answers to Question 3 ............................................................. 154</td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>Emerging themes and outcomes ............................................................. 158</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

A young teacher walks into her own classroom for the very first time. The walls, cupboards, and bookshelves are bare, save only a neat row of teachers’ editions sitting on her desk. As she begins to flip through the pages of the reading program teachers’ manual, she sees colorful labels indicating “Common Core aligned.” She whispers a sigh of relief as she thumbs the pages and sees standards listed, followed by detailed instructional methods and assessments of progress.

As she begins to set up her classroom and think about the daily routine of teaching, she again pulls out her teachers’ editions and begins to look at each step in the clearly sequenced instruction. “15 minutes daily language, 30 minutes shared reading, 20 minutes decoding centers, and so on…” The minutes begin to add up. She looks back at her rough daily schedule and questions whether she has allowed enough time. She looks at each color-coded section for instruction and sees a mixture of reading literature standards alongside language and foundational skills standards. She sits back and realizes the only way to make sure she is teaching every standard is to include every instructional section in the program, but how?

Across the hall a seasoned teacher pulls out a copy of last year’s plan book. He knows the reading program well enough he does not need to touch the manuals until it is time to teach. He also knows what parts he can move through quickly and what elements take more time for mastery. His command of the program allows him to move a bit more rapidly and squeeze a few more instructional minutes into the day. He does his best to use
those minutes for more science instruction, because it is tested, and a few more minutes
of read-aloud, because that’s what he loves. Despite feeling comfortable with what he
taught, and how he moves through the program, he still wonders why his students are not
doing as well as he thought in all areas. Every year his students struggle with the same
standards. He’s checked the program guide, he knows they are being taught, but for some
reason his students just are not “getting it.” He pulls up the program guide where each
standard is listed and reads through it again wondering, if he is teaching it all well
enough.

At a school just a few miles away a group of teachers gather around a whiteboard. Each holds a stack of sticky notes and a copy of the standards and stares anxiously at
their grade level curriculum map. They are talking, writing, and synthesizing as they
determine the “Big Idea” of each standard and write it on a color-coded sticky note. As
the foundational skills are carefully sequenced, the teachers begin to discuss when they
will incorporate literature and informational text standards. Looking at other content
areas they see a place to integrate science with some informational books, which they can
also connect with a language skill about orally sharing facts. They pause and spend some
time unpacking the next language standard in order to better understand what they are
asking students to know and be able to do. As they gain clarity, they are able to see how
that standard would align with a writing standard and begin to list some integration ideas.
They are slowly beginning to piece together their map.

Red reading sticky notes labeled with each reading standard are finished and stuck
across the width of their board; they begin discussing when they want to teach each
concept and how long it will take. They talk about order, overlap, and when mastery should occur. Together, they unpack each standard and find ways to teach it explicitly in small groups but also interweave it into other subjects and times of the day. The further the group gets into the process, the more sticky notes fill the board and begin to connect in vertical stripes as they plan integrated projects. The pieces coming together reach beyond the board and into the minds of the teachers as they gain a better understanding of what they have to teach and how they are going to go about doing it.

The curriculum is a common problem for each of these teachers. For one teacher, a lack of experience leads her to trust a canned curriculum and wonder how she will ever fit it all in. For another, he has begun to find comfort with the curriculum but still sees gaps in his students’ learning. The last also struggles to fit it all in and fights to ensure every student has access to learning, but these teachers have found a route in curriculum mapping.

The research reported in this dissertation examines the role of a community of practice in developing a K-3 English Language Arts curriculum. Through a collaborative professional development process teachers worked to create a scope and sequence map of early literacy skills. The teachers identified areas of difficult terrain and worked to navigate through them as a group. Their route-finding process guides this story, and the destination where they arrived.

The curriculum establishes the route from kindergarten to graduation. Teachers are responsible for focusing on their grade-level curriculum and refining that section of travel. They must find ways to navigate the terrain and avoid obstacles as they guide their
students through this curriculum. The curriculum is broken into standards that are waypoints in students’ travel through the curriculum. Each standard represents a skill to be mastered as students move along their route. These waypoints guide the students as they construct the knowledge and skills required to move onto the next leg of the journey. If one waypoint is missed, students are led off course and must be directed back toward the defined route. These missteps require a teacher who fully understands the route and can help students navigate its challenges and stay on course.

Curriculum mapping is way of constructing the route and enabling teachers to develop the knowledge and skills to navigate the travel. Curriculum mapping is a method by which teachers thoroughly analyze the standards within their curriculum and understand how the curriculum can be taught and mastered across the school year (Hayes Jacobs, 2004). Curriculum mapping challenges teachers to integrate and strengthen the standards by creating connections across the content areas (Fraser & Bosanquet, 2006). Through this process teachers learn how to create a scope and sequence that guarantees that every standard is taught and can be viably mastered within a given timeline (Marzano, 2002). Teachers also gain a firmer understanding of what they are supposed to teach (Glatthorn, Boschee, & Whitehead, 2009) by adapting, aligning, and unpacking the standards. Their perception becomes more refined as they connect curriculum maps vertically by creating a continuum of skills from lower to upper grades. Teachers who are given the opportunity to find their route through the development of a curriculum map are more prepared for their own travels and to help students successfully stay on the path.

In early approaches to implementing the curriculum, the teacher’s role was merely
to communicate the prescribed curriculum (Hirsch, 1987). In many schools, teachers are still given a prepackaged curriculum and do not participate in a mapping process, which hinders them from participating in the collaborative process and gaining ownership over their instruction (Dufour & Eaker, 1998). Darling-Hammond (2010) studied the positive impact of teacher education programs that gave teachers experience, knowledge, and self-efficacy in teaching the core with autonomy. Inhibiting teachers’ initial training regarding the curriculum and then regulating the autonomy they have in delivering the curriculum hampers the success teachers are able to have (Darling-Hammond, 2012). In many areas throughout our nation, teachers are still restricted and lack the knowledge and autonomy to take ownership of the curriculum. In these schools, because teachers must rely on a map they did not create, they are challenged to know the terrain and understand the obstacles around each waypoint.

In other countries teachers are given the opportunity to define their own route. Countries such as Finland, South Korea, and Singapore are showing consistent growth by allowing teachers to take ownership of the curriculum and use their training and expertise (Darling-Hammond, 2012).

Each of these countries has devoted resources to training their teachers in the curriculum, and granted them the freedom to address it with a tight focus on teaching and learning using the best practices. In each of these countries, which produce some of the highest achievement scores in the world (Organization for Economic Cooperation and Development [OECD], 2017), teachers are given a broad curriculum within which they are allowed to make choices regarding the sequence, scope, and methods of instruction.
Teachers are able to deeply understand the curriculum as they adjust the means of instruction to address the learning needs of their students (Darling-Hammond, 2012). Evidence of the impact of this approach internationally should inform the policies and protocols we implement in the U.S. regarding our teachers’ ability to personalize the curriculum.

Elementary teachers in the United States approach the curriculum in drastically different ways based on the autonomy they are granted and their knowledge of the core curriculum. Some teachers rely on what programs dictate, although others go straight to the standards outlined in the curriculum. Each looks for a method to teach every standard in a way that will ensure mastery and allow all standards to be covered within one school year. For some teachers this is an individual process; for a few, this is a collaborative endeavor where teammates join in discussion and decision making. Either alone or collectively, this is the process of creating a guaranteed and viable curriculum (Marzano, 2002). This daunting task is often hindered by the barriers of inconsistent knowledge and understanding of the standards, a lack of time to fully develop and refine the curriculum map, variance in the comfort with what they are supposed to teach, and differing levels of support for each teacher. These barriers can be overcome by providing teachers the necessary training that allows them to construct their knowledge and understanding. Then they must be given time to work through this process within a supportive community where they can build both their capacity and their self-efficacy. When these barriers are removed teachers would be able to define the route for their instruction and guide their students along the path towards mastery.
Background of the Problem

The U.S. educational system has consistently struggled through reform efforts over the last 50 years. Student achievement, accountability, and school improvement are at the forefront of American educational reforms (Fink, 2001). Beginning in the 1970s, schools’ scores on the Scholastic Aptitude Test began to decline (Bishop, 1989). In 1983, *A Nation at Risk*, which stated that U.S. schools were failing, was released. This report claimed that students were not being adequately prepared for jobs of the future. One of the solutions was creating high, consistent, standards that establish what students needed to know and be able to do at each grade level (Gardner, Larsen, Baker, Campbell, & Crosby, 1983). This school reform strategy became known as standards-based reform.

A decade later, the Goals 2000: Educate America Act (Heise, 1994) was created to further standards-based reform by setting specific goals for student achievement that would be attained through using standards. This outcomes-based initiative sought to motivate students to reach higher levels of achievement by setting high expectations for achieving the standards. This initiative was followed closely by the No Child Left Behind Act (NCLB), which was described as a “landmark in education reform designed to improve student achievement and to change the culture of America’s schools” (NCLB, 2001). This act supported the standards-based initiative by requiring states to develop assessments to measure children’s mastery of the standards and assure schools were setting and achieving high expectations. Standards-based reform has continued with recent reform efforts such as Race to the Top in 2012 (Civic Impulse, 2016) that provided funding and resources for schools that adopted common standards.
The Common Core State Standards (CCSS) were a response to the standards-based reform effort. They were launched in 2009 from a state-driven initiative to create consistent, real-world learning goals that would prepare all students for college, career, and life. The standards were created from existing high-quality standards and the input of teachers, content experts, parents, and the public. Individual states were given the opportunity to adopt, adapt, or reject the standards. At the initial release, a majority of the states (42) chose to adopt the CCSS, or a close version of them (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010a).

Teachers were challenged to gain mastery of new standards; particularly those that emphasized depth rather than breadth. The alteration of these standards to a focus on critical thinking and in-depth studies challenged the teachers to push their understanding and adjust their implementation. The pressure to implement the standards in such a way that students would perform well on standardized tests and close the achievement gap forced educators to enact change. Teachers’ methods and expectations have been closely scrutinized causing them to look carefully at how and what they teach. This increased pressure not only challenges what teachers are doing in classrooms but also what they know about their curriculum.

The charge to deliver the curriculum in such a way that it can impact change brings to light the variability in teachers’ knowledge and understanding of the curriculum. This is reflected in data that has been collected since the adoption of the CCSS (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010a). According to the 2015 NAEP reading achievement scores,
the student proficiency gap is still present and widening. Achievement differences are widening not only between White and minority students but also between economically disadvantaged and affluent students (Lemke et al., 2004). This continual lack of proficiency according to NAEP scores indicates that either our assessment system is flawed or our implementation of the CCSS is not effective. Although both may be an issue, and warrant further study, this research aims to address the effective implementation of the CCSS.

The deficiency in teachers’ command of the curriculum is revealed not only in the assessment data, but also in the ways it impacts their instruction. In order to address the issue of teacher’s implementation of the CCSS, it is important to understand the background teachers have regarding the curriculum. Historically, curriculum has been defined in a multitude of ways, such as a list of courses, a guide for teachers, or a collection of standards (Schubert, 1986). Teachers’ understanding has been influenced by these wide definitions, often leaving them with misperceptions or an overall lack of knowledge (Yurdakul, 2015).

The modern curriculum can be defined as, “The vehicle through which educators make manifest their goals for student learning” (Danielson, 2011, p. 77). However, a more practical definition would include multiple aspects of the curriculum including the hidden, written, and declared curriculum, explained in Figure 2 shown and discussed in the Review of Literature chapter of this document. For the purpose of this research, the term “curriculum” refers to the declared curriculum, which includes all that is outlined by leaders and stakeholders to be learned by all students (English, 1978). Curriculum
mapping can play a pivotal role in achieving learning goals and meeting the needs of students and teachers.

According to the ASCD Curriculum Handbook, curriculum mapping is defined as,

Identifying the taught curriculum and allowing teachers to compare their curriculum with others who teach the same grade or subject, to view curriculum content longitudinally, and, ultimately, to compare their curriculum to state and national standards. (Burns, 2001, p. 1)

Additionally, curriculum mapping aligns the state and national standards with specific instructional strategies and learning goals. Student achievement of learning standards is more likely when the content of the curriculum is aligned to skill development and method of assessment (Darling-Hammond & Falk, 1997; Wiggins, 1994).

Curriculum mapping, by aligning the standards with instruction and assessment, helps to assure teachers that they are providing a guaranteed and viable curriculum (Marzano, 2002). Furthermore, curriculum mapping allows teachers to create connections with expectations from prior grades and skills to be mastered in later grades, which is known as vertical mapping. These connections allow teachers to refine and focus on particularities that may not be specifically explained in the standards.

Although systematic approaches to mapping the curriculum have been developed, it is not a standardized procedure. Instead, it is driven by teachers and districts seeking strategies for improving the implementation of the curriculum (Hayes Jacobs, 2004). Instruction in curriculum mapping is not often included in teacher preparation programs and is not considered a standard procedure for new teachers. Teachers are often left to their own devices to implement this strategy. Many barriers to effective implementation of curriculum mapping exist. The focus of this research is on the impact of curriculum
mapping on teachers’ practice when barriers have been removed. In this research I have gained an understanding of the route-finding process teachers undergo as they develop and implement a curriculum map.

**Statement of the Problem**

Curriculum is the foundation of all instruction; it is the route, defined by the declared curriculum, from kindergarten to graduation. The standards identify the steps, or waypoints, that must be mastered as students move along this journey. Standards-based reform has increased the importance of teachers’ knowledge of the curriculum, particularly for English Language Arts (ELA) and Math. The ELA curriculum is broken into six sections that cover reading literature, reading informational text, reading foundational skills, writing, language, and speaking and listening. This curriculum serves as the foundation for all ELA instruction, yet its contents are complex and often misunderstood (Schubert, 1986). Curriculum mapping is a process that can help teachers overcome this complexity and clearly define their route; however, curriculum mapping is often impeded by barriers.

The barriers to curriculum mapping include a lack of time, support, and training, which leaves teachers with a gap in their knowledge and reduced self-efficacy regarding the curriculum. Teachers receive a wide range of training and instruction regarding curriculum and often enter the field with different levels of knowledge. The variability in their knowledge directly impacts the manner in which the curriculum is implemented in their classrooms (Fraser & Bosanquet, 2006). Additionally, teachers who may have the
knowledge to develop a curriculum map are hindered by a lack of support and resources to move through this process. Curriculum mapping is often abandoned without dedicated time to complete the work and a collaborative team to work through this process. These barriers leave teachers struggling to find their route and the benefits of curriculum mapping left unclaimed. There is a significant gap in the research that analyzes the impact of curriculum mapping on teachers’ instruction.

**Purpose of the Study**

The purpose of this study was to understand how teachers who have been through the process of mapping the ELA curriculum can define their route from curriculum to instruction. Specifically, this study looked at the impact of this process on the implementation of the curriculum in the classroom. For the purpose of this work, implementation referred to teachers’ planning and design, methods of instruction, and use and development of assessments. Through this case study, I examined how each of the barriers to curriculum mapping can be overcome through a constructivist framework and development of a community of practice. This research contributes to the literature by illustrating the effect of overcoming the barriers and developing a curriculum map of the K-3 ELA curriculum and the impact this work has on practice.

**Research Questions**

The research questions that were asked for this study were as follows.

1. What observable impact does removing barriers to curriculum mapping have on teachers’ assessment, planning, and instruction of the K-3 ELA standards?
2. How do teachers explain the impact of removing barriers to curriculum mapping on their delivery of the K-3 ELA standards?

3. What is the role of communities of practice in overcoming the barriers of curriculum mapping?

**Significance of the Study**

In this study, I sought to understand the role of communities of practice and a constructivist framework in overcoming barriers in order to develop curriculum maps. Furthermore, this work helped to determine the impact on practice when these barriers had been overcome. This understanding shapes the way that teachers collectively create maps and use discussion in making curriculum decisions, as well as the steps in providing time, support, and training for teachers to participate in this work. Lastly, greater clarity has been provided regarding the effect of developing curriculum maps on teachers’ practice and delivery of the ELA curriculum.

**Definitions**

*Community of practice*: A domain of knowledge, which defines a set of issues; a community of people who care about this domain; and the shared practice they are developing to be effective in their domain (Wenger, McDermott, & Snyder, 2002, p. 27).

Curriculum: Curriculum includes many elements of what is taught or expected to be taught. For the purpose of this research, the term curriculum will refer to the declared curriculum which includes all that is outlined by leaders and stakeholders to be learned by all students (English, 1978).

*Curriculum alignment*: Curriculum alignment is the link among standards and the
curriculum, instructional materials, methods, and assessments (Carr & Harris, 2001).

**Curriculum implementation:** The implementation of the curriculum as defined in this study relates to planning and design, methods of instruction, and use and development of assessment.

**Curriculum knowledge:** As defined by this study, curriculum knowledge refers to the facts, information, and skills teachers have regarding the curriculum, and their practical understanding of how the curriculum is implemented.

**Curriculum mapping:** Curriculum mapping is a systematic process that provides a structure within which teachers make choices in the general recording, management, and the use and alignment of the content and skills taught to students in schools (Udelhofen, 2005).

**Curriculum orientation:** Curriculum orientation is often defined as a collective set of beliefs about the intended, taught, and experienced curriculum, including statements of intent, program conceptualization, organization, and implementation (Cheung & Wong, 2002).

English language arts: English Language Arts curriculum includes all aspects of reading, writing, speaking, and listening in multiple genres.

**Guaranteed curriculum:** A guaranteed curriculum is one that assures that all content standards are taught (Marzano, 2002).

**Power standards:** Power standards are a selection of standards that teachers have determined as the highest priority or most important for students to learn (Ainsworth, 2003)
Self-efficacy: Self-efficacy is an individual’s beliefs about their capabilities to successfully carry out a particular course of action (Bandura, 1997).

Standards: Learning standards are concise, written descriptions of what students are expected to know and be able to do at a specific stage of their education. Learning standards describe educational objectives, but they do not describe any particular teaching practice, curriculum, or assessment method (Abbott, 2014).

Unpacking standards: The process of deconstructing a standard to determine exactly what is expected of students and how they demonstrate mastery.

Viable curriculum: A viable curriculum is one where the content identified can be adequately covered in the time available for instruction (Marzano, 2002).

Conclusion

The curriculum is the framework within which all instructional decisions occur. Standards serve as the guide to planning, methods, and assessment; however, the role of the standards varies in each classroom based on the teacher’s knowledge and implementation of the curriculum. Curriculum mapping can be used to define the relationship between standards and teacher practice (Hayes Jacobs, 2000). “Mapping becomes the monitoring device to check whether there is sufficient evidence to match a standard in the classroom” (Hayes Jacobs, 1997, p. 23). The use of curriculum mapping in purposefully aligning ELA standards has the potential to close the reading gap and increase students’ achievement (Schmoker & Marzano, 1999). Moreover, wider impacts of curriculum mapping may be attained, for example, as a method of communication
(Sumson & Goodfellow, 2004; Wenzel, 2011), a way of building collaboration (Beans, 2006; Lucas, 2005), a strategic collaboration tool (Archambault & Masunaga, 2015; Liu, Wrobbel, & Blankson, 2010), and a manner of improving teacher practice (Reining-Gray, 2008; Valencia, Place, Martin, & Grossman, 2006). Each of these elements clarifies the purpose for investing in this process and helping teachers find their route.

The impact of curriculum mapping on classrooms is significant (Blumberg, 2009; Harden, 2001; Reining-Gray, 2008; Squires, 2012), yet many teachers are hindered by the barriers that stand in their path. The efforts taken here to remove those barriers and find the means for teachers to create their map are significant in that they supply evidence to justify professional development and teacher training in this process. If we can overcome these barriers, we will have a clearly defined route from curriculum to instruction.
CHAPTER II
REVIEW OF THE LITERATURE

Introduction

The curriculum has long been seen as a guiding map through education. However, the role of that map varies based on one’s perception and definition of curriculum. The varying definitions and language are much of what is preventing teachers and researchers from using the curriculum to drive instruction (Fraser & Bosanquet, 2006). The theoretical framework through which one views the curriculum has a tremendous impact on how the curriculum impacts teachers’ practice.

The purpose of this review, as outlined in Figure 1, is to provide a clear definition of curriculum mapping and to analyze the impact curriculum mapping has had on

![Figure 1. Literature review framework.](image)
classroom instruction. This chapter will describe the theoretical framework that provides a lens for this research and review of the literature. Furthermore, I reviewed the research regarding the definition of curriculum mapping, and its implementation in various settings. I also addressed the benefits and barriers to curriculum mapping along with the assumptions and delimitations.

**Locating the Studies**

Curriculum is an essential focus of much educational research and writing; therefore, the search was narrowed using specific search terms. The following descriptors were used within the search: curriculum mapping, curriculum alignment, guaranteed and viable curriculum, curriculum mapping/alignment professional development, ELA curriculum, reading curriculum, curriculum definitions, and communities of practice. A comprehensive review of the research literature using these descriptors included a search of the following databases: Academic Premier, Digital Dissertations, Education Full Text, ERIC, Professional Development Collection, and PsychINFO. As articles were retrieved, reference lists were reviewed for additional sources.

**Theoretical Framework**

Constructivism, the theoretical framework of this research, is the lens through which I examined the effect of removing the barriers to curriculum mapping. Constructivism also served as the foundation for the curriculum mapping process itself. Through the use of a constructivist approach to curriculum mapping, I was able to
discover how teachers were able to construct their own knowledge and understanding of the standards, allowing them to find their route.

Professional development and the continuing role of communities of practice were also essential elements that were used in removing the barriers to curriculum mapping. Developing a community of practice as an essential part of the professional development allowed teachers time to learn and develop in a supportive environment. These communities of practice also played a key role in providing support within a domain-focused pursuit of common knowledge. I examined the role of communities of practice as teachers moved through this path of curriculum mapping, and how they impacted what happens in practice. In conjunction, these theoretical aspects created a map to guide teachers past the barriers and into their curriculum maps.

**Constructivism to Communities of Practice**

The constructivist paradigm posits that learning is an active process in which the learner constructs his or her own understanding or finds his or her own route. Within this paradigm, knowledge must be constructed rather than acquired (David, 2015). A constructivist framework requires teachers, or students, to construct their own understanding as they work through a learning process. Constructivism has become an overarching framework under which a multitude of learning theories have been shaped. Each takes the primary ideas of constructivism and applies them in specific ways. Of these many theories, the one that speaks most directly to this work is communities of practice theory.

Communities of practice as a theory of learning is most often associated with
Wenger (1998); however, the concept was first developed in the collaborative work of Situated Learning (Lave & Wenger, 1991). The authors introduced the concept of legitimate peripheral participant, which describes how someone progresses from novice to expert within a collaborative setting. A community of practice provides the setting for this transformation as people work together to build understanding and capacity. Lave and Wenger explained how this idea had roots in apprenticeship research; however, the role of situated learning originated in the work of Bourdieu (1978) and Vygotsky (1999).

Vygotsky’s (1999) social development theory includes two important ideas that are fundamental to the communities of practice framework. The first is the notion that learning occurs through social communication. Vygotsky explained the role of social interactions in increasing a person’s zone of proximal development. As people interact in a social community, they are challenged to extend their thinking to embrace the knowledge within the community. The second significant idea is the role community members take in collecting this new knowledge and shaping it to form their own understanding. The community member grows from the interactions by constructing new understandings through those interactions. Vygotsky’s theories directly influenced Lave and Wenger’s (1991) development of the communities of practice theory.

Bourdieu (1978) was another strong voice in shaping constructivism and other social learning theories. His research was pioneering in analyzing the relationship between personal cognition and the outside world. His theory explained the interdependent relationship between cognition, interaction, activity, and knowing. Lave (1988) extended this theory to suggest that cognition and practice do not merely influence
one another, but that cognition is situated within practice. Lave and Wenger (1991) extended this through research in apprenticeships to solidify the notion that learning occurs in practice. Those persons participating in active discussion and engagement with their learning will be able to construct their own understanding through practice.

Communities of practice have always existed. At home, work, and school people gather in groups to learn collectively. Some communities of practice are informal, and one can remain a peripheral member; however, it is also common to step into more active roles where one becomes a designer, creator, teacher, and student within the group. Wenger et al. (2002) described how communities of practice could be developed in ways that would be beneficial to organizations; however, the interest in peer-to-peer professional development has greatly increased, making communities of practice an educational movement.

In today’s schools, communities of practice function in three dimensions.

- **Internally**: How to organize educational experiences that ground school learning in practice through participation in communities around subject matters.

- **Externally**: How to connect the experience of students to actual practice through peripheral forms of participation in broader communities beyond the walls of the school.

- **Over the lifetime of teachers**: How to serve the lifelong learning needs of students by organizing communities of practice focused on topics of continuing interest to students beyond the initial schooling period (Wenger, 2009).

These dimensions situated schools within a broader learning system. Learning does not occur in isolation but rather it is a part of a larger system where connections, innovation, and authenticity deepen the learning experience and lifelong application.
Wenger et al. (2002) claimed that a community of practice consists of “a domain of knowledge, which defines a set of issues; a community of people who care about this domain; and the shared practice they are developing to be effective in their domain” (p. 27). The term domain implies a wider set of problems and issues that stretch beyond the narrow community. Community implies a belonging in identity as well as place. Practice implies a common set of tools and terms to address the concepts within the domain.

Developing a curriculum map requires teachers to understand the common domain outlined in the Common Core State Standards. As a community, teachers are able to collaborate to clarify their understanding and create the common tools and language that will impact their practice.

**Professional Development to Teacher Change**

Professional development is an essential aspect in improving schools (Borko & Putnam, 1995; Carnegie Forum on Education and the Economy, 1986; Darling Hammond, 1993; Holmes Group, 1986; National Commission on Teaching and America’s Future, 1997). It has the potential to be a critical element in improving student achievement (Desimone, Smith, Hayes, & Frisvold, 2005). Recent research indicates several core aspects of professional development that lead to successful implementation and impact on teaching and learning (Desimone, 2009): these include; content focus, active learning, coherence, duration, and collective participation (Hawley & Valli, 1999; Kennedy, 1998; Wilson & Berne, 1999).

This study focused on the ELA content, allowing teachers to see a direct impact on their instruction, an element that directly influenced student achievement (Cohen,
Furthermore, the structure of the professional development allowed teachers to connect with their communities of practice in active learning. This practice allowed teachers to observe, discuss, and engage with the work around a specific content area which made it an essential aspect of a lasting professional development (Garet, Porter, Desimone, Birman, & Yoon, 2001).

Biancarosa and Snow (2004) looked specifically at ongoing long-term professional development designed to create lasting change. The emphasis on duration is one that is supported by extensive research as an indicator for more powerful professional development (Desimone, 2009; Garet et al., 2008; Pearson, 2007). Schools that are able to embed a strong professional development program are more likely to be able to create long-lasting results. The curriculum mapping work implemented in this study has been ongoing for four years; teachers meet monthly to revisit their work and get regular professional development on the elements of curriculum mapping. Furthermore, the development and training of teachers can be reinforced through the use of coaches and teacher teams.

Teacher teams have been proven an effective method of implementing collective participation while building collaboration and support (Gamse, Jacob, Horst, Boulay, & Unlu, 2008). Teachers working collaboratively will result in stronger instruction through combined planning and content directly aligned to standards and assessments (DuFour, DuFour, Eaker, & Many, 2006). Through the use of communities of practice that are already established, teachers can use the support of experts and/or coaches to strengthen their own knowledge and instruction. This collective participation can be a powerful tool
to impact teaching and learning as well as to produce overarching institutional change (Borko, 2004; Desimone, 2009; Fullan, 2007).

According to Fullan and Miles (1992), the only way that society can ever implement a successful reform effort is to understand the process of change. Through their work they have sought to identify reasons that reform has failed and propositions that could make any effort more successful. They identified a major issue in the inconsistency in what they call “maps” routing the path of reform. According to the authors, each stakeholder has a different view of the issue and therefore identifies a different path to the destination. This inconsistency in understanding the steps to be taken to change leaves each participant floundering and looking for the path to success. The purpose of this study, and its collaborative elements, was to create a common foundation and clear path forward. Teachers were collectively oriented to the goals and purpose and had a clear understanding of how this work supported the mission of the school.

Fullan and Miles (1992) also addressed the need for tools to solve complex problems. Understanding and implementing the curriculum well enough to ensure students have mastery of the standards is a complex problem. This professional development provided teachers with the knowledge and framework to address the problem.

Last, Fullan and Miles (1992) addressed the importance of reform as a systemic change process. They stated, “Reform is systemic, and actions based on knowledge of the change process must be systemic, too” (p. 749). The professional development effectuates a systemic approach to curriculum through a community of practice. These
elements in conjunction with the active learning, key to the constructivist approach, allowed teachers to develop their own understanding and take ownership of how the curriculum impacts their practice.

**Review of the Research**

The research around curriculum and curriculum mapping is vast. Researchers have used an array of foci and methods to attempt to understand the impact of curriculum mapping. This review of the research used a constructivist and communities of practice lens to examine various research studies. This lens helped to analyze definitions of curriculum and mapping and outline the impacts curriculum mapping has had on classroom instruction.

**Curriculum Mapping and the Curriculum**

The curriculum is the foundation of our instructional practice (English, 1979; Squires, 2012). A continual debate over teaching the written or the tested curriculum exists; however, there is no argument that the curriculum shapes what happens in the classroom (Dufour & Eaker, 1998; English, 1980; Hayes Jacobs, 2004). The curriculum defines the route we expect students and teachers to take as they traverse through their education. Unfortunately, this route is not evident or clearly marked for all who intend to pass. Furthermore, it has many obstacles that block students and teachers from making steady progress. Research indicated that teachers have encountered many challenges as they seek to find a map to lead them along this route.
The literature reviewed indicated that curriculum mapping had influenced higher education, alternate fields, and elementary education. In this section of the literature review, definitions of curriculum and the role of curriculum mapping with elementary school teachers and their classrooms are reviewed and analyzed.

**Defining Curriculum**

Historically, societal and cultural elements have shaped the definition of curriculum, and the impact it has on the classroom. Among curriculum theorists the word ‘curriculum’ remains contentious in terms of ‘definition and delineation’ (Schubert, 1986, p. 26). Henderson and Gornick (2002, p. 3) explain why curriculum remains controversial in definition: “[L]ike many other common terms in education, curriculum is a complex concept. When people use the word, you don’t know what they mean until they explain themselves.” The complexity of the concept leaves many grappling for a definition and unsure of their approach to curriculum.

Curriculum has been defined in many ways throughout history. These varying perspectives have shaped how the curriculum has been implemented in the classroom and each of these definitions has had an influence on teachers’ understanding and perspective. The curriculum includes elements of both what is taught and what is expected to be taught; this incorporates the declared curriculum, all that is outlined by leaders and stakeholders to be learned by all students (English, 1978). Eisner (1985) defines five curriculum orientations that describe teachers’ approach to the curriculum. The orientations are aimed at clarifying the ways individuals think about the goals and elements of the curriculum, the role of the teacher, and the criteria and measures of
progress. A primary element of the written curriculum that is agreed upon across orientations is the division of the curriculum into individual learning standards.

The standards refer to the concise, written descriptions of what students are expected to know and be able to do at a specific stage of their education. Learning standards describe educational objectives, but they do not describe any particular teaching practice, curriculum, or assessment method (Abbott, 2014). The standards are breaking down the mass of the curriculum into the individual elements of learning.

Multiple approaches to curriculum arise from the diverse array of definitions. Within each definition, each type of curriculum plays a different role. Understanding the role of each type of curriculum will clarify how they are interpreted by teachers and implemented in the classroom. Figure 2 describes each of the types of curriculum as they

![Figure 2. Concept map of types of curriculum.](image-url)
are defined in the research. Teachers’ perspectives of these types of curriculum impact the role that they play in their classroom.

Early definitions look at the balance between the declared and taught curriculum. The declared or prescriptive curriculum includes standards and expectations for learning (Glatthorn et al., 2009; Squires, 2012). The prescriptive curriculum outlines what should be taught in classrooms if everything were to occur as planned. This definition is very broad and focuses on the overall intention of the curriculum. When one zooms in on the actual outcomes and experiences, this is the descriptive curriculum. The descriptive curriculum is the reality of what gets taught (Glatthorn, et al., 2009). Descriptive curriculum, or the taught curriculum, takes into account the factors of student needs and interests, school values, and the philosophical beliefs and understandings of the teacher. Additionally, Squires explains that the “hidden curriculum” is the unstated, and often immeasurable, elements of the curriculum that are taught in the classroom. These can include perspectives, values, or ideological methods the teacher interweaves into the structure of the formal curriculum (Glatthorn, et al., 2009). These types of curriculum impact the manner in which teachers interpret their understanding of curriculum and take ownership by adapting it to meet the needs of their classroom (Yurdakul, 2015).

Teachers make decisions about how the curriculum is implemented in their classroom, based on their knowledge, experiences, beliefs, and preferences (Shilling, 2011). Therefore, the written curriculum is interpreted by the teacher and reflected in the taught curriculum. Although they may overlap in many ways, a teacher’s knowledge and interpretation impact the written curriculum such that it often reveals the hidden
Finding the balance and being able to incorporate each of these into the classroom is the challenge of assuring the curriculum is delivered in its entirety (English, 1979; Hayes Jacobs & Johnson, 2009). Curriculum alignment helps to ensure teachers are able to account for the needs of the curriculum, the teacher, and the test by creating equilibrium of each of these elements (English, 1980).

Although curriculum maintains a range of definitions, for this work I focused on the declared or written curriculum that outlines what is supposed to be taught. Ideally, this declared curriculum would also be representative of the learned curriculum, but this is not always the case. The declared curriculum includes all that is outlined by leaders and stakeholders to be learned by all students.

**Understanding Alignment**

Curriculum alignment is defined as the process of coordinating curriculum, instruction, and assessment in order to facilitate student learning (Elliott, Braden, & White, 2001; Roach, Niebling, & Kurz, 2008; Webb, 1997, 2001). Working to assure that what is taught matches what is written and tested is the first step in guaranteeing a curriculum and creating curriculum alignment (Marzano, 2002). Figure 3 illustrates the process of curriculum alignment and the subsequent steps that must be taken to create a guaranteed and viable curriculum. Many of the challenges in aligning the curriculum can be addressed in the first phases of developing a curriculum map.

An aligned curriculum assures that standards are taught and each of the varying types of curriculum is addressed. Within the ELA curriculum, subject areas are closely connected, but the standards for each are unique and important. Curriculum alignment
allows teachers to make connections between content areas while still being accountable for each standard. However, the process of developing a curriculum map for all of the ELA standards in order to achieve curriculum alignment is a challenging task that often eludes, or is not possible for, teachers (Cheung & Wong, 2002).

**Curriculum Development and Curriculum Mapping**

Hirsch (2010) explains that one of the weaknesses in curriculum development is the lack of a properly organized and implemented standardized curriculum. Marzano (2002) discusses the characteristics of an effective standardized curriculum. The traits he determined as most essential include a curriculum that is guaranteed, viable, and the basis for academic grades. A guaranteed curriculum is one that assures that all content standards are taught (Marzano, 2002). This process involves teachers developing a sequence for each content area that promotes learning, connects across subject areas, and guarantees that every standard and objective are accounted for (Wiggins, McTighe, Kiernan, & Frost, 1998). A viable curriculum is one that can be taught in the time allotted. The final element as identified by Marzano is the connection between
curriculum and grading. The connection to grading allows the teacher to assure that the taught curriculum is aligned with the learned curriculum. A guaranteed and viable curriculum ensures there is alignment and that teachers have thoroughly analyzed their standards, resources, assessments, and beliefs.

According to Marzano (2002), teachers will be prepared with more powerful instruction after they have aligned the written, taught, and tested curricula to guarantee the standards are taught. Additionally, gaps in skills that are taught by progressing through the curriculum will be closed by assuring that the curriculum is viable and can be taught within the scope of the school year. A curriculum map serves as a tool to create a guaranteed and viable curriculum.

**Curriculum Mapping Defined**

Curriculum mapping is a tool, and a process, for the continuous monitoring and improving of teaching and learning in an educational system by aligning the written, taught, and tested curriculum (Cuevas, Matveev, & Feit, 2009; Hayes Jacobs, 1997, 2004; Liu et al., 2010; Uchiyama & Radin, 2009; Veltri, Webb, Matveev, & Zapatero, 2011). The concept of curriculum mapping was first introduced by Fenwick W. English (1987). The process arose from the recognition that the taught curriculum was not aligned to the written curriculum, and researchers sought to record the taught curriculum. English (1983) originally intended to use curriculum mapping as a tool to compare the taught to the written and tested curriculum.

The original role of curriculum mapping included a detailed sequence of instruction and accountability for time in the classroom. English (1987) sought to
measure a teacher’s use of time, not only in instruction, but also in the minutiae of classroom organization such as attendance and discipline. The purpose of this approach was the identification of the finite amount of time students spent in classrooms (English, 1980, p. 559). English also wanted to gain a better understanding of the overlap and repetition across grades and was able to evaluate this through creation and analysis of curriculum maps (Kaufman & English, 1979).

English (1978) defined a curriculum map as, “Descriptive rather than prescriptive” and included time, sequence, and teaching of the content (p. 158). From this early perspective, curriculum maps were a record of what occurred in the classroom. As schools began to have more standardized curriculum and accountability for what was taught, maps began to shift to a more prescriptive lens. Instead of recording what had already happened, they became a tool to help teachers plan what would be happening. Curriculum maps are now integrated with study objectives, learning activities, curriculum materials, assessment, and learning outcomes (Wang, 2015), as described in Figure 4. Curriculum maps make the curriculum more transparent by revealing a big picture view of what is happening in the classroom. (English, 1979; Harden, 2001; Hayes Jacobs & Johnson, 2009). Additionally, the big picture allows the teacher to present an overview of the student’s learning experience (Hayes Jacobs, 1997). The learning experiences are made clear through a visual representation of the sequence and structure. A curriculum map also provides stakeholders a clear view of each of the major components (content, time, objectives, activities, and outcomes; English, 1979; Wang, 2015) and communicates the educational expectations.
Hayes Jacobs (1997) was aware of the challenges of the multitude of standards and specifically addressed the need for a fixed set of standards and a specific timeline for delivery. She developed a process for curriculum mapping that included seven phases and focuses on the renewal of the curriculum.

Phase 1: Collecting the Data—Determining the major elements to be included on the map.

Phase 2: The First Read-Through—Teachers read through all maps and edit content and organization.

Phase 3: Mixed Group Review—Mixed groups of teachers review maps and provide feedback.

Phase 4: Large Group Review—Feedback is gathered and presented to the group, based on feedback decisions are made regarding changes in the map.

Phase 5: Determine Points to Revise Immediately—Decisions are made about
problems identified in discussion, those easily resolved are handled quickly.

Phase 6: Determine Points needing Long-Term Focus—Other problems that take additional research, reading, and study will be assigned to a task force.

Phase 7: The Review Cycle Continues—Curriculum review should be active and ongoing with consistent review, analysis, and discussion.

Through Hayes Jacobs’ process, teachers and teams work collaboratively to view, analyze, and discuss their curriculum maps. The discussion and collaboration are essential in terms of increasing communication, setting goals for improving instruction, and making curriculum mapping an institutional change (Hayes Jacobs, 1997).

The process designed by Hayes Jacob is frequently used; however, it was the work of Wiggins et al. (1998), *Understanding by Design*, that changed the order of the work and reframed the process. Their method included three phases: (1) begin with determining the desired results, (2) decide on the evidence, and (3) plan student learning experiences and instruction. Kelting-Gibson (2005) conducted a study that looked at 153 lesson plans and units written by preservice teachers. Two raters individually scored each plan using Danielson’s Framework for Professional Practice. Results concluded that students who were taught and used the backward design model outperformed preservice teachers who were taught curriculum design using a traditional model. Kelting-Gibson stated:

*The field of curriculum development is not static; new procedures are being suggested for changing existing curricula all the time, even though it may be a new name for an old or existing idea. However, if individuals look back over the history of curriculum development, they will learn that the backward design process is somewhat unique, not found in historical literature. (p. 26)*

The backwards design model of Wiggins et al. (1998) allows teachers to begin
with the standards and use those to construct the “big ideas” of instruction. This philosophy aligns with a constructivist perspective where instruction is focused around big ideas (Brooks, 1999). These big ideas are sequenced on a horizontal map, assuring that every standard is accounted for, an approach that helps to create a guaranteed curriculum. This step is followed by the careful alignment of standards across content areas to create integrated instruction that is reinforced by building multiple connections, see Figure 5. Blumberg (2009) stated, “Aligned courses lead to maximum student learning, and there is a greater chance that the students will achieve the goals and objectives for the course” (p. 96). According to Blumberg, alignment across content areas provides students with direction and clarity, which then results in increased student

![Diagram of curriculum mapping process](image)

**Figure 5.** Initial steps of curriculum mapping. This figure explains the first step in the curriculum mapping process that begins with the standards and their alignment across the scope of the year.
learning. Harvey and Bauman (2012) assert that the curriculum is meant to be aligned, both horizontally and vertically, in order for students to engage more deeply with their learning; they explained how “curriculum alignment refers to an overt alignment between the course content, learning activities, teaching strategies and assessment of a subject which are in place to achieve the intended learning outcomes” (p. 9). Creating a scope and sequence map allows teachers to sequence their big ideas and create alignment among them, thereby focusing on intended learning outcomes and providing opportunities for more purposeful learning.

The process of sequencing and aligning standards is then followed by the careful application of a timeline to assure that everything can be taught within the school year. English (2000) includes timing as one of the key elements of initiating a successful curriculum map. According to Hayes Jacobs (1997), timing is specific to the group of students and requires constant adjustment. Curriculum mapping is a fluid process where sequence and timing can be adjusted to meet the needs of each group of students. Teacher choice in recording, management, and the use and alignment of the content and skills taught is essential in completing this process (Udelhofen, 2005).

The next phase in the process is the identification of power standards (Ainsworth, 2003). Power standards look at what students need to know and be able to do and focuses on key skills and concepts that must be mastered. Power standards often become the safety net that teachers use to assure that the most important standards are being taught to proficiency. The breadth of ELA standards requires teachers to hone in on very specific skills or knowledge in order to identify power standards. They are identified through the
application of “endurance, leverage, and scaffolding” as criteria for importance (Ainsworth, 2003, p. 13). Teachers generally identify three to five power standards from each content area. For example, in kindergarten the CCSS set mastery of letter names and sounds as essential before students advance to first grade. This is a foundational skill that provides the basis for success in the next grade.

Power standards become the starting point for the next step, which requires teachers to deconstruct the standard to determine exactly what students need to know and be able to do in order to show mastery. This process is often called unpacking standards. This phase in the process is one of the most challenging and essential. Unpacking a standard requires teachers to deeply study what each standard means. Teachers have to identify essential questions, enduring understandings, and key skills, as well as provide assessment examples and vocabulary lists; furthermore, the process asks teachers to think about what their students will know, understand, and be able to do when they have mastered that standard (Wiggins et al., 1998). Backwards design methods empower teachers to better understand the standards, which in turn may improve the manner in which standards are taught and has the potential to increase student achievement.

Standards that have been unpacked are then ready to be taught. Teachers develop individual unit timelines that are focused sequences of instruction that cover the objectives within each standard. Unit timelines are developed for each big idea teachers have outlined on their curriculum map. Designing unit timelines after standards have been sequenced and unpacked allows teachers to assure that every element is included in their instructional design. In this manner, curriculum mapping becomes a process and a
tool that can “improve student performance by sharpening the alignment of all aspects of the curriculum to reduce repetitions, and gaps, and strengthen the articulation of skills” (Hayes Jacobs, 1997, p. 114). The backwards design process outlined in Figure 6 illustrates each of the steps necessary in developing a cohesive curriculum map. This process leans on the work of Wiggins et al. (1998) while including other essential elements, such as the identification of power standards (Ainsworth, 2003), in developing a guaranteed and viable curriculum (Marzano, 2002).

Identifying the Gap

Research shows that curriculum maps have a variety of benefits. These include: (a) a method of communication and collaboration; (b) an assessment tool for evaluating and articulating the curriculum alignment of a school or a district; and (c) a process for improving student achievement and teacher practice, as outlined in Table 1 and explained below.

Curriculum Mapping: Building Collaboration and Communication

Curriculum mapping can serve as a powerful tool for promoting collaboration. In a study conducted by Sumsion and Goodfellow (2004), curriculum mapping was used to

Figure 6. Overview of the curriculum mapping process.
Table 1

*Benefits of Curriculum Mapping*

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Research evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication &amp; collaboration</td>
<td>Methods of communication</td>
</tr>
<tr>
<td></td>
<td>● Harden, 2001</td>
</tr>
<tr>
<td></td>
<td>● Lucas, 2005</td>
</tr>
<tr>
<td></td>
<td>● Sumision &amp; Goodfellow, 2004</td>
</tr>
<tr>
<td></td>
<td>● Wenzel, 2011</td>
</tr>
<tr>
<td>Builds collaboration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Beans, 2006</td>
</tr>
<tr>
<td></td>
<td>● Dutton, 2015</td>
</tr>
<tr>
<td></td>
<td>● Liu, et al., 2010</td>
</tr>
<tr>
<td></td>
<td>● Lucas, 2005</td>
</tr>
<tr>
<td></td>
<td>● Storey, 2011</td>
</tr>
<tr>
<td></td>
<td>● Sumision &amp; Goodfellow, 2004</td>
</tr>
<tr>
<td></td>
<td>● Uchiyama &amp; Radin, 2009</td>
</tr>
<tr>
<td></td>
<td>● Wenzel, 2011</td>
</tr>
<tr>
<td>Alignment &amp; planning</td>
<td>Method for linking and aligning curricular components</td>
</tr>
<tr>
<td></td>
<td>● Harden, 2001</td>
</tr>
<tr>
<td>Strategic planning tool</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Archambault &amp; Masunaga, 2015</td>
</tr>
<tr>
<td></td>
<td>● Liu, Wrobbel, &amp; Blankson, 2010</td>
</tr>
<tr>
<td></td>
<td>● Lucas, 2005</td>
</tr>
<tr>
<td></td>
<td>● Storey, 2011</td>
</tr>
<tr>
<td></td>
<td>● Wenzel, 2011</td>
</tr>
<tr>
<td>Tool to evaluate curriculum alignment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Bester &amp; Sholtz, 2012</td>
</tr>
<tr>
<td></td>
<td>● Lam &amp; Tsui, 2013</td>
</tr>
<tr>
<td></td>
<td>● Lucas, 2005</td>
</tr>
<tr>
<td>Practice &amp; achievement</td>
<td>Improves teacher practice</td>
</tr>
<tr>
<td></td>
<td>● Reining-Gray, 2008</td>
</tr>
<tr>
<td></td>
<td>● Valencia, Place, Martin, &amp; Grossman, 2006</td>
</tr>
<tr>
<td></td>
<td>● Wilansky, 2006</td>
</tr>
<tr>
<td>Process for improving student achievement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Blumberg, 2009</td>
</tr>
<tr>
<td></td>
<td>● Fairris, 2008</td>
</tr>
<tr>
<td></td>
<td>● Oliver, et al., 2010</td>
</tr>
<tr>
<td></td>
<td>● Ranells, 2004</td>
</tr>
<tr>
<td></td>
<td>● Reining-Gray, 2008</td>
</tr>
<tr>
<td></td>
<td>● Shanks, 2002</td>
</tr>
<tr>
<td></td>
<td>● Squires, 2012</td>
</tr>
</tbody>
</table>
measure the integration of generic skills into a bachelor of education program. The purpose was to determine those skills that were integrated and those that were overlooked. Faculty used a mapping process that outlined the placement of each of the skills within the courses. They consulted with faculty members in refining and clarifying each of the placements. Their process proved to be less than sufficient in completing the task, and they realized the need for a more defined systematic process; however, the conversations that arose supported and increase collegiality: “This experience has reinforced for us the power of collegiality and the value of collegial dialogue in creating spaces in which to work strategically to transcend agendas that might appear more managerial than pedagogical in intent” (p. 342).

Collegiality and collaboration were also strong outcome of a dissertation study that analyzed the impact of curriculum mapping when integrated into two high schools (Beans, 2006). In this qualitative study, one school approached curriculum mapping with a bottom-up approach that was centered around a common vision and driven by the needs of teachers. This method proved to be significantly more effective than the process that occurred at an alternate school that did not embed a collaborative approach. These outcomes are supported by another dissertation study that looked at the perceptions of teachers implementing curriculum mapping within a private high school (Dutton, 2015). This study that identified the need for increasing the collaborative aspect of curriculum mapping. While collaboration was not initially a part of the curriculum mapping process, each of these studies (Beans, 2006; Dutton, 2015) concluded that the inclusion of teacher collaboration became a necessary step in actualizing the goals of curriculum mapping.
Liu et al. (2010) found that curriculum maps helped to foster faculty involvement and collaboration. Using a case study approach the authors looked at the impact of creating program alignment maps (PAM) to illustrate internal program alignment. They stated, “Faculty involvement is essential for meaningful curriculum alignment and successful program assessment” (Liu et al., p. 246). The role of teachers in creating maps is essential, in both their buy-in to the process and their role as the administrator of the curriculum. Allowing teachers to collaborate on the creation and analysis provides them opportunity to assure that each of the elements of the curriculum is addressed.

In dissertation studies conducted by Wenzel (2011) and Lucas (2005), interviews were conducted and analyzed to measure teachers’ perceptions of curriculum mapping. Wenzel used qualitative methods to determine whether curriculum mapping was useful in guiding instruction and creating a sense of collegiality among faculty members. His results indicated, “The process opened up lines of communication and collaboration; the teachers began to talk about data on student achievement, the best way of reaching students, and more” (p. 100). Lucas (2005) used both qualitative and quantitative methods to analyze teachers’ perceptions of the efficacy of curriculum mapping. Curriculum mapping proved to be a valuable tool for planning and alignment (discussed later in this review); however, the author stated that, “Curriculum maps require teachers to engage in discussions on what is actually taught” (p. 94). Curriculum maps facilitate the discussion around standards, assessments, and methods of teaching because they provide the visual stimulus and process of working through the alignment: “The scope and sequence of student learning is made explicit, links with assessment are clarified and
curriculum planning becomes more effective and efficient” (Harden, 2001, p. 123). In doing so, curriculum becomes more transparent and can be communicated to all stakeholders.

**Curriculum Mapping: Alignment and Planning**

One primary purpose of mapping is the alignment of the curriculum. Several studies indicate the value of the mapping process in accomplishing this goal. Harden (2001) argues that curriculum mapping “makes explicit the essential core areas to be covered and how students can achieve this” (p. 124). Wenzel (2011) asserts that mapping provides an organizational method that allows teachers to have more time to consider and organize individualized instruction. According to Wenzel, teachers claimed that the process of creating maps was a practical tool for long range planning.

Aligning and planning the standards and benchmarks “foster[s] a sense of responsibility and accountability between the taught and tested curriculum” (Lucas, 2005, p. 93). In a study conducted by Lucas, a MANOVA analysis was used to look for statistical differences between the test scores. There was a statistically significant difference between teachers with mapping experience and those with little experience. The analysis of the data concluded that teachers who had experience and training with mapping understood not only its role for long-term planning, but also its role as a tool in aligning the curriculum. The qualitative data from this study also indicates the middle and high school teachers saw that using mapping for curricular alignment would reduce gaps and redundancies.
Archambault and Masunga (2015) applied the curriculum mapping technique to the library setting where they documented and created a visual of student learning at the programmatic level. Through this process they were able to map out where literacy skills were taught across the curriculum and identify gaps and repetitions. The results of their research indicated that through this process librarians became more familiar with the curriculum and its structure, which allowed them to create a comprehensive and sequential literacy program.

In a similar study Liu et al. (2010) applied an extensive curriculum mapping process within the Department of Speech Education at a midsized university in the Midwest. Their goal was to understand the expectations and requirements for the programs within their departments. Using the mapping process, they were able to identify gaps between courses, improper pre-requisite requirements, and misalignment between learning benchmarks and courses. By using the curriculum map to diagnose issues, they were able to continue their collaborative work and improve the focus and alignment of their program curriculum. Their map became a “strategic planning tool” (p. 245) that aided them in identifying learning objectives and assuring courses were properly structured for students to master the objectives. In a similar study, Storey (2011) implemented curriculum mapping in an undergraduate department and also found that it was a beneficial for understanding the wider curriculum, including methods, structures, and competencies.

In several studies, curriculum mapping was used as a tool to measure the alignment of the standards as they were already outlined. Lam and Tsui (2013) used
curriculum mapping as a way of recording and evaluating the inclusion of student learning objectives across courses. A qualitative case study conducted by Bester and Scholtz (2012) that studied curriculum mapping as a process and tool for overcoming curriculum differences came to a similar conclusion. Bester and Scholtz indicated that using curriculum mapping as an evaluative tool forced instructors to ask important questions, such as, “Why do we teach what we teach? What do our students learn? How do our students learn?” (p. 282). Applying these questions to the alignment of the written, taught, and learned curriculum can create a clear expectation that can drive instruction and communication.

**Curriculum Mapping: Improving Instruction and Student Achievement**

Teachers who use curriculum mapping to align and communicate their curriculum are more likely to increase student achievement (Blumberg, 2009; Fairris, 2008; Oliver, Ferns, Whelan, & Lilly, 2010; Ranells, 2004; Reining-Gray, 2008; Shanks, 2002; Squires, 2012). However, it is important to understand that some of the progress in student achievement can be attributed to the impact of curriculum mapping on instructional practices driven from the clarity of the map. In a dissertation study conducted by Reining-Gray, curriculum alignment strategies were applied on the Georgia science curriculum. The outcome data indicated that teachers saw the value of research-based practices and instructional strategies in delivering the curriculum. The increased instructional quality was one of the factors that contributed to increased student achievement. Wilansky (2006) came to a similar conclusion regarding the role of
curriculum mapping in improving classroom instruction.

Valencia et al. (2006) determined through qualitative analysis of teachers’ knowledge and use of curricular programs that those teachers with greater knowledge of the standards were better able to adapt the curriculum for students’ needs. These teachers were able to adjust and align the curriculum in a more beneficial manner than those teachers who were less familiar. This adaptation allowed teachers to support students and improve their instructional practices.

Curriculum mapping provides a path that leads to improved instruction that supports students’ progress. Blumberg (2009) explained that alignment increases consistency in covering the elements of curriculum; covering each of the elements of the curriculum consistently increased the likelihood that each of the standards is taught to all students. Fairris (2008) supports this idea with quantitative data that indicated that the more thoroughly teachers implemented curriculum mapping strategies, the higher proficiency rates students achieved. Shanks (2002) came to the same conclusion when looking at the scores of students in one grade and then the same group of students in the following grade after curriculum mapping had occurred. The data indicated that students made significant gains in every subject area after teachers used curriculum mapping strategies. In the dissertation studies of both Ranells (2004) and Reining-Gray (2008), analysis of survey data using an ANOVA showed a significant increase in student achievement when teachers used curriculum mapping.

In addition to quantitative data, Oliver et al. (2010) provided a case study that reflected the effects of curriculum mapping of generic skills within an undergraduate
program at an Australian university. The authors noted the challenge in attributing success in teaching and learning to one cause but speculated that the curriculum mapping process was a key variable in their improvement. They saw extensive growth in student satisfaction and a steady increase in scores across the program. Although they described the ever-changing process of curriculum mapping, the positive impact on students caused their methods to become broadly used by universities throughout the country.

The benefits of curriculum mapping are immense and supported by the literature. However, despite the many positive aspects, curriculum mapping is not the norm in most schools, primarily due to the barriers that make its implementation a challenge.

**Barriers to Curriculum Mapping**

Although research has indicated many benefits of curriculum mapping, schools and districts are still struggling to reap those rewards. Many obstacles inhibiting their success have been identified in the research (see Table 2) as barriers to the successful implementation of curriculum mapping.

**Curriculum Mapping: Lack of Self-Efficacy**

Susilana (2014) wanted to understand how the self-efficacy of the curriculum development team regarding curriculum development and curriculum document quality contributed to the implementation of diversified curriculum in elementary schools. Using a quantitative approach with a descriptive method, the author surveyed 120 teachers and 120 students using questionnaires and conducted curriculum document reviews. The reviews of teachers and students rated the ability of the curriculum development team to
Table 2

*Barriers to Curriculum Mapping*

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Research evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of self-efficacy regarding the curriculum</td>
<td>● Susilana, 2014</td>
</tr>
<tr>
<td>Insufficient knowledge of curriculum and standards</td>
<td>● Grant-Williams, 2015</td>
</tr>
<tr>
<td></td>
<td>● Huffman, 2002</td>
</tr>
<tr>
<td></td>
<td>● Murphy &amp; Torff, 2016</td>
</tr>
<tr>
<td></td>
<td>● Valencia et al., 2006</td>
</tr>
<tr>
<td></td>
<td>● Yurdakul, 2015</td>
</tr>
<tr>
<td>Shortage of training, support, and time</td>
<td>● Assunção Flores, 2005</td>
</tr>
<tr>
<td></td>
<td>● Huffman, 2002</td>
</tr>
<tr>
<td></td>
<td>● Jarchow &amp; Look, 1985</td>
</tr>
<tr>
<td></td>
<td>● Shilling, 2011</td>
</tr>
<tr>
<td></td>
<td>● Sumsion &amp; Goodfellow, 2004</td>
</tr>
</tbody>
</table>

 implement the curriculum in learning processes. The outcomes revealed that the self-efficacy of the curriculum development team regarding curriculum development and curriculum document quality contributed simultaneously and directly to the quality of curriculum implementation. Moreover, the quality of the curriculum document directly impacted the quality of the curriculum implementation; however, self-efficacy made a greater impact. The study indicated that the curriculum development teams had low self-efficacy regarding their ability to create a curriculum document (curriculum map) that thoroughly implemented the curriculum. Therefore, the impact of the curriculum map on delivering effective instruction hinged on the ability of teams to develop quality curriculum maps, which only occurred when teachers had high self-efficacy regarding the curriculum. This study revealed the importance of teacher self-efficacy in developing curriculum and the relative lack of self-efficacy teachers have for developing curriculum maps.
Curriculum Mapping: Lacking Knowledge of the Standards

The first step in being able to create a quality curriculum map is understanding the standards to be mapped. Research indicates that teachers lack sufficient knowledge of the standards (Grant-Williams, 2015; Huffman, 2002; Murphy & Torff, 2016; Valencia et al., 2006; Yurdakul, 2015).

In a grounded theory dissertation study conducted by Grant-Williams (2015), the author analyzed the attitudes of kindergarten teachers regarding the implementation of the CCSS and developmentally appropriate practices in preparing kindergartners. The results of the interviews revealed that most teachers stated they did not know enough about the standards, and all teachers felt they were not prepared to implement the CCSS. These outcomes were also supported in a quantitative study conducted by Murphy and Torff (2016) that looked at the effect of CCSS on perceived teacher effectiveness. The data revealed that teachers did not perceive that they were effective in implementing the CCSS to the general population.

Yurdakul (2015) used a phenomenological design to understand the perceptions of curriculum by elementary school teachers. The results indicated that teachers perceived curriculum as “a theoretical text, political text, scope (content), or as guide books prepared by publishers, and that the curriculum is shaped in practice” (Yurdakul, 2015, p. 125). The study found that in order for teachers to be able to adapt the curriculum they need to understand and define curriculum and how it can impact instruction. The findings revealed that teachers who have a clear philosophy of curriculum were able to understand and adapt the curriculum. Valencia et al. (2006)
determined in their study of elementary teachers’ use of curriculum materials that those teachers with a greater knowledge of the curriculum were most able to adapt. Conversely, those teachers who lacked a deep understanding of the curriculum were reliant on programs and were unable to adjust materials to effectively meet the needs of students.

**Teachers and the English language arts curriculum.** The CCSS English Language Arts (ELA) are dense and complex. Teachers are required to have a great deal of foundational knowledge in order to teach the standards. Although the standards are important, the teacher plays the most critical role in facilitating literacy growth of early readers (Ainsworth, Ortlieb, Cheek, Pate, & Fetters, 2012). In fact, Barone and Marrow (2003) found the teacher to be the most critical element in implementing an effective reading program.

Teachers’ knowledge and understanding of the standards has significant impact on student progress (Lane et al., 2009). Furthermore, the challenges of the CCSS require teachers to use the most effective reading instruction (Allington, 2006). In order to ensure that instruction is effective and impactful, it is important to know what knowledge teachers possess (Fitzharris, Jones, & Crawford, 2008). Mather, Bos, and Baber (2001) and Moats (1994) found that preservice and practicing teachers lacked proficiency in strategies for addressing struggling young readers.

The CCSS were one product of the standards-based movement. The foundational principles that were integral in the development of the CCSS were focused on research in the most effective practices. Abernathy-Dyer, Ortlieb, and Cheek (2013) found that teachers did not thoroughly understand the research behind the implementation of the
standards, nor the standards themselves. This lack of knowledge impacted teachers’ understanding of the overall picture of reading instruction and made implementation of the standards difficult. Furthermore, Abernathy-Dyer et al. stated that what teachers know and believe directly impacted student growth. Teachers who struggled with the development of the standards and what they were asked to teach had a difficult time implementing them successfully.

The depth of the ELA standards provides a challenge for even the most seasoned teachers. When teachers are given time and support to develop their knowledge and work collaboratively in unpacking the standards they will be more effective in delivering instruction. Teachers’ lack of knowledge regarding the curriculum and standards hinder them from being successful in implementation.

**Curriculum Mapping: Shortage of Training, Time, and Support**

A primary barrier to curriculum mapping is a lack of training, time, and support for teachers to use this process. Huffman (2002) supported the notion of reduced teacher understanding by noting that teachers were unable to automatically associate the standards with the process of curriculum mapping due to insufficient knowledge. His research revealed that this occurred due to a lack of time for work and study and inadequate professional development. The results reveal that “teachers have attempted to use these tools and have done so with a positive and supportive attitude in spite of the fact that they have faced the handicap of attempting to implement them, in the opinion of the more experienced teachers, without the critical element of sufficient time” (Huffman,
Sumsion and Goodfellow (2004) discussed the complexity of the curriculum mapping process. Although they were able to use curriculum mapping to identify generic skills in undergraduate programs, they were forced to refocus and alter their process due to a lack of understanding about all that mapping entails. The authors recommended training and support in order to achieve the desired results of curriculum mapping.

Jarchow and Look (1985) determined that in order for curriculum mapping to be successful, teachers needed background information, an overview, and training in a workshop session. However, Assunção Flores (2005) indicated that although time is definitely needed to properly support teachers in understanding and using this process, that time is not granted. Thus, we see that insufficient training and time for curriculum mapping are primary barriers in its success.

Shilling (2011) conducted a qualitative case study of curriculum mapping at a high school. The research revealed that although curriculum mapping was recognized for providing opportunities for improving alignment and instruction, several barriers outweighed the opportunities prohibiting the implementation and effectiveness of curriculum mapping. Key barriers were a lack of time and money to facilitate the process and to provide training and support to ensure it could be maintained over time. Although the environment of the school had a strong focus on student learning and instruction, and teachers were focused on collaboration and collegiality, the lack of time, support, and training inhibited teachers from receiving the benefits.
Overcoming Barriers

The benefits of curriculum mapping are made clear by the research, as are the barriers preventing its success. This study analyzed the impact of curriculum mapping on teachers for whom the barriers have been removed. By increasing teachers’ knowledge and providing them with time, support, and a community committed to developing curriculum maps I have gained a better understanding of the role of communities in developing curriculum maps and the impact the maps have on practice.

Assumptions and Delimitations

Assumptions

For purposes of this study it was assumed that teachers responded honestly during interviews and discussions due to the rapport with the researcher and commitment to the work. My role within this research is both beneficial and inhibiting. I have been a colleague and friend of many of these teachers for years. I know their practices, strengths, and weaknesses. My immersion in this research allows me to have intimate and personal conversations with teachers, as well as spend significant time in their classrooms. However, I also recognize the limits of my role.

Being deeply embedded in the research setting could potentially hinder the openness of teachers or alter their responses.

Delimitations

This study confined itself to the parameters of a small regional area in Northern Utah. Additionally, the focus of this study was only on the impact of curriculum mapping
A Review of the Methods

Evaluating the impact of curriculum mapping on teachers’ practice requires a careful look at both the outcomes of the evaluation and also the tools used in making the measurement. The researchers who have studied curriculum mapping have used a variety of methods, quantitative, qualitative, and mixed-methods (see Table 3).

Few authors have attempted a quantitative approach to studying curriculum mapping. Shanks (2002) attempted to correlate curriculum mapping directly to student achievement. While the conjecture that student achievement is directly benefitted by curriculum mapping is made by a multitude of authors (Blumberg, 2009; Fairris, 2008; Oliver et al., 2010; Ranells, 2004; Reining-Gray, 2008; Squires, 2012), few look directly at scores to make that assertion. Shanks showed increases in students’ performance after teachers had participated in curriculum mapping; however, a variety of other factors could have influenced students’ growth. Reining-Gray also looked at students’ scores and measured the growth of students by cohort, which allowed her to see how individual students progressed; however, she could not control for the teacher, which was a potential variable influencing outcomes. Reining-Gray took a mixed-methods approach that also measured the teachers’ perceptions of the changes they saw take place in their classroom following the curriculum mapping work. Lucas (2005) also took a mixed methods approach, but both quantitative and qualitative data was focused on understanding teachers’ perceptions of curriculum mapping.
Table 3

A Review of Methods Used in Studying the Impact of Curriculum Mapping

<table>
<thead>
<tr>
<th>Study</th>
<th>Method</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archambault &amp; Masunaga, 2015</td>
<td>Qualitative: Case Study</td>
<td>Curriculum mapping (CM) leads to high quality integrated programs.</td>
</tr>
<tr>
<td>Assunção Flores, 2005</td>
<td>Qualitative: Instrumental Case Study</td>
<td>Teachers supported the curriculum development work but lacked time and support to fully integrate the process.</td>
</tr>
<tr>
<td>Beans, 2006</td>
<td>Qualitative: Exploratory Cross-Sectional</td>
<td>The bottom-up collaborative approach was most successful.</td>
</tr>
<tr>
<td>Bester &amp; Sholtz, 2012</td>
<td>Qualitative: Case Study</td>
<td>CM is a tool for overcoming curricular differences.</td>
</tr>
<tr>
<td>Dutton, 2015</td>
<td>Qualitative: Case Study</td>
<td>Collaborative training and work time is necessary for CM.</td>
</tr>
<tr>
<td>Fairris, 2008</td>
<td>Quantitative: Survey</td>
<td>Higher compliance with CM saw significant difference.</td>
</tr>
<tr>
<td>Grant-Williams, 2015</td>
<td>Qualitative: Grounded Theory</td>
<td>Teachers do not have the necessary knowledge to implement the standards.</td>
</tr>
<tr>
<td>Harden, 2001</td>
<td>Conceptual Work</td>
<td>CM allows teachers to demonstrate mastery over the curriculum.</td>
</tr>
<tr>
<td>Huffman, 2002</td>
<td>Quantitative: Survey</td>
<td>CM is a valuable tool but must have time and training.</td>
</tr>
<tr>
<td>Jarchow &amp; Look, 1985</td>
<td>Qualitative: Case Study</td>
<td>Teachers need support and training for CM to be successful.</td>
</tr>
<tr>
<td>Lam &amp; Tsui, 2013</td>
<td>Qualitative: Content Analysis</td>
<td>CM is a useful tool.</td>
</tr>
<tr>
<td>Liu et al., 2010</td>
<td>Qualitative: Case Study</td>
<td>CM increases involvement and collaboration.</td>
</tr>
<tr>
<td>Lucas, 2005</td>
<td>Mixed Methods: Survey &amp; Focus Groups</td>
<td>CM is effective when teachers are able to collaborate.</td>
</tr>
<tr>
<td>Murphy &amp; Torff, 2016</td>
<td>Quantitative: Survey</td>
<td>Teachers feel underprepared to implement the CCSS.</td>
</tr>
<tr>
<td>Oliver et al., 2010</td>
<td>Qualitative: Case Study</td>
<td>CM improves the quality of teaching, thereby student achievement.</td>
</tr>
<tr>
<td>Ranellls, 2004</td>
<td>Qualitative: Case Study</td>
<td>CM contributes to an increase in student learning.</td>
</tr>
<tr>
<td>Reining-Gray, 2008</td>
<td>Mixed Methods: Test Scores &amp; Interviews</td>
<td>CM drives a change in teaching strategies and scores showed improvement.</td>
</tr>
<tr>
<td>Shanks, 2002</td>
<td>Quantitative: Quasi-experimental</td>
<td>Students scored higher after CM than they did prior.</td>
</tr>
</tbody>
</table>

*(table continues)*
Researchers have generally taken a qualitative approach to this topic. Of the literature reviewed, 68% of the studies used a qualitative approach with the majority using a case study design. This approach was effective with this topic because it helped to understand the complexities of a process that impacted teachers personally and in practice. The case studies reviewed tend to focus on individual schools or districts that were implementing a curriculum mapping process and the outcomes felt by teachers. The qualitative methods used most frequently included interviews of teachers after the process. In many of these retrospective interviews teachers recognized a need for more training (Jarchow & Look, 1985; Shilling, 2011; Yurdakul, 2015). Their need for more training is likely due to the challenges of completing this process and then having to implement it independently. This emerged as a significant barrier to curriculum mapping. My goal was to provide teachers training in the process and support as they embarked on

<table>
<thead>
<tr>
<th>Study</th>
<th>Method</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shilling, 2011</td>
<td>Qualitative: Case Study</td>
<td>CM has many barriers that prevent it from full implementation.</td>
</tr>
<tr>
<td>Squires, 2012</td>
<td>Conceptual Work</td>
<td>Alignment improves student achievement.</td>
</tr>
<tr>
<td>Storey, 2011</td>
<td>Qualitative: Participatory Action Research</td>
<td>CM increases understanding of methods, structures, and competencies.</td>
</tr>
<tr>
<td>Sumsion &amp; Goodfellow, 2004</td>
<td>Qualitative: Case Study</td>
<td>CM is complex and requires training but can open doors for reflection and discussion.</td>
</tr>
<tr>
<td>Uchiyama &amp; Radin, 2009</td>
<td>Qualitative: Case Study</td>
<td>Increases in collegiality and collaboration were achieved through CM.</td>
</tr>
<tr>
<td>Valencia, Place, Martin, &amp; Grossman, 2006</td>
<td>Qualitative: Longitudinal Case Study</td>
<td>The greater teachers’ knowledge of the curriculum the more adaptable they are in teaching.</td>
</tr>
<tr>
<td>Wenzel, 2011</td>
<td>Qualitative: Case Study</td>
<td>CM increased teachers’ collaboration and gave them empowerment.</td>
</tr>
<tr>
<td>Wilansky, 2005</td>
<td>Qualitative: Survey</td>
<td>CM directly impacted practices.</td>
</tr>
<tr>
<td>Yurdakul, 2015</td>
<td>Qualitative: Phenomenology</td>
<td>Teachers understanding of the curriculum is shaped in practice.</td>
</tr>
</tbody>
</table>
the journey.

Many researchers (Beans, 2006; Dutton, 2015; Liu et al., 2010; Lucas, 2005; Storey, 2011; Sumsion & Goodfellow, 2004; Uchiyama & Radin, 2009; Wenzel, 201) studied the collaborative nature of the process but few were able to capture the work as it occurred. Researchers identified a strong tie between collaborative learning and the positive collegiality that emerges from curriculum mapping work. Through participation in the professional development and the collection of field notes during this process I have a unique perspective of the role of communities of practice. Methods were designed to enable a glimpse into the collaborative process beyond reflections in interviews.

Dutton (2015) included observation in the research design as a method to determine which strategies were used in curriculum mapping. The method helped to clarify teachers’ perceptions and provide a framework behind some of the decisions that were made. Lauridsen (2003) also included observation of the curriculum mapping process and was able to see the essential value of the group. These studies provide further basis for the inclusion of observations of the collaborative work and teachers implementing their curriculum map in their classroom. These aspects are important waypoints on the journey that can provide insight into both teachers’ perceptions and their steps.

Having surveyed the literature on curriculum mapping, research indicates curriculum mapping is effective in expanding collaboration and communication, improving student achievement, supporting planning, and building collegiality. In other works (see Table 2), barriers were presented that inhibited teachers from successfully
implementing this work. Further, having reviewed the methods used in these studies, I determined that a qualitative case study allowed me to better understand and draw conclusions regarding curriculum mapping and the impact it can have on practice when these barriers were removed. This method allowed me to explain aspects and effects that have not been studied extensively and provide clarity on the impact on teachers’ practice.

In Chapter III, I describe the research design being used and the methods and procedures that I applied. These tools facilitated an investigation into the role of a community of practice and a constructivist framework in overcoming barriers and helping teachers find a route to effective curriculum mapping of the K-3 English Language Arts standards.
CHAPTER III

METHODOLOGY

Understanding the change in teachers’ practice and implementation of the curriculum could occur in many ways. In this study, my approach was to step into the process alongside teachers and gain an understanding of their perspective of this work as they were given the time, support, and training necessary to overcome the barriers of curriculum mapping. This qualitative case study attempts to tell our story as we navigate the process of creating and implementing a curriculum map for the K-3 ELA standards while working as a community of practice. Multiple methods were used to capture the process and record the moments that made the greatest impact on practice.

This chapter outlines the methods and design used in this research, as well as an overview of the setting, participants, and limitations. A qualitative case study approach was used in gathering the data. Teachers participated in professional development, interviews, and observations. Data from these were collected and analyzed to determine themes.

Research Questions

1. What observable impact does removing barriers to curriculum mapping have on teachers’ assessment, planning, and instruction of the K-3 ELA standards?

2. How do teachers explain the impact of removing barriers to curriculum mapping on their delivery of the K-3 ELA standards?

3. What is the role of communities of practice in overcoming the barriers of curriculum mapping?
Research Methods

A constructivist approach to learning asks learner and teacher to stand side-by-side in developing their understanding. Furthermore, this theory incorporates both the social and cognitive aspects of a learner’s environment within their personal approach to learning (Reining-Gray, 2008). Constructivism stands on the foundation that learning must be relevant and meaningful if it is to be long lasting (Gentry & Springer, 2002).

This research design relied on creating an authentic environment where teachers were engaged in relevant and meaningful learning through collaboration. They worked together to build their knowledge of the curriculum and their curriculum maps. Communities of practice theory suggests that when teachers have a community they are able to build relationships, recognize competencies, and share information (Wenger, 1998). With a common domain, specifically the K-3 ELA standards, the teachers in this study had a shared interest and knowledge that informed their practice, including sources and tools that were used. This research study allowed teachers to work in a community of practice as the barriers of curriculum mapping were overcome and they defined their route from standards to curriculum.

Case Study Approach

A case study approach allowed me to thoroughly describe and analyze both the individual teachers and the collective group, the K-3 community of practice (Smith, 1978). Merriam (1998) stated, “Case study offers a means of investigating complex social units consisting of multiple variables of potential importance in understanding the
phenomenon” (p. 41).

Much of the research in this area uses the case study method, which seems appropriate due to the complexity of the process and the widespread impact on the school. Curriculum mapping cannot be measured, nor can its implementation. It is a process that is undergone when teachers are given the tools and knowledge, and the opportunity to apply them. The outcomes are changes in work and practice and not items that can be measured or counted. A case study allowed me to view this complex process from multiple angles by collecting data from many sources.

The complexity of this process, coupled with the dynamics of a larger community of practice, produced a challenging setting in which to develop an understanding. A case study allowed me to observe the implementation of this work as well as conduct interviews to gain each teacher’s personal perspective. Case studies allowed me to collect information from many participants and their personal perspectives on the situation (Glesne, 2016; Merriam, 2009; Stake, 2006).

This design allowed the teachers involved to share their personal insights, interpretations, and reflect on the impact on their practice. Furthermore, observations of the work and artifacts from the process provided additional layers of data that helped to reveal how teachers connected with the work and implemented it into their practice (see Table 4). The use of multiple data sources created richer descriptions of the data as well as increased the validity of the interpretations (Glesne, 2016). Collecting data through multiple sources provided stronger evidence in understanding the impact of this work (Yin, 2017).
Table 4

Overview of Data Collection by Research Question

<table>
<thead>
<tr>
<th>Research question</th>
<th>Source</th>
<th>Data collection procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>What observable impact does removing barriers to curriculum mapping have on teachers’ assessment, planning, and instruction of the K-3 ELA standards?</td>
<td>professional development</td>
<td>Field notes were taken in a research journal</td>
</tr>
<tr>
<td></td>
<td>classroom: observation</td>
<td>Observation - field notes of observation of ELA lesson</td>
</tr>
<tr>
<td></td>
<td>interview</td>
<td>Informal/semistructured interviews - field notes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Artifact - such as lesson plans, curriculum map, etc.</td>
</tr>
<tr>
<td>How do teachers explain the impact of removing barriers to curriculum mapping on their delivery of the K-3 ELA standards?</td>
<td>questionnaire interview</td>
<td>Informal/semistructured interviews - field notes</td>
</tr>
<tr>
<td></td>
<td>interview</td>
<td>Informal/Semi-structured interviews—field notes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Artifact - such as lesson plans, curriculum map, etc.</td>
</tr>
<tr>
<td>What is the role of communities of practice in overcoming the barriers of curriculum mapping?</td>
<td>professional development</td>
<td>Field notes were recorded in a research journal notating observations and quotes</td>
</tr>
<tr>
<td></td>
<td>questionnaire interview</td>
<td>Informal/Semi-structured interviews - field notes</td>
</tr>
<tr>
<td></td>
<td>interview</td>
<td>Artifact - such as lesson plans, curriculum map, etc.</td>
</tr>
</tbody>
</table>

Research Journal

Along with the data collection techniques described, it was important to track the events, reactions, and observations that occurred through the research process in a research journal. I used a reflexive journal approach for my research journal. A reflexive journal can help researchers to: (a) connect thought, feeling, and action; (b) deepen self-awareness; (c) trust emerging ideas; and (d) allow new or revised insights to emerge (Lukinsky, 1990). This journal allowed me to record my notes and thoughts as I moved through the sections of research and had ideas relevant to the analysis.
A reflexive journal approach required interactive introspection (Ryan & Cave, 2005). As Dewey (1938) explained, “All direct experience is qualitative, and qualities are what make life-experience itself directly precious. Yet reflection goes behind immediate qualities, for it is interested in relations (p. 293). A reflexive journal allowed me to record my reflections regarding the observations and also record my analysis of these reflections and my methodological decisions.

I used a three-column approach (see Figure 7); the first column was for taking traditional narrative field notes; the second column was used to record my reflections on these notes and observations; and the last column was used to record methodological decisions and actions. I used the first column to record factual information about what I saw and heard in each of these situations. This was important in connecting reflections to facts, which occurred in the second column. In this area I put my own thoughts on what
the things I saw and heard meant in relation to my research questions. Last, the third column provided a place for me to note methodological decisions. This included additional questions that I asked in an interview and notes about a discussion that was sparked during the professional development that provided direct answers. This essential step helped to record the stops along the route and their relative importance to the journey.

**Situation within the Research**

My role in this research was both as the leader of the professional development experience, the trail guide, and also as learner/researcher trying to understand how teachers find their route to implementing the curriculum, in other words, the cartographer. Furthermore, my embedded position within the school also allowed me to be an active member of the K-3 community of practice, a member of the hiking crew. Each of these roles emerges from the various positions I fulfilled within the school; I was the curriculum director, assessment director, vice principal, and interim director. Although teachers were familiar with working beside me and were comfortable with my presence, my various roles may have impacted their responses. However, each of these roles also provided a different level of insight as I was entrenched in this route and already had established my place along this journey. My day-to-day responsibilities provided me with unique access to teachers, their classrooms, and our K-3 community of practice.

The terms to define these various roles can often be misconstrued or include misnomers (O’reilly, 2012). I acted as a participant observer or participant as observer
As a participant observer, the observation tasks underlie the participant tasks (Merriam, 2009). Although the participant observer role can often be complicated by relationships and expectations, it can be simplified if the participant is considered an insider (Glesne, 2016). Because I was considered an insider, I was able to use previously established trust and rapport to relieve tensions. In this role, I was actively engaged in the professional development work while still observing the interactions and impact of our actions.

**Setting and Participants**

**Setting**

The school that serves as the focus of this research was located in a rural college town in the mountain west. It was a public charter school with a long history in the community and with the university. The school was established as a laboratory school to work in conjunction with the university as a model site for student teachers and a place to collaborate with university researchers.

Initially, the school was a private laboratory school that could carefully monitor the students enrolled in the school. This allowed administration to control the number of special education students, admit professors’ children, and serve as a perk for incoming faculty with school-aged children.

This freedom from being a public school also allowed teachers a great deal of freedom in their classrooms. Teachers and administration put less weight on test scores and used the constructivist approach to create hands-on learning experiences and student driven instruction. Historically, the school had the reputation for being cutting-edge and
producing great thinkers.

In 2006, the school officially became a public charter school, which provided access to public funding but also meant that certain parameters had to be met for curriculum and assessment. In the early years of this transition, there was a great deal of frustration as teachers sought to find the balance between their ways of teaching and the mandates from the state.

In 2011, as the new core curriculum, a close rendition of the CCSS, was officially adopted at the state level, the school struggled, along with many within the state, to implement the curriculum. The state put in place a new assessment system to measure instruction regarding the new curriculum, and schools were graded for the first time.

School grades were determined by looking at various aspects of achievement data, attendance, and overall performance. In the initial year of grading, the school received a D grade. The following year it received a C, and then the next two years the school received an A with continual growth in all areas. In 2016, the school was awarded a National Blue Ribbon and named a top charter school in the state and nation.

In 2011, just prior to receiving the D grade, a new principal was named, and the school went through a period of high turnover, ranging from 10% to 26% teacher turnover each year. The teacher population had always included all highly qualified teachers, with most having a Master’s degree and/or various endorsements. The school housed just over 350 students in 14 classroom groups. The school demographics were a majority white, with 15-20% non-white, 2-3% English Language Learners (ELL), 12-18% special education, and 30-35% free/reduced lunch (the numbers represent the range
of data from 2011-2016).

The school began the curriculum development process just over five years ago as a school goal emerged to develop a guaranteed and viable curriculum (Marzano, 2002). Each summer teachers were paid to spend two to three days in training and guided work time to develop their curriculum. Each year there was a curricular focus as teachers continually worked through this process. That focus had shifted from writing, to math, to science, without ever having focused on the ELA standards. Although teachers had developed scope and sequence maps for ELA, they were not tightly followed and include large sections where the specifics were not sequenced. Furthermore, teachers had done little to take these maps and develop individual unit timelines to determine the sequence and methods for instruction on a daily schedule.

Another compounding issue was teacher turnover, which had required most grade levels to rework their curriculum maps multiple times as each new teacher was immersed in the process. The school was committed to a continual focus on curriculum development and provided time each month for teachers to focus on this work. Although it was a priority goal for the school, it was also a continual work in progress that could never be considered complete.

Another major priority for the school was a focus on building faculty rapport and collaboration. Much work had been done to enable teachers to make strong connections with one another and gain a trusting network of colleagues. Field experiences, hands-on learning, mission creation, and specific training on behaviors for collaboration served as key elements in the relationships between teachers. Just prior to this research there was
another large turn-over due to retirements and expansion. The school put in place a mentoring system to onboard the new teachers. This, in conjunction with a faculty retreat, allowed teachers to get to know one another and create the foundation of a strong relationship. These elements of collaboration and development of faculty rapport were essential in our ability to implement a community of practice.

As teachers changed, students changed, curriculum evolved, and requirements from stakeholders emerged and took shape, teachers needed to update and adjust their curriculum to meet these new needs.

**Participants**

The school has a staff of thirteen classroom teachers, five humanities teachers (art, music, movement, media, and Spanish), three special education teachers, several administrative positions, and numerous support staff and aides. This study focused on the seven teachers who work in kindergarten, first, second, and third grades. The teachers included in the study ranged in experience from 3 years to over 25 years. The classroom teachers were all responsible for delivering the core content for their grade level, ensuring student mastery, and overseeing student teachers. These teachers were all considered master teachers and brought to their work a wealth of knowledge and understanding of education.

Student teachers also played an important role in the production of this work. They were not included in data collection and interviews, but they were actively engaged in the professional development and as members of the community of practice. As a laboratory school we were mentors to pre-service students at various levels, during this
research we had approximately 15 practicum students. These students were in the student teaching semester or the semester just prior. I worked closely with these students as the building administrator but also as an adjunct faculty who taught these students in management and reading courses. During the professional development, I ensured that teachers were gathered first at the table, then I had practicum students fill in the gaps and sit on the perimeter. I wanted them to be included in the group, but I also wanted teachers to have the best seats and good space between them.

Throughout our professional development these students varied in their participation. Some were actively providing ideas, answers, and suggestions. Others worked as scribes or took notes on what was happening. As we moved farther into the process their involvement increased and they became more actively engaged. Further research could be conducted on the impact of this work on student teachers as they take over their first classroom.

**Research Design**

The research was organized in a series of tasks that each gathered new information necessary in answering the research questions (see Figure 8).

**Questionnaires**

The purpose of the questionnaire was to establish a baseline understanding of teachers’ views of curriculum mapping and place within the community of practice. Questions were open-ended and given in a survey format to allow teachers an opportunity to answer freely and without interruption (see Appendix B). The survey approach
allowed me to give the teachers the questions at the beginning of our professional development day and gather a true baseline reading. They were each given a link and then sat in relative silence for approximately 20 minutes as each person answered. The results of the survey questions were gathered, coded and used to inform both the professional development and follow-up work.

**Professional Development**

Curriculum mapping is an on-going process (Hayes Jacobs, 2004). Although teachers have been engaged in this work for some time, it requires constant refinement. As we have worked through other content areas and greatly improved both their curriculum maps and the implementation in the classroom, it has become clear that more attention needed to be given to ELA. Although this research occurred mid-year, we looked at the breadth of the year, and honed in on the skills that had not yet been taught. We revisited curriculum maps in a monthly professional development session. This
session was more in-depth and emphasized the ELA curriculum. The constant focus on what students need to know and be able to do, as outlined in curriculum maps, was intended to help teachers address all of the standards and stay true to their route.

The research process continued by assembling the K-3 vertical team for professional development (PD). The professional development covered the unpacking and implementation of the K-3 ELA standards (see Appendix A). The professional development was designed to follow the key elements outlined by Desimone (2009) and described within the theoretical frameworks. The plan intended to align with each of the theoretical frameworks. For example, teachers were taken through a constructivist process to develop their curriculum map. They were not given specific steps to follow to produce a particular product. They were given an opportunity to work collaboratively, in alignment with Vygotsky’s Social Cognitive Development theory (Vygotsky, 1999) and construct their own understanding of the curriculum. The professional development was guided by the teachers; although I had a plan for where I hoped we would conclude, they were the ones actively doing the work and finding the route.

During this professional development work we focused on the reading standards and their progression from kindergarten to third grade. We created a vertical continuum of the standards and unpacked them to determine the specific competencies required at each grade level. The steps of this process are described in Chapter IV to illustrate the way they unfolded in our process. Within this development we looked at essential skills, enduring understandings, and key questions as they vary at each level and developed a progression for students. Teachers spent time determining how this continuum would
impact their instruction by looking at the standards at a more granular level and making decisions about how this would play out in our school. Our professional development work included several short sections of instruction followed by collaborative work time, as outlined in the professional development plan in Appendix A.

During the initial professional development day, we were able to dive into the work and accomplish a great deal of what was planned. However, during our work we kept coming up with other lines of the curriculum that we needed to delve into more deeply and make decisions regarding. Over the following three weeks we revisited our process several times and looked at an additional area we had not yet addressed.

**Observations**

After the initial interview, the teachers immediately started making changes in their classrooms. Initially, I had planned on giving them a few weeks before I observed them, but I noticed in my routine visits the following week that the teachers were making changes already. I began keeping notes on my observations during the following three weeks. During this time, we were also continuing the work in small professional development sessions.

Because I was the school’s interim director, I was responsible for observing teachers regularly and chose to be a part of their classrooms daily. Part of my responsibilities included “drop-ins” to classrooms where I observed teaching and learning, occasionally providing comments or feedback, but primarily just observing. My visits ranged from five to forty minutes depending on my schedule and what was happening in the classroom. I used these regular visits to the classroom as additional
opportunities to observe the potential impact of curriculum mapping on practice. This allowed me to watch for small changes alongside the major shuffles in their teaching routines. I did not schedule a formal observation but used my regular visits, carefully planned to occur during ELA time. During these observations I attempted to be as nonintrusive as possible, with no attempt to influence or interact with the students (DeWalt & DeWalt, 2011). My observation focus was on assessment, planning, and instruction of the ELA curriculum. I looked for signs and evidence that the curricular work was impacting instruction and recorded these in my field notes. This constant presence allowed me to remain a member of the community of practice and serve as a trail guide as teachers continued their route finding.

**Interviews**

I chose to use a semistructured approach for the interview in order to allow myself to add questions based on the flow of the interview. Within a week of concluding the observation, I met with each teacher for a 30-minute semistructured interview at a time and place that was convenient to them. The focus of these interviews was on the initial reactions to the work and process, as well as the role of the community of practice. These interviews were guided by open-ended questions (see Appendix C) that helped to gain key information while still allowing for teacher elaboration (Merriam, 2009). The timing of these interviews allowed teachers to have recently completed the professional development, but still have time to reflect. An interview is the most effective way of gleaning their reflections (Merriam, 2009; Patton, 2002). Furthermore, teachers were able to share the curriculum maps for their grade-level as a launching point for further
questions. They shared samples of lessons, maps, and tools they were implementing based on the curriculum work we had completed. These artifacts were used as a stimulant for discussion and prompt for asking questions.

During the interviews I took field notes identifying the key words or phrases that stood out or inspired new thought. Using descriptive notes can be a powerful way to inform the next layers of the research by developing a stronger foundational understanding (Merriam, 2009; Patton, 2002). The focus of this interview was on the process, the role of the team, and the implementation of the work on their practice.

Data Analysis Procedures

The artifacts, interviews, and observations served as the basis for data triangulation. Triangulation allows the researcher to “obtain different but complementary data on the same topic” (Morse, 1991, p. 122). Furthermore, multiple sources of data can elicit more complex perspectives relative to the subject (Glesne, 2016). Merriam states that “triangulation remains a principal strategy to ensure for validity and reliability” (p. 216). Triangulating multiple sources strengthened the internal validity of the study (Denzin, 1978). Themes from the initial interview impacted both the field notes and follow-up interview. These data sources, in conjunction with the teacher artifacts, allowed multiple sources to be used to confirm themes and findings.

Interviews

Each of the interviews was coded using an open coding process. The coding process was intended to support interviewees in their expression of ideas in order to
create a well-developed understanding of the topic (Glesne, 2016). An interviewer is responsible to be aware of and receptive to the answers and to guide the discussion in order to glean the necessary information. As I conducted the interviews, I was sensitive to the teachers and allowed them ample time to share their thoughts. In my role as administrator I do not regularly record interviews but I do take detailed notes. This strategy was used also during each interview. The field notes provided insight into teachers’ answers as well as thoughts to guide further questioning.

The artifacts included in the final interview were meant to be a discussion point and stimulation for questioning and analysis of outcomes. These artifacts were used to demonstrate outcomes of the professional development. These were collected and used in descriptions during analysis. I did not formally code the artifacts because discussion regarding the artifacts was included in the interview coding.

I developed and used a codebook to aide in conducting a strong qualitative analysis following guidelines for this iterative process (DeCuir-Gunby, Marshall, & McCulloch, 2011). Codes are used to “look for patterns, make comparisons, produce explanations and build models” (Gibbs, 2007, p. 38). The first reading of the transcript or notes involved using a pencil to jot notes about key ideas or outcomes expressed by the teachers. For example, when teachers did or said something related to a community of practice the code (CoP) was listed in the margin. Or, I would write a few key words describing what I was observing, “Teachers looked to one another for answers—seeking help from CoP.” Using a constant comparative method (Glasser & Strauss, 1967), I compared the outcomes that emerged from questionnaires with this interview after the
initial coding was completed. This process continued until common threads or categories began to emerge and all data sources had a first reading. The first list of categories was long and included words and ideas such as; knowledge, trust, collaboration, teacher voice, and purposeful. These categories are “concepts indicated by the data (and not the data itself)….In short, conceptual categories and properties have a life apart from the evidence that gave rise to them” (Taylor & Bogdan, 1984, p. 36). I assigned colors to these initial categories. As the next interviews and notes were read, I marked the text using the colors assigned to the categories. As new categories emerged, I assigned each a new color. I read each interview and coded it using this initial color-coding system.

I then reread the master list of emerging ideas and their corresponding colors and used it to find more holistic themes or categories. Some of these emerging ideas included; teacher knowledge, time as a barrier, purposeful or intentional instruction, and common goals. These were identified by combining similar ideas, such as “I don’t know this?”, “so what does that mean?”, “I think it’s…” as teachers demonstrating a deficiency in knowledge. Teachers also used phrases such as “common goal,” “shared vision,” “clear expectations,” and “agreed upon target.” These phrases led to a theme regarding ‘shared expectations’ as an outcome of the collaborative work—this theme was given a new overarching color. Similar or related ideas were combined to narrow the number of groups. Ideas that were outliers or did not fit within a broader category maintained their original color. New categories were given a new color to represent all of the underlying themes or ideas.

I read the notes from each interview again using the new color-coding system
with the broader categories that emerged from the initial themes. I highlighted each section with an assigned color. Ideas that did not fit within in the larger categories were eliminated if they did not bring new information or clarity, or I created a new category for them. The goal of the second reading and coding of each interview was to help clarify the outcomes.

After I color-coded the interviews, each section of text that was highlighted was copied to a table and listed under a column description for the initial emergent themes. This table was used as a way to synthesize ideas and outcomes. Each category and its supporting quotations were described as an emergent theme in the discussion section. This process was completed for both the questionnaire and the interview with the use of the constant comparative method to look at the varying themes from the two interviews.

**Observations**

Gathering and analyzing data from observations requires descriptive and detailed notes and a careful eye focused on the topic (Merriam, 1998). During the observations I focused on instructional practices and any assessment tools or techniques. In order to focus on these areas, I watched for the activities and interactions between students and teachers and noted the purpose of each. I was listening to both instruction and conversation for key words related to the standards or curriculum focus. I recorded the observations in my field journal using descriptive note-taking strategies. The notes also fit within the three-column layout addressing observations, reflections, and methodological impacts. This strategy allowed me to easily find information and generate ideas based on the notes (Merriam, 1998).
Following the observations, I analyzed the field notes in a manner similar to the interview data using the same color-coded themes. I added new themes or categories to the table as they represented more information. This stage of data collection was essential in triangulating the ideas that emerged from interviews with the elements that were seen in practice.

**Trustworthiness**

**Member Checking**

The teachers' voices were essential in understanding their perspective of this route-finding experience. It was vital that teachers' be represented accurately as I told this story. Member checking is a tool that allows the participants to be a part of the interpretive process (Glesne, 2016). Sometimes member checking means that transcripts of the interviews are given to the participant for a review of accuracy. This can be a challenge for some participants as they read their own spoken word and question what they said. These interviews provided insight into various stops along the route, each of which was used to find patterns and themes. Instead of sharing transcripts, I shared a draft of the relevant portions for their review and approval. Sharing a draft allowed them to offer varying interpretations and suggestions and have a voice on their contributions.

**Peer Debriefe**

A peer debriefer or reviewer is a valuable method of ensuring that interpretations and deductions are in line with the data being collected. A peer, working outside the project, served as an auditor of the field notes and subsequent analysis and interpretations.
(Lincoln & Guba, 1985). The person who served as the debriefer was familiar with qualitative research and had a background in education.

The peer debriefer used the research journal, which contained the notes and reflections, as well as images of artifacts and interview transcripts. This research journal then became an audit trail that showed the evolution of the research, adjustments in methodology, and emerging conclusions (Glesne, 2016). The peer debriefer served as an important step in ensuring that interpretations were valid; however, it was also important to remember that no one interpretation exists.

Meetings were scheduled during the data analysis phase. This allowed me to share portions of the journey, the outcomes, the notes, and the artifacts with the debriefer. These meetings allowed the debriefer a glimpse into the research and an opportunity to weigh in on the emerging themes and outcomes. Careful triangulation and the intertwining of multiple interpretations present both a challenge and necessary step in producing quality results.

Summary and Conclusions

Constructivist theory supports the notion that individuals construct their own meaning based on their environment and the individuals with whom they interact. This study allowed teachers to construct their own understanding as they worked through a challenging process with the support of a community of practice. The design of this study allowed me to collect data that highlighted the outcomes from this work when barriers have been removed and teachers are given time and support to develop curriculum maps.
The data collected in follow-up interviews and sharing of artifacts provided insight into the impact of the curriculum mapping process on each teacher’s practice.

I wanted to gain a greater understanding of the impact of curriculum mapping on teacher’s practice through this research. Through this methodology I have gained clarity on the process, the practice, the outcomes, and, ultimately, the route.
CHAPTER IV

RESULTS

This chapter tells our story. Through this narrative I describe the process we underwent in finding our route to a K-3 curriculum map. This includes an account of our questionnaires, professional development, observations, and interviews.

Preparing for the Journey

When you prepare for a long journey you often begin with the destination in mind and work your way back through the routes until you get back to the beginning. This backwards design approach allows you to prepare for all the potential trials along the route. In designing this research, I tried to think back to plan out the path we would take on our journey; despite my efforts I found our journey was speckled with unexpected surprises that both pushed us away from our path and helped us surely keep our feet planted upon it.

My work allows me to know my teachers well. We have a good understanding of one another’s needs, strengths, and struggles. As we embarked on this journey I wanted to deepen my knowledge and help teachers to focus on their own place in this process.

Professional Development

We were slated for a four-hour professional development on a teacher work day in late March. Teachers came to school comfortable, although tired, from a full week, and ready to learn. This work focused on grades Kindergarten through third; however, our
school goes through sixth grade with several other specialists. I wanted to get each group moving forward on the day’s tasks and help my K-3 group get grounded in the work of the day. I decided to have teachers go through the questionnaire in a more informal survey style. I told them they had all been sent the questions and a secure link to fill in the form. I asked them to read the questions, share any thoughts, ask any questions, and then type in their answers. As they began working, I readied the other grade level groups and sent them off to work so we would have a day to focus.

As the teachers began the questions, they started with a little discussion. The first question asked, “How comfortable are you with the ELA standards at your grade level?” (see Appendix A) A few teachers noted how they felt very comfortable and then there was some joking from two teachers who were in a new grade level about “I will be by the end of the year!” The next question asked about their comfort level with the curriculum development process. At this point the teachers quietly answered the Likert-scale question and moved on. The third question asked them to explain their answer to the previous question. The teachers made a few comments about the required length of their answers, and “How can I put this in words?”

The remainder of the survey was completed quietly. The teachers were focused on their answers and only made an occasional trivial comment. As the first few teachers began to finish, the discussion opened up again, particularly about communities of practice. Question seven asked teachers what they believe a community of practice is, and then question eight asked them to define what it looks like at our school. They were talking about whether a community of practice was just a professional learning
community (PLC) or something different. One teacher commented, “Well I wrote what I think it is, and what I hope it is!” Others laughed and continued on about how they hoped that it would mean working together on their practice rather than the data that commonly drives PLCs.

It took about 20-25 minutes for each teacher to finish the survey and submit their answers. A few finished more quickly and quietly talked about their excitement for this day; one teacher said, “I’ve been waiting for this day since fall!” Their excitement for the work grew largely from a recognized need for more focus on ELA and a desire to create some consistency in the grade levels. These factors, which came out of earlier professional development during the school year, fueled me to design this training and then get it on the calendar; however, due to some other variables we had to push our work to spring. The teachers had come to me several times during the year with questions or thoughts regarding the ELA work we had hoped to accomplish. I had always assured them that the training was indeed coming, but that we had had to properly prepare. Their anxious typing and discussion helped me to see that they were indeed ready and excited to begin our journey, and with their completed answers I knew where we were and where we were headed in our first steps.

Our First Steps

The plan for this professional development was laid out months prior to our day of work. I had an idea of what I wanted us to work through and the steps we would need to take to get there. A summarized version of our work is available in Appendix A. This
section will provide a narrative of the process, the reactions, and the steps we took in finding our route.

**Orienting Ourselves**

I started by asking teachers to name the first literacy skill that is developed by children. Teachers’ responses varied. Some said, “Concepts of print” followed by agreements, another said, “Alphabetic principle.” A few teachers remained noticeably silent. As I started talking I related the metaphor of building a house to building a reader. I asked them to think about the building that had just been built next door and the first steps they took. A teacher answered, “They poured a foundation”, but I asked them to think about what went under the foundation. They talked a minute about dirt and rocks and then someone said, “It has to be packed gravel.” I explained to them how the foundation of reading is actually built on packed gravel, just like in a building, and that the packed gravel is representative of concepts of print. Then I explained that although that gravel is essential, there is still work that comes before.

Before you can pour any gravel, you have to dig the hole and compact and prepare the dirt; in developing our literacy foundation this preparatory work is really where reading begins and that is the development of oral language. At this point, teachers were typing and writing quickly as I talked. They had some follow up questions about what exactly was included in oral language and how that prepared for concepts of print. I had them describe the elements of concepts of print and they could name a few, such as directionality and orientation, but most could not name any more aspects. As we clarified this point I said, “So this is generally the base of the house of reading.” To this point a
teacher replied, “Wait, what? I don’t know this.” Her vulnerability and willingness to speak up were met with agreement and nods from other teachers, so I responded by going back to a more basic beginning than I had planned.

In my design we were going to walk through the “advanced house of reading” but teachers were unfamiliar with this simpler outline and I knew this would make the other version more confusing. I quickly drew on the board the jagged “gravel” and labeled it, “Concepts of Print” (see Figure 9).

As we progressed up the house I probed teachers and asked them to predict and explain the next layer. Often one teacher would give one answer and then another would chime in with a second portion or follow-up idea. The discussion was as much guided by

*Figure 9. The basic reading house. The request for more information lead to a quick sketch of the ‘Basic Reading House’ I use in teaching reading to undergraduate students. It outlines the Five Pillars of Reading and how each play into the development of the others (National Reading Panel, National Institute of Child Health, & Human Development, 2000).*
their answers and ideas as it was by my questions and elaborations. As we got into the
vocabulary and comprehension layers I explained how there was some debate about
which step actually came first, and that the more detailed house better explained how
they developed.

The teachers had seen the more detailed house during our fall discussions when
this “need” was originally brought forward; however, we did not spend time on the
details. At this point in our professional development it seemed that we had a good grasp
on the basics, even with just fifteen minutes of discussion and we were ready to launch
into the more detailed level.

I projected the Advanced Literacy House (see Figure 10) on the monitor for the
teachers to look at several opened it on their computers so they could look at it more
closely. Their initial reactions were related to the complexity of the house, and “This
looks harder to teach.” I explained that it was much the same as what we had talked about
on the board, only it added in more layers and detail. I also explained that this version
truly did look at the foundation of literacy, the well-formed hole in which all else is built.

I opened the floor and asked teachers to think about oral language development
and where they thought that occurred. Most quickly responded “as toddlers”,
“preschool”, “at home”, and similar answers. We discussed how this foundational phase
actually comes far before the school-age years in a typically developing child. Our
kindergarten teacher raised her hand and said she felt like she was teaching more students
with language delays than ever before. She felt like there was a rising number of children
coming to school without as much oral language development. In an open question I
I developed this Advanced Literacy House during earlier coursework and studies in literacy. It is based on the framework of the ‘Big 5’ but adds in the multiple layers of reading development.

asked teachers to conjecture on why they felt this was happening, if indeed it was. One teacher quickly pointed out how parenting has changed and children are not talking with adults as much. The conversation turned to the challenges of the digital age and high number of devices in children’ hands, particularly in the car when they would have
engaged in conversation in prior eras.

The group also identified the rising number of students coming from struggling homes where parents may work multiple jobs and children are not around adults as much. They were able to provide several examples of the challenges of a low socio-economic status on students gaining these foundational skills. We talked about how this lack of early language exposure could impact oral language, but also the next layer which is the articulation of phonemes.

This skill requires a child to be able to say sounds aloud. It takes careful speech and a great deal of listening to good examples of oral language to build this ability. Students who do not master this concept struggle greatly as they move into more in-depth phonemic awareness, and even phonics, where they are asked to articulate and manipulate single sounds. This simple yet crucial step of making sounds can create a significant gap if not mastered prior to school.

During this period of discussion, the teachers were largely taking notes and asking clarifying questions. The early layers of development seemed to be the ones they struggled most significantly with. They had questions about terms, definitions, and practices. Of the seven teachers present all were actively engaged; four were taking notes, and five were asking questions, providing answers, and/or seeking clarification.

We continued to progress up the house, talking about each layer and clarifying what that meant in literacy development. I explained why ‘receptive vocabulary’ ran vertically over several sections as students gained a wider receptive vocabulary through exposure to wide reading, but also how they were learning other foundational skills as
this knowledge was created. Our kindergarten teacher spoke up with some thoughts about whether she was putting enough emphasis in vocabulary development. She stated that most children come to her with solid concepts of print and she just expands in skills through shared reading. In raising her question, she “thought-aloud” her practices in developing vocabulary. She told about how she always used “real words” and did not try to “dumb down” what she was saying. She talked about using many vocabulary words throughout science units and her shared reading activities but expressed concern about the intentionality of her instruction. She raised the question to the group, “Should I be doing more?” Three teachers remained quiet, and the other three offered support of continuing what she was doing but being more intentional about the words she introduced. They determined it would be beneficial to use them, but also to take a moment to explain a meaning of the word for those children who may struggle more at vocabulary development.

As we proceeded on we also talked quite a bit about listening comprehension. When I asked teachers how students developed this, most replied during shared reading or read-aloud. This raised questions among other teachers about whether time should be spent on this, to which one teacher replied, “Well obviously we need to spend time on it” while pointing to the place on the literacy house. The issue of time first appeared at this point. One teacher said, “But how do we do it all? It’s really hard to fit in read aloud time. We used to read for a long time every day but I don’t feel like I have time anymore.” Another teacher responded with suggestions for finding the right place in the schedule and using this time to build several skills. One teacher talked about how she
used read aloud time to pick out word patterns that were being learned during phonics word work time, or to reinforce science strategies through a content text. No one argued that time was a challenge, but several had reasonable solutions.

The center of the literacy house engages in several challenging literacy skills almost simultaneously with many aspects overlapped. I noticed that teachers were eager for my definitions and clarifications on some of the sections, such as orthographic and semantic awareness. They were quick to pick up on my clues about expanding awareness and using our morphology skills to break down the words. I explained how this section does build from layer to layer, but the layers are thick and one often jumps into the next portion before full mastery is gained on the prior. They had many questions and ideas about decoding and sight words and how the two interact. I allowed them time to share thoughts and process their ideas together. They all provided different insights and posed other questions. They turned to me as a guide and as the expert, but did not hesitate to ask, answer, question, and engage with one another. During these moments I jotted notes in my research journal and sat back to allow them time and space.

Moving into the top three layers of the house, some teachers who were previously actively involved started to get quiet. It was our kindergarten teacher and one first-grade teacher. As we got to a discussion moment they both mentioned how they spent so little time on this section and that most of their work happened much lower in the house. I challenged them to think about not only their place in preparing students for upper levels, but also working with students who are ready for more rigor. As we talked more about these sections and how they might look in practice, I noticed that all teachers had
reengaged with the content and were providing questions and suggestions.

The top three layers took the shortest amount of time to learn about and discuss. The teachers felt comfortable with the building idea from our earlier discussion and seemed to grasp those concepts more easily—or perhaps they felt it was not their responsibility within the primary grades. It was in this moment of shift that I launched them into our next activity.

**Familiar Paths**

Staring at the literacy house, and having just talked through its many complicated layers, I could see how some teachers were connecting the sections to their classroom as they shared examples of their own practice, but there were some silent gaps in the group. I next asked teachers to work with their grade level partner and student teachers to talk about what portions of the house they teach within their grade level. I had each group generate a list on the board that connected what they teach to the skills we had just outlined.

During this work session, lasting only about 15 minutes, teachers continued to have many questions. Some related to what they expected their children to know at the end of the grade in contrast to what they wanted them to come in knowing. They also wondered about the level of detail they should include. They talked largely with their grade level partner but also asked questions of other groups and pulled me in as well. The outcomes of the groups were quite different. Our kindergarten teacher went in-depth and provided some very specific details (Figure 11), while our third-grade group had a much different response (Figure 12). The third-grade team was new to the school, and both
teaching third grade for the first time. They are quieter by nature and tend to be the least social of the group.

As the lists on the board took shape, the discussion around the tables began, primarily teachers talking to grade-level partners about, “Oh did you see they put that” or “Oh we forgot about this.” I asked each grade to take a minute and walk us through their

Figure 11. Kindergarten literacy skills list. This list was generated by the kindergarten team listing the specific things taught in kindergarten that connect to the Literacy House.
Figure 12. Third-grade literacy skills list. This list was generated by third-grade teachers listing the specific things taught in third grade that connect to the Literacy House.

list. During this time the other teachers asked a few questions and commented about differences in their own ideas and lists.

After each group had shared their thoughts I posed the following question, “Why do you teach these things?” The following responses were shared, “Because it’s developmentally appropriate,” “It’s what they need,” “It’s where they are at,” “That’s what the core says I’m supposed to teach.” The final response was greeted with nods and verbal assents. I reminded teachers that it is necessary to understand what is appropriate for children and to identify where they are in learning, but that the core should be the guide to all things in the curriculum.

The next task I gave them was to connect their lists on the board to the standards
within the core. I asked them to look at the things they had written and find the corresponding standard. I did not want this to be an exhaustive activity but instead an opportunity to connect practice with standards. They each opened a copy of the Utah English Language Arts standards on their computers and began looking for the connections. I was a bit surprised to see two teachers slow to pull up the curriculum; they double checked they were ‘in the right place. As they were talking about which website to look at, another teacher said, “Don’t you have that bookmarked? I don’t think I ever close the core.”’ The two teachers quietly laughed it off and stayed at the Utah Education Network website under my recommendation.

After about 15 minutes of looking, I brought the group back together to discuss. I asked them if they were finding what they were looking for and if they saw a good connection between what they were teaching and the standards. One teacher said, “It’s there, it’s just not written this clearly,” referencing the list on the board. The discussion centered on the idea that most of what they were teaching was included in the core, but it was not stated clearly or explicitly. They found that they had to read into, or unpack, a standard to know exactly what it meant or how it connected with these skills.

This idea led into our next activity which was focused on the standards and all of the elements within them. In our prior discussion teachers found that most of what they were referencing was in the Reading Foundational Skills section. We decided we needed to focus in that area first, along with Speaking and Listening since that was the foundation of the Literacy House and an area they all felt they had neglected.

I asked each grade-level group to create a sticky note for each standard in Reading
Foundational Skills and Speaking and Listening. The sticky note needed to note the big idea for the standard or indicator and any essential details. I wanted them to ensure they had every standard and indicator in these sections represented and then I asked them to sequence the sticky notes. There was a significant discussion about whether the number order represented an appropriate sequence or whether they should come up with their own. I told them that the standards did have a logical progression of skills to be mastered but reinforced that they have autonomy to decide. Later one of the teachers mentioned that she felt like the core order was appropriate when referencing these skills that were building on one another; however, other grade levels approached the order differently.

**The Confluence**

A river confluence marks where two rivers come together to form a new body of water continuing forward. An example would be the confluence of the Monongahela and the Allegheny Rivers that come together in Pittsburgh, Pennsylvania to form the Ohio River. Another would be the mixture of the red and muddy brown water where the Green River terminates into the Colorado River. Each of these rivers meanders independently through its course until it meets another and together they make something new.

Generally, when we look at the core curriculum we think about each grade level independently, like a river meandering its own course. However, our work was about the confluence of each of these four grade levels to define a new course moving forward. Our next step was to form the confluence.

Each teacher team had a pile of sticky notes laid out in front of them, labeled with standards in Reading Foundational Skills and Language. The sticky notes had been
sequenced by grade level but I asked the teachers to put the sequence down from kindergarten through third grade. They placed their sticky notes on a large sheet of butcher paper stretched across the length of the room (see Figure 13). We divided it into two horizontal lines, one for each section of the curriculum.

Figure 13. Beginning the map. Our map began with the kindergarten standards, written as big ideas and placed in sequence.
Our kindergarten teacher was the first to place her sticky notes. She had some questions about where to start and how to lay things out. She did not want to put things in a straight line because she felt there was some overlap with certain skills. I told her to place them in the way she felt most represented her thoughts. As the next grades started to come forward, they began to place things more simultaneously. As a grade would finish I asked the teachers to just gather around and look at the sequence. I pointed toward the Literacy House still projected on the monitor and asked them to look for connections. They talked quietly to grade-level partners as the last grade discussed and placed their sticky notes. Someone then shared their thoughts about the connection between the house and the map we had just created. The response indicated that the two were very similar the house had more formal terms; the core had more broad terms, but both included parts of the development of a literacy structure.

Each grade level walked through their sequence, their route, from kindergarten to third grade. We talked about some areas that were unclear, like the placement of \textit{r-controlled} vowels and how many would be addressed in first vs. second grade. The red sticky notes (see Figure 14) illustrated the standards of first grade. Their sequence was far more jumbled and did not create a standard horizontal line. As we talked through their section, they talked about how many of their foundational skills are taught in close sequence and then reinforced over time. They also talked about how first graders have so much to learn that much happens simultaneously. They layer on skills and knowledge, slowly mastering one concept as they begin to learn a new one.

As the map became clearer, the discussion became richer. Teachers were
questioning their sticky notes and checking back to the standards for clarification. As we got into second grade and they discussed a few standards about which they needed clarity, several teachers searched the second grade core and added their thoughts. They answered one another’s questions and turned to me only occasionally for validation.

One topic that got a great deal of emphasis during this continuum was phonics. In each grade level Standard 3 states, “Phonics and Word Recognitions: Know and apply
grade-level phonics and word analysis skills” (National Governors Association Center for Best Practices, & Council of Chief State School Officers, 2010a). As each grade level got to that big sticky, they knew that it was the indicators below that really guided their instruction. The indicators break down in more specificity what grade-level phonics means. However, we determined that even with the more granular explanation of the indicators, it is not detailed enough to cover all of the rules of phonics.

When I introduced the Advanced Literacy House to teachers it came in a document with several other literacy tools, one of which was a phonics continuum. This was a project that I had created in earlier coursework and research and outlined a sequence for developing phonics skills. The continuum put the skills in progression but did not determine which skill set went in each grade level. I wanted teachers to have the opportunity to determine where their grade fit on the continuum, but also understand that it was a continuous scale and that students would be spread across the scope depending on their developmental level.

As we worked through the sticky notes related to phonics questions kept arising, “But what about r-blends? Does first do them all?” “Which digraphs should we be teaching in second, the ones with more than two letters?” “But what about /oi/ and /oy/? Do you teach those or do we?” As their questions went on they were looking to the standards for answers but found that many of the rules and concepts they were talking about were not listed in any indicators. At this time, I pulled out the phonics continuum and asked them if they thought they could apply their current sequence to this one to clarify the separations. They all quickly pulled up the document and I loaded it on my
iPad. We sat gathered around the sticky notes and began to make notes on our own continuum to determine what belonged in each grade level.

We first marked the things specifically listed by the curriculum, then we looked at the areas in between to determine the non-specifics that should be included at each grade level. Things that did not fall clearly into one grade level were discussed and decisions were made regarding where they belonged. Some of the phonics concepts were easy to place in one grade or another, but others took discussion and debate about how they connected to other skills. For example, /ough/ and /augh/ were mixed within the two-digraph area, but the first-grade teachers felt they were not appropriate for their children who were learning the bulk of digraphs, only containing two letters, for the first time. The group agreed they should be in second grade, but then the second-grade teachers felt if they were teaching those they should also have /aw/ so they could teach the distinction between /augh/ and /aw/. Similar digraphs were pushed to second grade because they aligned with other more complex di- or tri-graphs. We worked through several concepts this way, looking at standards, finding connections, and coming together with a decision. The outcome was a messy copy of the continuum (see Figure 15), covered in labels and highlights with grade-level color coding, but it was also much more to the teachers, as described in the succeeding chapter.

As we looked across the spectrum there were areas that we could see we needed more focus; our sticky notes had question marks, and we placed and replaced them several times. These areas caused discussion to slow and pauses to lengthen. These were the moments when we were stepping into the unknown.
| Phonics | Consonants | High-frequency regular consonants: s, m, f, h, r, l, b, t, d, c, p, n  
Lower-frequency consonants: g, w, j, k, r, y, z, x |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Vowels</td>
<td>/a/ /i/ /u/ /e/ /o/</td>
<td></td>
</tr>
<tr>
<td>Beginning digraphs</td>
<td>ch, sh, th, wh, ph</td>
<td></td>
</tr>
</tbody>
</table>
| Consonant Blends (Initial) | S-blends: sp, sl, st, sn, sc, sw, sk, sm  
R-blends: br, cr, dr, fr, pr, tr, gr  
L-blends: bl, cl, fl, gl, pl, sl  
S-Clusters: scr, spl, spr, str, spl, squ  
Other: tw, qu, dw |
| Consonant Blends (Final) | Review: -st, -sk, -sp  
-n, -nt, -mp, -kg  
lh, ll, ld, lp, lm, llb, lc  
l, tt, ft, pt |
| Trigraphs and Double Consonants | -tch, -dge  
ff, ss, ll  
gg, dd, tt, zz |
| Onset & Rime/ Synthetic Phonics (Word Families) | Short /a/: -ack, -at, -ash, -ap, -an  
Long /e/: -ote, -oke, -ole, -ay, -ank, -ain, -ame  
Short /u/: -ill, -in, -ing, -ink, -ip, -ick  
Long /i/: -ide, -ight, -ine, -ice  
Short /e/: -ell, -est  
Long /e/: -eat  
Short /o/: -ock, -op,  
Long /o/: -oke  
Short /a/: -uck, -ug, -ump, -unk  
Other: -aw, -all, -ore, -ir |
| CVC-e | a-e (brave)  
i-e (time)  
o-e (hope)  
b-e (these)  
u-e /yoo/ (fuse)  
u-e /bo/ (tube) |
| Vowel Digraphs: Two letters that make one sound | ao (boat)  
ao (flow)  
ai (pain)  
ay (say)  
og (dog)  
w (tow)  
short (short)  
lough (daugh)  
ough (daugh)  
ough (daugh) |

*Figure 15. Our phonics continuum. An exercise in mapmaking; our phonics continuum developed a new layer as teachers applied their knowledge of the core standards and students development to create a grade-level sequence of skills.*
Unknown Trails

Much of the work of curriculum unpacking and developing a sequence was familiar to teachers. They had worked through the process and knew the steps. However, I knew there were areas that needed more support and I had to push teachers beyond the familiar pathways and onto the unknown trails.

The first of these emerged in the early part of the day when we broached early literacy skills and were met with a lack of knowledge. In discussing some of the concepts, we could quickly talk about what it was and then move on, but in other areas, like details of phonics, or the role of sight words, there was more hesitation and uncertainty. Not wanting to hinder the pace I picked a spot on the corner of the board (see Figure 16) and told teachers that the things we wrote there were of great importance, but not issues we could solve at the moment.

Figure 16. Artifact: Unknown trails. Throughout our work we hit several moments when we came across a section of the trail that we knew we needed to pass, but we did not have the ability or time to do it at the moment. We ‘tabled’ these unknowns by listing them on the board to be addressed later.
Our final hour was spent together, primarily on the floor, discussing our sequence and how it might play out in the classroom. I had teachers add an additional layer of sticky notes that talked about practices for addressing the standards and allowed them to share across grade levels. This was relevant in that many of our lower grade teachers actually have taught in other grades. They shared ideas and suggestions as each one talked through their own standards and how they fit into the map and the progression.

Their dialogue during this section was slower and more thoughtful; they were wading through some unknown and could recognize that they needed the support and guidance of the group. Most focused on the big picture and asked questions about the preparation for the next grade and ensuring their children were ready, but also checking to see that the students coming to them were properly prepared. The tone was not accusatory or negative but rather supportive and encouraging. The teachers asked questions of one another regarding an explanation of a standard, a question about instruction, or a check of understanding. Their focus stayed true to instruction and assessment, and they asked many thoughtful questions about the reality of the discussion, “How is this going to look in my room? How am I supposed to be teaching this so that it uses what you have taught them to move us forward faster?” They were connecting with one another, not only as a peer looking for suggestions, but also as a colleague seeking out expertise.

As the day wrapped up and I could see the exhaustion beginning to set in, I introduced the last component of their work. I challenged each grade level to use a PLC time to talk about how they would allow this work to inform practice and make a plan to
implement. I also told them that we had identified several unknowns that needed support and that we would address them in the following weeks. I helped them to know that although it feels like it is more to teach, it is better to understand what has to be taught to ensure that every child reaches the top floor of the literacy house. In order to reach our destination, we have to find the trail and be willing to commit to each step along the route.

**Marking Waypoints**

The initial plan was to map each of our waypoints in our first professional development; however, we ran out of time and had to follow up during weekly professional development time. We were able to reconvene the following two Fridays for approximately 2 hours each week.

One of the unknowns that emerged from our first meeting was *sight words* and their progression from Kindergarten to third grade. The core states that students should be able to “recognize and read grade-appropriate irregularly spelled words.” In our discussion teachers determined that irregularly spelled words were sight words. The following ideas were included in our questions; which words align with each grade level and how many are appropriate to read and recognize? Should students also be required to write and spell sight words accurately?

These questions brought out a wealth of ideas and possible answers from the group. Some teachers felt very strongly that students needed to be able to spell the words. Others felt that if students could read sight words then the spelling aspect would come.
Most felt that they were approaching this idea randomly and wanted to be intentional in their approach to addressing this standard.

As we unpacked the standard, which is the same for grade one and two but has variations in kindergarten and third grade, we determined that there was purpose in putting this indicator in the standard alongside phonics. Sight words are often called *rule breakers* because they have letter patterns that are expected to make one sound but in that word they do something different. In trying to determine which words fit within the grade level we felt that our previous work in defining the phonics rules for each grade level would be a guide in this process.

Our own work was very informative to our decisions; however, we also pulled other premade word lists and learned about their history and intentions in creating our own sequence. We looked first at Dolch, a list created in the 1930s and 1940s that includes high frequency words and sight words. The Dolch list is broken into grade-level lists and we felt they were mostly appropriate, however they were not aligning with the standard which was looking for irregularly spelled words. One teacher pointed out, “If we can focus on the phonics element and they know how to stretch and blend, then they can decode most of these words. We need to focus on the ones that are not decodable.”

We next looked at the Fry and Zeno word lists, as well as some lists teachers already had from previous schools. The Fry words are very similar to Dolch, coming from a similar whole-language approach, but included all parts of speech. The Zeno list is much shorter, just over 100 words and includes both high frequency and non-decodable words. We talked about the value of automaticity of decodable words that are high-
frequency, words such as *and, is*, and *on*. Children should not be slowing their reading to decode these words; however, we determined that if students had a strong understanding of decoding and reading, they would be able to master the words and gain automaticity quickly. Giving children the tools to decode and be able to work through challenges more independently is more in line with our constructivist school philosophy.

We then went through the Fry, Dolch, Zeno, and a list one of the teachers was already using and found the common words. Most of these were non-decodable, except for a few in kindergarten. They paired with phonics rules being taught in the grade level so they can be taught in application, even though they are rule-breaker words. After a couple of hours of listing, writing, and discussing the words we were not sure of, we had formed a list that moved from kindergarten to third grade.

The conversation around words was an integration of both practice and theory. Teachers were sharing what they did to teach sight word fluency, and why they believed it was the right practice. They talked about practices they felt were effective and were challenged by one another with, “why” or “how do you know?” Some provided evidence and others admitted to not really knowing. They continued by talking about how some practices helped with reading and others with writing and they needed to know what to focus on. They struggled to move past this point, so I told them that reading would need to come first, so they should think about that. They came up with the term “snap” word because they are words you should know in a snap (gestured with the snap of two fingers). They started to use this term throughout the conversation and referred to the *snap* as a way of assessing the students’ automaticity. As the ideas continued to flow
teachers were making notes and asking questions about delivery.

During this time most of the teachers were actively engaged and eagerly sharing ideas. One teacher sat on the outer perimeter and was clearly distracted by her computer. She nodded and agreed with our rationale but was not quick to offer ideas or write down notes.

A third-grade teacher was actively engaged in the sorting of words and determining what fit in each grade level, but when it came to talking about practice, he was relatively quiet and was not taking notes. Although he appeared to be listening, the teacher did not share any ideas about practice or question the practices of any others.

After about two hours of time working on sight words, we decided we would wrap it up for the afternoon. Each grade level had a list of words they were to teach explicitly and in relation to an embedded phonics program. They each had ideas to include or refine in their instruction. They had a map of sight words, from kindergarten to third grade, and a clear idea of the steps they needed to take to get to their destination.

**On the Trail**

After our initial professional development, I began my class observations. My position as Assistant Principal and Interim Director pushed me into classrooms on a daily basis. My goal that year was to see every teacher teach every day. On some days this was challenging, particularly at the end of the university semester when student teachers were taking over most of the day. I valued time watching student teachers teach and seeing how the mentor responded to the student teachers’ struggles. However, for this work I
wanted to know if what we had talked and learned about was making a difference in our teachers’ practice.

During my morning rounds I made note of when the teachers had each included ELA on their daily schedule. I then used these times over the next two weeks to visit each classroom multiple times. I tried to stay in each room for a full instructional period but often got interrupted and had to break my observation into sections. The teachers were so accustomed to my presence that they did not worry much about being watched; most appeared to continue on without noticing. During my observations I sat quietly in the back of the room (this was a signal to teachers that I was staying for a while) and tried to be unobtrusive. I kept notes on my iPad, as I usually do for observations. Most importantly, I came during regular visits to the classroom. As an administrator my job was to know what really happened in classrooms and not just the prescribed visits where everyone has been warned and prepared. Our work was a natural part of our growth as a faculty, and I wanted to understand if what we had done would transfer and make a difference in everyday practice.

Observation: Carmen

Carmen (all names are pseudonyms) taught kindergarten and had been a part of this school and community for over two decades. She had a passion for early childhood and developmentally appropriate practices. She was a beloved teacher and a quiet leader in the school.

Observing Carmen teach took several visits over the period of a couple of weeks. Her classroom set up involved a great deal of small group work and whole-group
instruction that integrated across several content areas. In order to see if Carmen was applying our work to practice I had to catch her at each of the instructional points during her day. Fortunately, she taught both AM and PM kindergarten, which gave me two blocks during the day to observe.

The first observation was of Carmen doing her morning letter with all her students on the rug. The class has a letter written on the board daily that asks them key questions or provides insights into the day. As the class came to the rug they began by having someone come forward to read the letter. On the day I was there one student pointed to the words while each member of the class read the letter out loud. As they got to unfamiliar words they paused to discuss, clarify, and decode. They used a stretch and blend technique on two words. More so, they spent a good deal of time talking about the words, ideas, and the letter as a whole. Carmen led the discussion, but it was fueled by students asking and answering questions and sharing their ideas. Carmen modeled her thinking about one word, which was then used as a framework for another student to talk about a less familiar word. They used various oral language skills and addressed several of the standards. Their discussion briefly mentioned and used phonics.

In another visit I was able to watch two small group literacy lessons. The first was taught by the kindergarten teaching aide under the direction of Carmen. During this lesson the students were focusing on mastery of their word of the day. The word was they, a sight word from the list we had formed, but had previously been a sight word in kindergarten. During the lesson the teacher had a large white board with several areas to fill in and the students had a smaller version on paper. Together they looked at the shape
of the word and each of the letters in the word. They talked about the letters that were tall and how the y hung below the line. Next, they talked about the sounds the letters make and how they did not all make the sounds they expected. Together they reviewed the /th/ digraph and each student said the letters and then made the sound. The students wrote the word and then sounded it out. At the ey part the teacher talked about the letters saying /ay/ even though they were spelled differently.

The second portion of the lesson that I observed was of Carmen teaching a different small group for literacy. When I watched her, she had a mid-level group of students gathered around a small hexagon table. Each student had a tray in front of them with three sections. The students were looking at nonsense words and more complex CVC words. Each section of the tray had a word part. The students read the sounds in their tray, one compartment at a time, then they pulled the parts out and read them together as one word. Some of the word parts came together to make real words, like this and that, other words were nonsense words but the students still went through the process of stretching the word using their tray and then blending it together when they pulled the word parts out. The students were working independently on their words; reading each sound and then blending it together to make a word. Carmen was moving around the table listening to each student and helping as needed.

In a final observation I watched Carmen doing some word sorting work with a group of more advanced readers. The students each had a set of cards, each one containing a word. They were thumbing through the cards, reading each word and then sorting it into the correct section. I came in midway through the lesson so students were
already working independently. They were quite accurate at reading the word, then they would struggle a bit more as they pondered before placing the word into the section. While the students were working Carmen was circling behind the students to listen to their reading and check their sorting. She often asked, “Why did you put that word there?” and students would explain the pattern they saw or heard in the words. She would have them read the word to her and then tell her their thinking. Some students identified the appearance of the word as the reason for placing the word, “These both have an a at the beginning.” Others were using the sound to guide their placement, “This one says /a/ like in cat, this one says /ā/ like in cake.” Carmen prompted students to look at both how the word looked but also how it sounded. She continued to question students until they were saying words aloud to listen to the sound, but also identifying what letters in the word were making the sound they were identifying.

Throughout the observations I saw Carmen using a variety of teaching methods, some I had seen before and others that were new. Her time allocated toward ELA was similar to previous years but her attention to detail seemed changed.

**Observation: Susan**

Susan was a first-grade teacher who was passionate about teaching reading. This was her first year in this grade, but prior experiences had given her an opportunity to build a great love for struggling readers. She wanted to come to first grade so she could teach children to read. When she was moved to first grade, she was quick to dive into planning and looking at her scope and sequence. Her students had many behavioral issues at the beginning of the year, so she was feeling a bit behind on her instruction.
Fortunately, she had remedied the behavior issues and was focusing on specific needs to close students’ learning gaps.

I observed Susan on several occasions during her literacy block. She had a unique instructional pattern where she would teach a 10-15-minute mini-lesson and then students would do a 15-20-minute small group rotation, after which she would circle them around for another mini-lesson. This approach gave her more focused whole class time and closer monitoring of the transitions in small group time.

I was able to watch a mini-lesson where the students were learning r-controlled vowel teams. Susan used a direct instruction approach with opportunities for students to respond in a variety of ways and apply what they were learning immediately. The lesson was not introductory to this concept, but instead adding another blend and deepening their skills.

The students had a very sound understanding of her procedures which allowed me to watch them saying and repeating sounds as a group and with a partner. She also used a gradual release model to help move the children from a learning phase to a practicing phase. They were confident in their knowledge and over 95% were responding with correct answers to her cues to stretch and blend words from the board. The students were confident and consistent in their responses.

As students moved into small group activities I saw them extending their knowledge of the skill through games, reading, computer programs, and small group instruction with Susan.

Susan had a group of six students with her at the table during small group. All
other students were busily engaged with their own independent activities. Susan began her lesson with a phonemic awareness warm-up where students were listening to sounds, identifying elements, and saying them back. They had a very clear procedure for this and it seemed like a step they did daily.

Following the phonemic awareness warm-up, the students started a guided reading lesson. They were working on a book that was somewhat familiar to them but required layers of support. Susan also used this as a time to reinforce the phonics concept she had introduced at the rug and the book supported the phonics lesson with r-controlled blends. I noticed that Sarah was intentional about including phonics throughout the day. Whether they were reading a science book, talking about math, or walking down the hall, students were quick to point out and identify letter patterns. They would stop mid-math and talk about how they knew a word said /er/ instead of /e/ /r/. Susan used this extension group to address other reading needs but also to provide a place for phonics in application.

**Observation: Rose**

Rose had a more traditional approach to literacy instruction. She also had experience in kindergarten and pre-k so she understood the needs of young learners. Rose also used both small group and whole-group strategies to differentiate for her spread of needs.

During the whole-group component, students were using white boards and an anchor chart to spell and manipulate words. Rose would provide them with a word and they would write it on their white board. She would then use their whiteboards for
discussion points as they reviewed the r-controlled vowels. She observed and assessed as students wrote words. She would crouch next to a struggling student and provide some additional support. The anchor chart was also used as a level of support. Students referenced it independently and were asked to look at the information to verify their answers.

Throughout the lesson students were engaged with writing words using phonics patterns, but then they practiced manipulating words, sometimes even into nonsense words, to deepen their knowledge. As students showed mastery across a majority of the class she sent students to assigned tables to practice various literacy skills.

In one area students were working with a parent on sight word assessments. Rose had been a strong leader in the sight word discussion because she had previously developed a list of words that she was using in her classroom. She had broken them into levels and had an assessment system for students to show mastery.

In another center students were extending their work with r-controlled vowels in an activity led by the student teacher focused on word work. They were working with vowel sounds and playing a game together.

In another center students were practicing handwriting with an aide. In the last center, led by Rose, students were in a very small group working on guided reading. This particular group had the most struggling first graders. They were working on skills that were far different from the whole-group lesson. During this intensive lesson they did a phonemic awareness warm up game and then jumped into a decodable book with some basic sight words. Rose lead students with high levels of support and explicit instruction;
they practiced phonemic awareness and phonics in application.

Observation: Alex

Alex’s approach to instruction was generally through small groups. She had found that her second graders were able to focus for a longer time if she focused on a small number of children and adjusted her instruction to their specific needs. During my visits to her classroom, I observed students during several small group cycles as well as a few shorter whole-group discussions.

During the small group time students worked on a range of activities. They used a computer software, Lexia Core5 (https://www.lexialearning.com/products/core5), that placed them according to their learning gaps and provided them focused instruction and practice. Students were working on a variety of skills on the computer, many of them phonics related. Due to the adaptability of the software, the lessons did not align with the instruction in class but were based on students’ current levels in basic reading skills.

In other centers students were working on reading activities of a more independent nature. They read passages with accompanying questions and activities. Students were working on these scattered around the room at tables and desks. They seemed very comfortable with what they needed to do and were on task for a majority of the time. The content of the packets varied through several visits but generally focused on reading literature and comprehension, although they did include aspects of word work.

Two centers were taught by teachers during the literacy rotations. One center was directed by the student teacher and had a guided reading focus. Students were reading a novel and the student teacher provided them with discussion points and questions.
throughout their reading. The students sometimes choral read and at other times took turns reading aloud. They moved through several chapters during my observation and seemed to be focusing mostly on fluency and comprehension.

The center taught by the teacher varied greatly in my multiple observations. With one group she had a small decodable text that the students were working on and some accompanying word work that emphasized the sight words from within the book. In this group they read, talked about words as they encountered them, and then completed the sight word activity. With another group, the students were reading a more challenging book and Alex led them through some deeper questioning. These students spent less time talking about the decoding of words and more focus on vocabulary and meaning. They were fluent readers but not the group of students with the most advanced reading ability.

During the whole-group instruction, I watched as Alex read the class a story and guided a discussion on some of the themes and ideas from the book. She asked several open-ended questions that were answered by students with raised hands. As she was guiding the discussion, I noticed that there were several vowel digraph posters hanging on the board. These were digraphs we had added to the second-grade list during our professional development. Furthermore, after the professional development Alex and her teaching partner Jamie had requested a poster set that contained the vowel digraphs that were aligned with second grade. I saw these posters recently added to a bulletin board on the side wall; however, I did not see any instruction related to the phonics posters or accompanying rules.
Observation: Jamie

Jamie was an energetic and excited second-grade teacher who used a small group rotation plan for the majority of her literacy instruction. When I came in to visit she was finishing up a shared reading experience at the rug. The students were actively engaged, and Jamie used several questioning strategies to provoke thinking and get students to interact with the text. Her questions generally related to comprehension or gleaning the theme or main idea of the story. This reading lasted about 12 minutes before students were given instructions on the rotations for the day and then they were sent off to get started.

The students broke into five homogeneous groups, each with four to six students. They seemed to have clear understanding of expectations when they went to the center, except a couple of boys who got distracted when they were supposed to be beginning computers.

Jamie used the same computer program, Lexia, as the rest of the school. She integrated it into her center time where students generally got 20-30 minutes per week. This station revealed a similar pattern that Alex and other teachers used. Students were working at varying levels based on their current progress. The software determines an area of focus and then as the students progress, they move to more challenging levels. Her students were mostly completing phonics levels with a few students still working on phonemic awareness activities.

Another center students attended was run by a parent and included a comprehension game. Students were using a pre-built gameboard, and the parent helped
them to stay on task and complete the necessary actions. At a center next to this one the student teacher was working on more specific reading strategies through an integrated lesson. She had a book that was related to their science concept, and the student teacher was doing a lesson related to the features of the text. I was not able to see the whole lesson and just caught the end as students were doing more reading and just identifying features as they came to them.

At a table in the back of the room, the grade-level aide was teaching a small group focused on phonics. The students were creating phonics books/foldables that included some specific digraphs. The aide did not provide specific instruction on the phonics patterns during my time there but offered more instruction on the creation of the product. The students seemed fairly comfortable with the phonics section, but they were doing work in isolation, so they were not transferring any skills to text.

The last station was directed by Jamie, the classroom teacher. Jamie was working with seven children on a small novel. The students each had a copy of the book and were taking turns reading. Jamie stopped the reading quite frequently and had the students answer questions about the text. Their discussion was rich and pushed beyond the bounds of character and setting. The students seemed to be making connections to other texts and to the larger theme of this text.

As in the other second-grade classroom I could see the posted phonics posters but did not see any instruction that was directly related. The students seemed to be building some sort of a phonics book in their center with the aide, but I was unable to see if this connected with the larger phonics instruction.
Observation: Jason

Jason takes a very integrated approach to all instruction, particularly literacy. He developed larger units that could then be the guide to his literacy instruction. During my observation the class was working on the indigenous cultures of Utah and the surrounding communities. Their classroom was laden with authentic artifacts for students to handle and learn about. They also had a range of texts that related to the artifacts that students were using for learning. In one of my first observations the students were working on a graphic organizer that was relating two items from within the collection. The students were working in partners and writing about each item. Their written notes were brief, almost bulleted but not intended to be a bulleted list.

In another observation, I was able to watch Jason in a whole-group rug lesson. They began with a lengthy discussion of their learning targets for the lesson. The teacher guided them to a target that related to using artifacts and texts to gain information about a group of people or community. The literacy goal related to the ability to pull resources and use them in informational writing. Jason was using these artifacts and tools to help them determine which aspects were most important to include in their writing.

During his instruction, students were sharing about artifacts through hand raising and partner talk. Jason was noting ideas on the board as students determined what was most important. He used a graphic organizer to separate their ideas. After the rug time students were partnered and then were going to create their own graphic organizer of the other artifacts around the room. I watched as children went out exploring and chose an item. They were very focused and had clear understanding of the task at hand. They were
able to describe the items but the things they added were not necessarily the most important elements. Students were also more focused on the items than the things they wrote down, leaving their lists a bit basic and brief.

**Observation: Heidi**

Heidi was a third-grade teacher with a busy class full of unique personalities. In her previous teaching experience, she had worked with older students, so this transition has been a challenge. She had created a thorough system of classroom management and spent a significant amount of time building expectations and behaviors. Heidi had developed a classroom where students knew what to do and understood the structure of the classroom. During the beginning of the school year, she had used primarily whole-group and independent instructional approaches. After having visited some other classrooms she redesigned her instruction to use smaller group and hands on approaches. Her literacy block included two teacher guided groups (one by Heidi and another by the student teacher), and an independent station where students worked with a reading software program on their computers.

In my observations of Heidi’s classroom, I saw a variety of reading activities that were always focused on the core and specific reading strategies. She ran a guided reading group for her rotation that included aspects of vocabulary, comprehension, and fluency. Her approach varied per group and she started with the level they were on and helped them to move up in skills. I watched as she led students through a novel where they stopped to discuss terms, words, and talk about the elements of the story that were important to the theme. During one observation in which they were working on retell,
students were picking out the main ideas of their reading and working together to retell their story.

In the center lead by the student teacher, students were working on more specific reading skills. On one visit I saw them working on text features using a non-fiction book, in another they were working on word patterns. During one visit I watched them go through a lesson comparing several prefixes and how they would change the word meaning. Students were adding *re* to simple base words like *mix* and *match*, then they would try a new prefix and see how the word changed from one to another. Students were writing words on an interactive worksheet as they completed the activity with the student teacher.

The students who were working on the computer had varied foci for their instruction. Some students were working on more simple skills, like phonics rules, while others were doing more complex comprehension that included reading long passages.

**Observation Summary**

Throughout my observations, I was watching for the application of the work we had done in teachers’ practice; but I was also seeking to understand how they were utilizing literacy instruction time. In many classrooms I saw signs of our work, recently added phonics posters, sight words lists, and intensifying oral language practice and instruction. In the few weeks after our work, these were the beginning steps, but I could see that not all that we had learned had made its way to the classroom. To better understand whether our professional development and continual work within our community of practice was influencing practice I sat down with each teacher and
conducted a semi-structured interview about the process.

**Vista Point**

As each teacher sat down at my desk to talk about our experience I told them that I had a perspective as the curriculum director and an administrator, but the work means something different to a classroom teacher. I asked them to help me see this work from their perspective, from their vista point. I explained that I was taking notes in order to better remember the important details from where they stood, and that I hoped they would help me to see it clearly through honest and open answers. Then I asked the first question. With most teachers the conversation was quick and constant. They provided a great deal of depth and elaboration on their thoughts. Although they were thorough in answering questions they were also quick to jump from one idea to another, not always following the path of the questions. As they each shared their perspective I was able to see how they had lived and carried on our work in their own classrooms. Here I hope to create an illustration of each of their vistas of this process in developing a literacy curriculum map.

**Interview: Carmen**

Carmen was comfortable in her place as a teacher, among the staff, and in the trajectory of our school. She knew that she played an important role as the kindergarten teacher. She built the foundation on which all other learning occurred. Carmen also understood that although her work was key, it was not the end of the learning journey; it was a first step. For some children the first step is only one and it is small; for others they
were ready for more and could move down the path more quickly. Carmen valued the
differences in children and how they learned. She was willing to be patient and let
children develop at their own rate, even if it meant test data was not always pretty or
children walked out of kindergarten not quite reading.

Carmen first described our work as “validating.” She had made some changes in
her scope and sequence and felt like she had already adjusted some of the things that
needed to be addressed. However, she also recognized this as an opportunity to identify
holes in her strategies and improve her process.

She described the greatest outcomes as a “common goal” and “common
vocabulary” for the K-3 teachers with a clear idea of what we want children to know and
be able to do. Carmen talked about professional development we had done earlier in the
year where I asked each teacher to draw a dog. They knew the characteristics of a dog but
as we walked around the room and looked at each one, we saw a wide variety of dogs. I
explained that the standards are similar in that we all understand the basic characteristics,
but there was much room for interpretation. Carmen said, “I still have that dog on my
wall; it reminds me about this work and why we have to sit down and do this.”

She described the scope and sequence for sight words as a “powerful tool.” She
could see how she would make some adjustments to her own practices, such as adding
more writing of sight words and including some mini-spelling tests to see how students
are doing at spelling sight words as well.

Carmen also talked about being more aware of some aspects; for example, oral
language development with the speaking and listening standards. She talked about being
intentional about asking “tell me more” and then giving children time to explain and her time to model.

Carmen stated that she believed that children would be better prepared if they are taught with this level of intentionality, and that “intentionality builds confidence.” She described how the academic growth of students was important but, more so, this was empowering teachers to know they are “giving [kids] what they need.” Her belief was that even though we are tightening our expectations on some things, we are not taking away teachers’ autonomy. We did set a list of sight words to teach and did share ideas, but teachers still get to decide what works for them.

The role of the community of practice was very important in Carmen’s eyes. She described the role and the impact of working together as a team for the professional development.

It was a lot more exciting. A lot more engaging. There was buy-in. I felt like we were a team, it felt like we had a focus. It felt like we accomplished good work, I mean, what we came out with, to me, is very valuable.

She explained the impact of this work was due to the hands-on nature where teachers were interacting with administrators and experts. She said that we needed to invest time in this work more often, and that our school year should begin with more time dedicated to curriculum development. “There is something about getting out a big piece of paper, getting sticky notes, walking around, looking at it, talking about it with everybody. It’s huge.” As she talked about the investment of time she reinforced the need for time together and used the word synergy to describe the benefit.

Although Carmen valued the time to collaborate and work within a community of
practice, she also recognized this as a barrier to this work. She talked about previous professional development on curriculum work and how the time between them became so busy that often ideas and lessons were forgotten. She said that sometimes she just needed a reminder to focus on her scope and sequence, and to “get in there and get specific.” She described the challenge in focusing on detail and taking time to intentionally slow down and master each small step. Carmen believed that the key to overcoming these barriers is time that is dedicated and frequent, with follow-up work, questions, and reminders. Although teachers may not need as much support in what to do, they need support to just keep focused on the work and keep things organized.

Carmen helped to illustrate how she views this as an opportunity to build a structure on which she can teach literacy. She knows that she was still given autonomy to teach but feels this step was important in ensuring that she was still focusing on the path ahead.

**Interview: Susan**

Susan was a confident literacy instructor. She had experience and expertise in closing the reading gap. She was excited about this training and described some specific outcomes she found beneficial.

Susan was most grateful for the clarity that she gained through our work. Specifically, she pointed out knowing kindergarten’s “must-haves” so she understood where students should be when they came to first grade. She also was happy to better understand expectations for phonics and who would be addressing each pattern. She said this would help her ensure her students would be ready for second grade. The big picture
continuum was something she felt was an essential tool for us to create in order to ensure every student was getting what they needed in preparation for the next grade level.

Susan described her experience as an opportunity to clarify and adjust. She better understood what was expected of her and could communicate her expectations to others. She also recognized a need to increase oral language and be more intentional about the speaking and listening standards. She believed that if we focus on developing our map we would be able to “go deeper” and provide consistent instruction. Furthermore, she believed that building this foundation that was clear would allow us to focus more on how we are teaching rather than what we are teaching. She felt her own practices were reinforced but that the collaborative efforts were key for getting everyone on the same page. “If those things keep coming around they will be more effective…. Some of those big concepts need to keep spiraling around.”

Susan described the community of practice as an opportunity to bring all of us together. She said that it was “powerful in that all of us could hear and decide together, we all had to be together.” She felt it was important that everyone heard and talked to ensure we were all on the same path.

As I talked to her about the barriers of the work, she looked at the idea in two ways. First, she looked at human barriers, such as the capacity of teachers. She described how some teachers have strengths in other areas, and how some have less comfort in ELA. However, she stated that these limitations did not have to hinder us because we can gain from one another as we learn and grow within the community of practice. She described working with another teacher in the prior year who had a different skill set but
working together they were able to learn from each other. Although the capacity of
teachers could be a barrier, she believes these efforts would help overcome that.

Another way she described the barriers was the inability to focus on one topic for
professional development. Susan believed we needed to focus on one topic for a majority
of our professional development. She thought we need to *chunk* the ELA concepts into
smaller sections to help teachers learn the *what* and the *how* because, “We still have a
[group of students] that need help at every grade level, and we still have to teach them to
read!”

For her own instruction moving forward, she said that she needed to focus more
on speaking and listening and include those standards more specifically on her scope and
sequence map. She also wanted the dialogue to continue because she felt like we had
started an important thing but it needs more time to truly make a difference.

**Interview: Rose**

Rose was a thoughtful teacher who liked to focus and get the work done. She
addressed this interview in the same way. She was thoughtful but concise. She had a very
clear idea of where she was and where she wanted go in this work.

Rose jumped right into the impact of the community of practice. For her, the
change in knowledge came largely from the team around her. She talked about working
with Susan, who has rich experience in literacy, and how she was able to learn from her
in ways that she never had before from a teammate. She expressed that this knowledge
would help her to be more systematic in her instruction. The work also helped that
process in that it allowed teachers to dissect the standards and understand, “What is this
really saying?” Although the standards tell you to know sight words or high frequency words, it was not until this work that we really understood what that means. The unpacking of standards helped us to get more familiar with each grade’s expectation and where they are headed.

I like to see the whole big picture. I like to see the whole puzzle, not just my little piece. It helps me to see, “where have they really been?” I’ve taught kindergarten so I know where they’ve been but not everyone has done that. It’s nice to see where have they been, where are they, and where are they going.

Rose stated that she would be more intentional in her teaching and focus on more explicit instruction because she better understands what she needs to do at a granular level. She said it would help her with children who are struggling, but also the middle groups that often get neglected because their needs are not as extreme. As a whole, she believes this work would help us to be more mindful of our scope and sequence map and checking to see that we are on track to reach goals. She did express that it was hard to makes changes this year as she was already so far into her instruction, but she had already been adjusting things for the upcoming year.

In describing the barriers of this process Rose was very clear that time and focus were our greatest challenges. She expressed that we did not have time to get deep into a concept; instead we try to work on a wide range of topics and did not master any of them. She wanted the time and support to focus on this work until we could get it fully integrated into the scope and sequence and the daily schedule.

Interview: Alex

Alex was a very thoughtful and reflective person. In conducting this interview, I
could tell that she was mindful of the impact of this work and her interaction with the process.

Alex reflected that through this process she became more aware about the need to integrate and incorporate multiple skills into each lesson. She expressed that this process made her more comfortable with the curriculum and she also recognized that ELA was not her strongest area. The professional development raised her awareness of gaps she has in her own knowledge and understanding, particularly in phonics and phonemic awareness. Her experiences have primarily been with advanced readers and this seemed to focus more on struggling readers. She said that this work gave her a template to tick the box and ensure that she was teaching each of the necessary skills.

Alex explained how she had started to make changes in her work already. She had included phonics instruction in her weekly groups and, with her grade-level partner, developed posters that they used for instruction. She also talked about being more intentional about her vocabulary now that she knew what prefixes and suffixes were expected of her students. She said that she had been teaching many more prefixes than were expected, but had been able to reduce the number and focus on the ones we outlined on the continuum.

In our discussion on the community of practice Alex talked about the impact of listening to others and appreciating what they have to bring to the work. She felt that the wide perspectives were valuable and it helped her to see how so many people are teaching with intent. She also expressed that time with her grade-level partner alone was also necessary so they could get to the nuts and bolts of instruction and make decisions...
about how it would look in second grade. She wanted to have time with her partner but felt that although they had intended to spend more time on this this year she still did not get enough dedicated to collaborative work. 

Time was the most significant barrier to the success of the work for Alex. She expressed a sincere desire to know the information and felt that we desperately needed the continuum and need to continue it to sixth grade, but we were always challenged to find time to focus. She felt that it was important for administration to see the value of this work and be able to provide support, serve as a guide, and show interest. She expressed a concern that a change in administration could inhibit our progress moving forward. However, if we can invest time, Alex believed that she would be able to be better prepared with materials and strategies to help all her children. She felt that with this work in place she would be able to look forward rather than backward, “Right now I am looking at it backward. These are the things I haven’t covered and I get those in by the end of the year. It’s taking more time.”

Alex could see the impact of the work, her reflection helped her to understand where her own instruction would benefit from this work, but she also felt hindered by time to get it developed and in place.

Interview: Jamie

Jamie was excited to learn, and eager to talk about how she could make her new knowledge a reality. As I asked her the first question about her own change in knowledge she got excited and was quick to produce a list of things she wanted to do and know more about. She said she liked to know about all of these things but wanted to continue the
conversation into how. She wanted to understand how everyone was fitting in each concept. She felt as though her new knowledge helped her to understand the need for consistent instruction, and she had greater clarity on what she needed to do, but she still wanted more time to process and work through the details. Jamie said she felt like she knew what the standards said, but they were vague and this helped her to really see what she needed to teach. Her view of the continuum gave her a clearer perspective of her own instruction but also that of her colleagues

Jamie felt that the conversation and debate was both enjoyable and necessary. She talked about the trajectory and being responsible to know what comes before and what comes after for students. The vertical teaming was exciting to her and she felt that she gained a wealth of ideas from hearing her peers share.

We all need to be on the same page. We all need to be present at these things. We all need to be having these conversations. We have this scope and sequence lined up for math, but I think this area has been pretty vague.

Jamie recognized our previous lack of focus and knowledge as barriers to this work, but also areas that can easily be overcome. She also felt like our children have historically done very well on state tests and have been pretty strong readers, so there was not a pressing need. She felt like that was changing and more children are coming in who struggle and need support. Jamie has made efforts to help those children since our work and feels that her steps are moving in the right direction.

Jamie described her changes to her literacy block since our initial meeting. She talked about a significant increase in phonics focus. She also had been teaching language more intentionally by having one center dedicated to those skills. She felt like she had
started the process to revamp the curriculum but that this was just the first step.

Jamie identified her personal barriers as time during the day and an understanding of how to allocate it and using the right tools to help close gaps. She also questioned her use of time during Response to Intervention (RtI) and whether their focus area was the most effective. She believed that every minute of the day has to flow naturally and be focused on getting children where they need to be, but she struggled to fit it all in. This lack of time was also a barrier she identified for the school as a whole.

According to Jamie, time dedicated to this work, with continual check-ins and follow up professional development were essential to this work. We needed to continue on the path, use the experts among us, and eventually bring in the upper grades to ensure that the trajectory continued.

Interview: Jason

Jason was in his first year at this school and came from first grade to third grade. He felt this work was really important to him in helping him understand what was expected of him as a relatively new teacher. He described the work as a holistic process where teachers had the opportunity to “de-compartmentalize the curriculum.” It was laborious but helped him to see what ELA looks like at this school.

Jason described the outcomes as a better understanding, clearer thinking, and clarity as to “where the lines connect.” He felt like he could write guiding questions to improve his instruction next year and ensure that he has fidelity to the work we are expecting. He was looking at standards more holistically, connecting to prior knowledge, and giving students information that would be beneficial in the next grade. Jason believed
the fidelity of his practice was more honed with regards to the standards. He also understood the effort of this work, “It’s a marathon, and a relay race at the same time. It takes intellectual stamina to produce the right result.”

The challenges in developing this type of work are daunting to anyone, and Jason recognized and validated that idea. He also believed that it would be worth it. Not only would teachers have a greater understanding of the sequence but there would be common goals driving the work forward. Teachers would still be given freedom but there would be a consistency due to a shared understanding. Furthermore, students would be given the opportunity to learn what they are expected, and teachers would know what that was supposed to look like.

Jason did not see this as an individual process. He recognized that the shared work was essential in getting as far as we have, but also in moving forward. Jason felt a sense of accountability among the faculty because we all stood there together and decided that these were our expectations. It was clear that everyone knew what they were supposed to do, and you were counting on the people before you so you can pick up where they left off. The collaborative work would lead to intentional check-ins with a common conversation. Jason also talked about how we could move this forward and expand. He stressed a need to continue with the K-3 team, but also have time to dive deeper with a grade-level partner. He then talked about meeting with the upper grades to move the work in that direction, and at some point pulling the whole school together to align the two pieces. This would take time, and a willingness to invest in this work. He felt as though he has the tools and resources he needs to move forward, he just needs the
continual focus and support from administration and the collective faculty.

**Interview: Heidi**

Heidi saw this work as a mental shift from her previous paradigm as a sixth-grade teacher. “This has been a huge shift that I don’t think I was prepared for. This is a big change, kids are learning to read, not reading to learn.” She recognized that this adjustment had been more than just structuring her class but realizing her own gaps in knowledge and skills. She felt this work gave her an opportunity to look more closely at the standards, to get *nit-picky* and then to figure out how to actually teach them.

Heidi recognized that she could not have gained this knowledge without the collective voice of the group. She gained a great deal from their perspectives and understood how everyone could contribute their own strengths. She also could see how this work belongs in upper grades as well, because they have encountered children who are still struggling, but they also need to see where children have come from.

She could see in her own children how far they had come, and more since our work had helped her to refine her small group work and think more about the instruction and where it fits on the continuum. She said they had come up with several areas to adjust for the next year as a grade-level team. She believes that through this work she would become a more effective teacher who knows how to teach phonics and address these foundational needs. She recognized that this knowledge would not come easily and would take the support of a grade-level partner and collective community of practice to build knowledge. Heidi hoped to come away from each day feeling as though she has learned something new; this would make teaching more exciting and she would feel more...
confident.

Heidi also recognized that gaining that confidence would require a tremendous amount of work, individually and collectively. She pointed out that we only addressed two areas of the ELA core, and that there was so much more that needed time and attention. She felt that we needed to invest in those just as much as the basics, but also recognized that the foundational skills needed to come first. She also worried about having the knowledge and plan in place in time to help the children who come in struggling. She acknowledged that she would always have children who struggle and must be prepared to help them.

As we talked about moving forward, Heidi reiterated the need for focus, time, and learning; however, she also talked about this as part of the bigger guaranteed and viable curriculum. She identified those standards as essential in the larger picture, and that we could only get to a level of mastery that we desire if we worked together as a team.

**Conclusion**

Each fall teachers stand on the precipice of a school year and see a body of children before them and a length of curriculum to move those students across. Their vista was sometimes clear, and they are able to see the end of the path; but often it contains so many twists and turns they are reliant on a map to guide them to their destination. Through this work we have encountered numerous obstacles, wandered down various digressions, and finally settled at a comfortable pace moving toward our destination. Our journey was not complete, but we had taken great strides. This chapter
has provided a narrative of our process that illustrates the work that was done and the
reflections *en route*. In the subsequent chapter I will explain the themes that emerged
from finding our route, and how they have impacted our destination in practice.
CHAPTER V
ANALYSIS

This chapter outlines the findings that emerged from the events described in the previous chapter. I describe the findings in relation to each of the research elements, and then reconnect to the research questions.

A long journey begins with defining a route. Sometimes the path is obvious and one just has to take the first step and the rest of the journey is clear; but oftentimes a route is shrouded by obstacles and options that must be maneuvered in order to reach your destination (see Figure 17). And sometimes the destination is so far in the distance it is not known until you begin your journey.

Figure 17. Teachers gathered around our curriculum map to sequence the standards.
Our curriculum development process was an experience in route-finding. We had some notions of where we wanted to be at the end, but the process of getting there was a wild unknown. With our knowledge, willingness to learn, and drive to impact children, we pushed through many obstacles until we found a route through the work, and in sight of a destination.

The Process

In order to glean the essential elements from this work, a multi-layer coding process occurred, as described in Chapter III. Each section of the research was coded and emergent themes were identified. The themes served as trail markers, or rock cairns, to help guide the path from one section to the next. A rock cairn is a stack of rocks that serves as a trail marker to guide hikers. It is often built by a group of people each adding a rock as they pass that location. Cairns serve as a metaphor for the emergent themes that were then compared across each of the sections (questionnaires, professional development, observations, and interviews) to find common paths that defined the route to our destination.

Questionnaires

The responses from questionnaires established several important cairns (see Figure 18). First, teachers were comfortable with the curriculum but needed ownership of their maps to implement the work. Second, time was a significant barrier to accomplishing this task. And last, teachers believed that if we could overcome this barrier, they would be able to positively impact their own practice.
The teachers responded that they were generally comfortable with the standards and the process of developing a curriculum map. Some of the teachers were hindered by the lack of ownership over the map that was created by previous teams before they came to that grade level. On his questionnaire Jason stated,

I feel pretty comfortable with how to do it and how the process is beneficial to my teaching. My hesitancy in saying it’s a 5 is that some of it has been done for me and I don’t feel like I’ve spent enough time determining if I agree with those sections that were done prior to my employment.

Jason explained in his interview that he had a clearer understanding of what was expected of him and that he was thinking about all the standards and how we was preparing to address them the next year. This example was consistent across the teachers. The teachers felt like they were trusting work that was not their own and had not had adequate time to verify the map or make their own adjustments. After our professional development they had greater ownership. Having time to create that ownership was key. They identified time as their greatest barrier to implementing an effective curriculum map.
Their responses indicated that if time was set aside regularly, outside of prep time, where they could get support, they would be able to refine and improve their curriculum maps. They also believed that their instruction would improve if they could deliver a guaranteed and viable curriculum, which would be accomplished through curriculum development work. If they could do this, students would do better because there would be clear expectations for both students and teachers. Susan described the outcomes of curriculum mapping as, “A system of best practices across a school that helps students succeed.” Teachers believed that if they were able to consistently provide best practices through a solid curriculum map they would feel more confident in their delivery.

**Professional Development**

The professional development, which stretched over one day, and into two Friday afternoon sessions, provided insight into the impact of this work. The emerging themes included the role of the community of practice in this work (see Figure 19).

---

*Figure 19. Emerging themes of the professional development.*
The first cairn in sight was an agreed upon need for time set aside for curriculum development work. From the moment they began working, teachers were feeding off of one another. Their survey responses and feelings toward the day were impacted by the energy and excitement of one another. They often turned to each other for ideas, confirmation, and questions. An important element of the team was a mutual respect and trust. Teachers who had worked together for several years were very open to ask questions and reveal their own insufficiencies. In the newer teachers, I observed more hesitancy, but they were able to be a part of the trusting environment and gain comfort in the group. I watched Heidi, a teacher in her first year at the school, start very tentatively. She watched, listened, and took notes. As we got into the first activity in individual grade levels Heidi began the conversation with, “Well I really don’t know.” As her group talked and began to address novels she started to engage more with the work, her voice was louder and she had more enthusiasm. As each grade then presented their information Heidi walked us through her list, another teacher who had previously taught third grade chimed in and supported her ideas. They exchanged some dialogue and her demeanor changed to reflect the openness of the group and willingness to be vulnerable in sharing.

This was just one demonstration of how the group support was essential in getting everyone engaged in the work. Their collective engagement allowed for buy-in and agreement from everyone. We had to build trust with one another where it was lacking, and used that established trust to be direct and open in our conversations. Jason stated in his interview, “I know we are accountable to one another”, he went on to talk about how we had come to a collective agreement and that allowed everyone to commit to where we
wanted to go as a group. The trust that was built through the community of practice allowed us to agree upon shared expectations.

As our professional development progressed into the Friday afternoon sessions I saw the impact of communities of practice increase as teachers demonstrated confidence in the work and a sense of ownership. They took charge of the sight words work and made decisions collectively. They agreed upon expectations and questioned one another openly without reservation or causing others to feel concern. Susan stated, “There were frustrating moments, but we had to be there for that.” There was fuel from their conversations; they were excited by the work and the discussions. They gained trust and valued one another. Susan explained that she felt an increased confidence because she knew that we all were gaining knowledge of how to teach a child to read. Each teacher shared their ideas and expressed support of the work. They clarified expectations and became accountable to one another. Without the essential elements of a community of practice, they would not have been able establish waypoints to guide them through this route.

**Observations**

Observations alone served as a window into the journey. I could see where small elements of our map were making their way into teachers’ practice, but I could also see gaps in areas where I knew we had expressed a need for focus. While observing teachers, I felt some concern about whether there was any impact, but then I began to see glimpses that indicated a change was occurring. It was not until the interviews that I could fully perceive that change. A few key themes emerged from the observations (see Figure 20).
The first cairn I found in my journey through classrooms was that teachers had not lost their sense of autonomy. This was a fear that I had in taking our curriculum work to this level. I did not want to hamper teachers’ ability to make decisions about how they teach in their classrooms. Instead I wanted them to demonstrate clarity and consistency in what they teach. As I sat in each classroom, I saw teachers implementing a variety of instructional practices. I saw a variety of small and large group activities. Students were writing, drawing, reading, playing, and interacting as they all studied literacy (see Figure 21). Some teachers were using explicit instruction, while others were still continuing with a more constructivist approach. Furthermore, I could see each teacher’s personal style was expressed in how they had instruction set up, yet, they were all teaching with more intentionality. Every station had a direct curricular purpose and focus on a skill. In most, teachers were using assessment to measure students’ progress and check to see that they were mastering content, even if the assessment was nontraditional but developmentally
In Carmen’s classroom, students were working in small groups to complete their *Word of the Day*. This practice was established in Carmen’s classroom, but she adjusted it to increase the inclusion of phonics.

Prior to this work there were only two or three classrooms in which you could ever see phonics instruction. It was generally reserved for RtI and taught in short spurts. After our professional development and the creation of our phonics continuum, I could see evidence of that in nearly every classroom. In some I did not see the actual instruction
but artifacts from around the room demonstrated that teachers were being more intentional in their efforts to teach phonics. Visual aids, anchor charts, and student work was providing the evidence that teachers were applying their new knowledge and clarity to practice in their classrooms.

The two emerging themes of continued autonomy and intentionality in instruction were clarified further within the interviews.

Within the interview, teachers were able to describe how they had started to make changes but needed to devote more time to getting their knowledge and clarity outlined on their own maps. Jamie talked about how she had made changes to her instruction by focusing more on the phonics now that she understood what that meant for her grade, and included a grammar rotation under her aide’s direction. She said she felt like she wanted to “revamp the whole curriculum” during the summer so she was ready to go with these updates the following year. Most of the teachers had similar feelings and said they wanted time to match the order on their maps to the order we defined in our continuum, and then to ensure it was viable within the school year. Furthermore, they needed to add information about phonics and the specific areas they were responsible for teaching so they could ensure those were also within the guaranteed curriculum. Alex stated, “I want to make booklets for each of the phonics areas so they are sequential with our map. Then I won’t feel overwhelmed.” They all expressed a desire to revise their current work, but a lacked time to do so; however, they each mentioned a changed intentionality in their teaching. Rose talked about a desire to “give up excess” and to “be more intentional”, however, she noted that it was hard to make changes during the year because they had
already had so much to accomplish. She explained her plan to make adjustments over the summer in meetings with her teaching partner in order to be prepped for the upcoming year. Although most felt it challenging to make drastic changes so late in the year, they were being more thoughtful and purposeful in what they were teaching during their last month and a half of school. The impact on instruction was not immediate but the cairns had been set and a path defined.

**Interviews**

The interviews were a tremendous opportunity to reflect and gain clarity around the impact of this work. Cairns were established within this analysis, some we had traveled past that became clear in looking back and others that were brought into sight as we thought through the journey. Those cairns included; teacher knowledge, role of the community of practice, and the barriers preventing them from achieving perceived results (see Figure 22).

*Figure 22. Emerging themes of interviews.*
Teachers’ knowledge changed in three important ways. First, they had more understanding of how they were supposed to teach these concepts and how they could make them fit into their daily work. Their knowledge of instructional practices increased. Second, they understood what needed to be done to plan for the use of these instructional practices. They gained an understanding of the sequence and systematic approach to including these foundational skills in their maps. Lastly, they gained necessary knowledge to teach these concepts. In some teachers this knowledge was lacking, in others it brought them greater clarity. With both, the skills and information they gained were essential in the effective delivery of the curriculum to the level of specificity that was defined in the K-3 map.

The teachers attributed this change in knowledge to an increased comfort and clarity with the standards and an awareness of their own weaknesses in instruction. Jamie said in her interview, “You just feel better!” She went on to talk about how literacy instruction would be smoother with no time wasted. The community of practice was essential in overcoming these gaps because teachers were able to be open about their own gaps and work together to gain new knowledge.

The community of practice also helped them to understand the perspectives of others and gain from this new knowledge. The desire and ability to learn collectively increased the excitement and engagement in the work. Alex described this work as an opportunity to appreciate teachers’ knowledge while listening to them talk about their work. She felt that their conversations would help her “teach with intent” because she knew what was expected of her from the curriculum and the group. The teachers
expressed a need for one another and an energy that was gained from working together, “It’s just exciting getting to talk and work together.” This energy helped to keep things positive and developed a mutual trust and buy-in. The trust was essential in coming to agreement and a mutual buy-in for the results of the work.

While there was much achieved, the teachers identified some specific barriers to the completion of our journey. The first, as predicted by Questionnaire, was time. “I need time to get it done, and I need to be patient with the process.” Carmen stated. They expressed a need for more time and then continual frequent time to revisit and continue the work. Susan summed up this idea by saying, “We need to come back to things. To check in with each other”. She continued by stressing the importance of focusing on one topic and doing it well rather than spreading ourselves thin and not doing anything really well. This was not a process that could be completed in one day; it was ongoing and the teachers expressed a need for ongoing time, and with that, a focus on this process not crowded by other work. The need for a focus on one area for the duration of a year was the next barrier. They all saw this as an area deserving of that attention, partially because they saw the impact, but also because they recognized their own knowledge gaps.

These knowledge gaps were the third identified barrier of this work. Teachers recognized the need to better understand these foundational areas of literacy and be able to teach them effectively to their students. Heidi said, “I’ll come away every day learning something new.” She recognized the gap in her own knowledge and need to learn more to address her students needs.

As in the questionnaires the teachers identified time as a barrier, although, they
also were able to determine what was needed to overcome that barrier. They felt time should be spent on gaining knowledge and developing their curriculum maps and if they were to have time, they would reap the benefits in their own classrooms. Jason reflected on his growth and described a better understanding of the scheme of literacy. He believed that if we were to focus on these concepts we would see “exponential growth.”

This growth would be achieved through a common goal or expectation, an agreed upon destination. Teachers also indicated that we could actually reach that destination because there would be consistency and intentionality in our instruction. A key theme was the belief that we would make a difference for children because of the changes in instruction. Having a systematic approach and a clearly defined route for learning would ensure that more children would be successful in achieving mastery.

A Marked Trail

The analysis of each of these components revealed some common ideas across the areas. These themes were essential in answering the questions that served as the guide to this research.

Research Questions

1. What observable impact does removing barriers to curriculum mapping have on teachers’ assessment, planning, and instruction of the K-3 ELA standards?

2. How do teachers explain the impact of removing barriers to curriculum mapping on their delivery of the K-3 ELA standards?

3. What is the role of communities of practice in overcoming the barriers of curriculum mapping?
Question 1

In the first question of this research I sought to understand what impacts I would see when observing teachers in this work, particularly in respect to assessment, instruction, and planning. Four clear ideas emerged: knowledge, intentionality, consistency, and autonomy (see Figure 23).

Knowledge. I was able to see how teachers’ knowledge changed through this process. They gained understanding of the work, the role of a community of practice, and content knowledge that would guide assessment and instruction.

Their knowledge of the process of developing a curriculum map for the K-3 grade span was essential in understanding where their students had been and where they were going. Carmen describes this work as an opportunity for “teachers to feel successful” because they are being intentional and “intentionality builds confidence.” They also understood how to create and use a continuum that took students into upper grades and other content areas. “There is a collective efficacy,” Jason states, and then goes on to

![Figure 23. Emerging answers to Question 1.](image-url)
describe the positive conversations and potential of taking this initiative to all the grades, “We can fit it all together.” Their knowledge of communities of practice had impacted their instruction as they used the collaborative group to field ideas and gain support. This group had and will continue to work together to forge a route rather than each trying to find their own way.

The most significant impact on instruction was the gained understanding of early literacy skills and practices. Teachers lacked knowledge and confidence in this area. Once they had the skills to teach these concepts it had influenced what and how they were teaching. It also changed their assessment of students as they focused in on key skills that they now understood instead of random concepts. Carmen said, “Now I know I am giving them what they need.” This was driven by an intentionality of practice.

**Intentionality.** The newly gained knowledge helped teachers to understand where they needed to focus efforts. Alex said, “Now I can look forward. I know where we are going.” They had defined goals and expectations for the content areas at each grade level. The goals made it clear for teachers to be intentional in their instruction as they worked to ensure children were reaching those goals.

**Consistency.** Along with intentionality, teachers were also able to be more consistent from grade to grade. For example, in developing our sight word lists, we keyed into the term *snap words*. If students were introduced to this term in Kindergarten they would be better prepared for first grade when teachers introduced a new *snap word* and they already knew the expectation of being able to read it *in a snap*. Using consistent terms or ideas would help students transfer information from one grade to another.
Whether it would be a *snap word* or a *stretch and blend* strategy, teachers would waste time re-teaching. The consistency in practices would aid students and teachers; however, it did not have to be a means for removing autonomy. One teacher said, “We want freedom, but we need consistency.”

**Autonomy.** Teachers were asked to support a *big picture* continuum that would put them on the same page and give them accountability toward one another. The community of practice enabled them to feel trusting and supported in *buying in*, but they all also understood that they were agreeing to outcomes, not practices that took away their autonomy. Carmen talked about her years at this school and the history of autonomous teaching. She described the “power” of this instruction in creating a consistent continuum without jeopardizing their freedom. Although they did share practices, there was not a top down initiative to demand everyone to teach the same way. They understood that they could learn and grow from one another and then take their new knowledge into their classrooms to use as they saw fit for their students.

When teachers were given time and support to develop a curriculum map, they increased their knowledge, became more intentional in their instruction, used consistent practices across grade levels, and still maintained their autonomy.

**Question 2**

The second question I was able to address in this research focused on the perspectives of the teachers and their beliefs about impact of this work when barriers were removed. The answers to this question were found embedded in the professional development and interviews. The teachers were quick to identify the most significant
barrier as time, a theme common throughout the findings (see Figure 24). When teachers were given time to complete the work, and the support to do so thoroughly, they were able to express four common outcomes.

**Positive experience.** The first outcome of removing the barriers was teachers working in a collaborative fashion where they built excitement and energy for this work. Heidi talked about the work as “exciting” and that she felt more confident about her teaching. The community of practice gave them a common domain and mutual desire to master unknown material. The supportive community and increase in knowledge provided teachers with an increased self-efficacy regarding their ELA instruction.

**Intentionality.** The increased knowledge and confidence lead to the next cairn on the route, intentionality in instruction. Teachers believed that if they were given the opportunity to do this work their instruction would be more thoughtful, purposeful, and focused on the specifics of what children needed. Jamie expressed a deep appreciation for

*Figure 24. Emerging answers to Question 2.*
time to increase her knowledge and improve her practice. She talked a great deal about being intentional and how she felt she was going to be such a better teacher after knowing what was expected of her and having a plan for achieving it. Each moment of instruction would have a clear intention and teachers would be able to monitor their own progress through the continuum. The intentionality in their instruction would be driven by a clarity of expectations.

**Clarity.** The teachers expressed great relief in having clarity regarding what they were supposed to teach and what students were expected to master at each grade level. The steps we took in unpacking standards helped teachers to better understand each standard and what they needed to teach. The continuum also helped teachers to see what was coming next for students so they could be sure their students were prepared for the next grade level. “It’s nice to see where have they been, where are they, and where are they going.” These expectations were impactful in setting a target for both teachers and students to reach.

**Student achievement.** The final outcome of this work, from the perspective of teachers, was the effect on students. The common belief was that if teachers were working in an environment that generated excitement about the process, and they received the support they needed to increase their knowledge, and thereby their confidence, they would be more intentional in their instruction. Heidi described the process as exciting and believed that she would “feel more confident” after implementing our map. If their instruction was driven by a purpose and clarity for what was expected of them, they would teach more effectively, resulting in student improvement. Furthermore,
the intentionality in their work and increased knowledge would allow them to drill down to understand students’ needs, thereby closing the gap for those who were struggling. The responses of teachers indicated these essential themes as the impact of finding this route.

**Question 3**

The final question answered in this research attempted to understand the role of communities of practice in this work. As noted in the answers above, they were identified by me and the teachers as integral to the work. In analyzing the data from each of the elements of the research process, I was able to identify several key themes that summarize the role of communities of practice; trust, common expectations, and shared knowledge (see Figure 25).

**Trust.** The primary role for communities of practice primary is the group of people, gathered with a mutual interest and goal. A key element of the group is a variety of perspectives that are shared and valued across the group. The shared perspectives are key in building a trusting relationship where each member of the group is valued and respected.

![Figure 25. Emerging answers to Question 3.](image)
In our discussions, teachers were open to sharing ideas about their practice, providing specific examples of ways they were teaching and then challenging each other with questions. For example, Jamie talked about a strategy she was using for teaching sight words, but she said she felt it was not working. Susan asked her if she felt it was not working, had she done something different? Jamie responded calmly, “Not really, spelling is hard. I don’t really know what else to do.” The conversation then opened up and others shared strategies they were using and the evidence they had regarding its effectiveness.

The cohesion of the group was important in creating a positive and enjoyable working environment where the energy was encouraging. Teachers who had developed trust were willing to listen, share, and open their practice to discussion. They also generally enjoyed working together and they were fueled by their mutual excitement. This energy and connection of the group is an essential part of a community of practice in developing a curriculum map.

**Common expectations.** The next major role of the community of practice is to identify and establish common goals and expectations for the group, focused on the common domain. The process of developing or deciding upon these expectations is important in that it creates the commitment and buy-in from each member of the group. Teachers being able to work together to determine these targets gives them ownership and the desire to reach out and achieve them.

**Shared knowledge.** Clear expectations were achieved through common knowledge. A community of practice serves as a tool for building shared knowledge.
Whether the focus is on content, or stories of classroom practices, the collaborative nature of the group allows each member to benefit from this information. The knowledge that is collectively gained forms a map which guides and leads each individual classroom to increase student achievement.

The projected improvement of students is also driven by consistency generated from work within a community of practice. When teachers are able to sit down and learn together, generate ideas about instruction, and decide upon expectations, they will also create areas for group consistency. The community of practice becomes a place where teachers can discuss and debate the balance of consistency and autonomy. They can determine what elements would benefit from repetition through consistent practices, and what elements teachers can still deliver in their own way.

The community of practice is key in creating an environment that is positive and supportive, but also informative and instructional. In initial interviews teachers were unclear on the role of a community of practice, but their statements revealed that they understood it as a collaborative group working in a common domain with a shared goal—a definition in line with that of Lave and Wenger (1991). This environment set the tone for teachers to create goals and commit to achieving them. Through discussion, the group gained the necessary knowledge to achieve those goals and make decisions about what practices would occur in their classrooms. The community of practice served an essential role; the hiking group working together to navigate terrain, identify waypoints, and map the route to their final destination.
Summary

This chapter provided an overview of the findings from each of the elements of the research process and the findings relative to the research questions. Several themes emerged; teacher knowledge, intentionality, autonomy, consistency, and the roles of a community of practice. These major themes were supported by more ideas that were embedded within the analysis of each question. Each of these themes served as a cairn in finding the route through this curriculum process. When the group set out we were unclear of how far we could get or the digressions we would take along the way. Our process was marked by the constant search for the next cairn to help us continue maneuvering the route to our destination.
CHAPTER VI
DISCUSSION

The process of creating a curriculum map for K-3 English language arts forced us to find a route that would take us through the unknowns to our destination. Barriers of time and support had to be removed through the implementation of professional development that allowed teachers to work as a community of practice through the activities.

The Role of the Community of Practice

Several key elements served as rock cairns to guide us through our journey (see Figure 26). The first significant cairn was the importance of a community of practice as the venue to move through this work. There was an essential need for a group of people

![Figure 26. Emerging themes and outcomes. The results of this work identified several key themes that were essential in leading teachers towards effective implementation of a curriculum map. Furthermore, teacher efficacy and student achievement were potential outcomes identified through this research.](image-url)
with shared knowledge, common expectations, commitment to one another in the work, and valued perspectives of all members. It was necessary for the community of practice to come prior to the work because it enabled teachers to move through the process of developing a curriculum map with the support, accountability, and intentionality driven by the community of practice.

**Teacher Knowledge**

The second cairn, and key to this process, was building the knowledge within teachers to help them access the content. Teachers needed an understanding of early literacy skills, as well as the knowledge of how deconstructed standards impacted their instruction. The knowledge was gained through our professional development and work within the community of practice. This strengthened the group by creating shared knowledge.

**Intentionality**

The clarity gained from the map that was created drove teachers to be more intentional in their assessment, instruction, and planning. Intentionality was the next cairn that helped teachers to progress through this work and push to gain the knowledge that would allow them to develop common goals. As teachers were more intentional, they became more consistent in expectations and approaches across grade levels. Lastly, although they had created areas for consistency, teachers were able produce autonomous practices within their shared domain.
This work revealed the impact of curriculum mapping when barriers were removed as a drive to gain knowledge and be more intentional in instruction, achieved through a community of practice.

**Consistency**

The collective work of a shared curriculum map establishes understanding across the grade levels about standards and practices. Teachers were able to come to a common ground about certain elements of their literacy instruction that would flow from grade to grade. Furthermore, the shared knowledge of most essential elements, and intentionality in teaching those creates a consistency in focus.

**Autonomy**

Although many common agreements were made it was clear from the observations and interviews that teachers maintained their autonomy. They were able to use the knowledge of their shared domain to inform their instruction, yet they had the authority to determine how exactly it would impact practice.

**Removing the Barriers**

These outcomes reveal the value of removing the barriers to curriculum mapping and providing teachers with the tools and supports necessary to do the work. If teachers are given time and the support of a community of practice, they will be able to successfully complete the task. Essential to the community of practice is a group willing
to be open and develop trust. Given a supportive context, teachers can commit to goals and practices that will impact their own classrooms. Furthermore, they can become accountable to one another as they develop shared expectations that are apparent to all. When a community of practice is established as support for teachers they can begin to develop the knowledge necessary to successfully develop a map and impact their instruction.

Teachers’ prior knowledge must be considered within this work. Although some teachers come to the group with more background in early literacy, the knowledge needed to be shared in order to create an equal foundation for all teachers. Teachers may have significant gaps in their understanding of early literacy skills and how these should be addressed in the classroom. In addition, teachers need a clear understanding of the standards and what they mean at their grade level. Teachers gained a great deal from unpacking, or deconstructing, the standards and working together to determine what that means to their own practice. Deconstructing, or unpacking, the standards increased teachers’ knowledge of those standards.

Teachers who are given time and support to conduct this work and can increase their knowledge will come away with a sense of intentionality in their instruction. The clarity that comes from unpacking standards and determining where they fall on a curriculum map stimulates a desire for purpose in a teachers’ instruction. They have clear expectations for what students need to know and be able to do and have agreed-upon goals set within a community of practice.

These elements serve as powerful tools in helping teachers define their route
through the curriculum mapping process. Each one is essential in helping them maneuver obstacles and remain on the desired trail.

**Connecting to the Guidebooks**

The curriculum is the framework upon which we build instruction (English, 1979; Squires, 2012). However, it is complex and carries multiple meanings, which makes it challenging for teachers to access (Fraser & Bosanquet, 2006). In this study, the teachers expressed confidence in their knowledge of the standards, but still grappled with understanding what they mean. Their experience helped them to see the value of the standards, but knowledge of the terrain hindered them in fully implementing them into practice.

Part of the struggle is moving from the declared curriculum (English, 1978), that which is defined in the standards, to the descriptive curriculum, which is the reality of what gets taught in the classroom. This is particularly challenging in that standards describe the objectives, but they do not get to a level of specificity regarding practice, planning, and assessment (Abbott, 2014). The work conducted in this research focused on enabling teachers to dive into a more granular view of the curriculum where they could more directly connect the declared curriculum to the descriptive curriculum. Teachers were gaining confidence and understanding of the curriculum as they gathered around a large sheet of butcher paper and manually moved standards into order as they talked about the flow of knowledge. Their hands-on interaction with the curriculum allowed them to construct their understanding of the curriculum and how it would impact their
practice.

Through our route-finding process we were able to work toward a guaranteed and viable curriculum (Marzano, 2002), a step the teachers identified as essential. They were eager to have clarity in their expectations and the big picture of ELA in grades K-3. The curriculum map we created and the resulting outcomes aligned with the research that indicated that mapping makes the curriculum more transparent by revealing a big picture view of what is happening in the classroom (English, 1979; Harden, 2001; Hayes Jacobs & Johnson, 2009). The big picture we created allowed teachers to align their curriculum, instruction, and assessment to improve student learning (Elliott, Braden, & White, 2001; Roach, Niebling, & Kurz, 2008; Webb, 1997, 2001). Hirsch (2010), explained that a curriculum map that is not properly organized and implemented will be weak and ineffective. This research indicated that collaborative effort to create an organized scope from kindergarten through third grade made a powerful tool that has impacted students and teachers.

Research indicated that the curriculum shapes what happens in the classroom (Dufour & Eaker, 1998; English, 1980; Hayes Jacobs, 2004). The research questions guiding this work sought to understand how curriculum mapping could impact the classroom. The outcomes are related to both teachers and students. Marzano (2002) stated that teachers will deliver more powerful instruction after they have developed a curriculum map that guarantees the standards are taught. Evidence from this research supports that point in both observation and teacher perspectives. One teacher stated, “This [work] will give us a better foundation collectively…. The conversations were
really good. I could improve and get better. That’s a natural consequence of more of this work.”

Teachers believed that their instruction would be more intentional and consistent across grade levels as they implemented the curriculum map. Blumberg (2009) indicated that when instruction is aligned through a curriculum map, students are more likely to reach their goals and objectives. The teachers in this research indicated great benefit and appreciation for the shared goals and expectations that resulted from this work.

The shared creation of goals was a key outcome of this work and an element necessary for this process to be effective. Research indicated that discussion and collaboration were key in setting goals for improving instruction and making a curriculum map an institutional change (Hayes Jacobs, 1997). While most research (Beans, 2006; Dutton, 2015; Lucas, 2005) indicated that curriculum maps were a cause for collaboration, this research posits that collaboration is essential prior to mapping. A community of practice was an essential element in bringing teachers together to create a shared knowledge, common goals, and facilitate intentionality in instruction.

Lucas (2005) stated, “Curriculum maps require teachers to engage in discussions on what is actually taught” (p. 94), an idea that was witnessed in this research. As teachers worked in their community of practice, they discussed ideas and talked about how their decisions would impact instruction. Their work was rich with debate about practices and teachers challenging their instructional approach. It was essential they had an environment that enabled them to talk and share without reservation. These discussions were both informative and revealing as teachers better understood their own
gaps in knowledge.

Teachers’ knowledge was also analyzed in this work. While some teachers had great understanding of early foundational skills, this was not true for all teachers. Cheung and Wong (2002) suggest that developing a curriculum map for ELA is a challenging task that is not possible for all teachers. The tremendous amount of knowledge needed to understand literacy development can be overwhelming to any one teacher. Research indicated that many teachers lack sufficient knowledge of the standards (Grant-Williams, 2015; Huffman, 2002; Murphy & Torff, 2016; Valencia, et al., 2006; Yurdakul, 2015).

This research found teachers to have definite gaps in knowledge, some that teachers were aware of, and others that emerged through the process. Valencia, Place, Martin, and Grossman (2006) determined that the greater knowledge of the curriculum, the more adept teachers were in its implementation. As teachers worked through the process of unpacking the curriculum and gaining knowledge and clarity regarding the standards, they were better able to determine how it would impact their classroom and their self-efficacy increased. Teachers who have high self-efficacy regarding the curriculum are more likely to use a curriculum map to deliver effective instruction (Susilana, 2014). Teachers are the most critical element of teaching reading (Barone and Marrow, 2003) and their knowledge directly impacts student performance (Lane et al, 2009). Jarchow and Look (1985) determined that in order for curriculum mapping to be successful teachers needed background information, an overview, and training in a workshop session. The curriculum development process that was conducted as part of this research directly informed teacher knowledge and closed their gaps in mapping and
instructional practices.

The outcomes of this research align closely with previous studies that describe the positive benefits of using a curriculum map to improve student achievement (Blumberg, 2009; Fairris, 2008; Oliver, et al., 2010; Ranells, 2004; Reining-Gray, 2008; Shanks, 2002; Squires, 2012). Although student achievement was not measured, teachers believed that students would improve because they had an increased shared knowledge and intentionality in their instruction.

**Implications**

The findings of this research speak to the power of a community of practice. A community of practice is inspired by ideas emerging from Vygotsky’s (1999) social development theory. This framework supports two important ideas; the first is that learning occurs through social communication.

In this study, the teachers gained knowledge of curriculum mapping and content through social interactions. Vygotsky discussed the importance of members of the group taking this new knowledge and shaping it to inform their own practice. In this study teachers were creating knowledge through collaborative efforts. Jamie talked in her interview of the role of the group as helpful in determining “what is reasonable” for expectations of growth. She described the group as a place to “gain new ideas and learning.” However, the teachers also recognized their continuing autonomy by describing this process as a “loose—tight experience” where we are tight with what we expect but still allow teachers to be loose in how they get there. While teachers came to
common agreement on sequence and expectations, they were still given autonomy to determine how that would impact their classroom. They did discuss practice and share ideas, but it was in a framework of learning, not being told that it was something they had to do.

Lave and Wenger (1991) built on Vygotsky’s theory and applied it more directly to practice. They discussed the role of the community of practice as a place where each member grows from the interactions by constructing new understanding. This is significant in this research in that teachers stated, “We needed to talk.” Teachers valued and recognized the interactions with the group so much so that they felt they were essential. This is an important result of this work and one that should be applied in schools.

Teachers need to be given a community of practice with which to work, and within that group they need opportunities to speak and listen regarding their instruction. We often limit teacher talk to the lunchroom and do not allow them adequate time within a professional development environment. This theory, and the research conducted here, support the notion that learning does not occur in isolation but instead as a part of a place where teachers can connect and develop. A community of practice is key in producing quality curriculum development work within a professional development setting.

Several key findings emerged from this research regarding professional development. Research clearly identifies professional development as essential in improving schools (Borko & Putnam, 1995; Carnegie Forum on Education and the Economy, 1986; Darling Hammond, 1993; Holmes Group, 1986; National Commission
on Teaching and America’s Future, 1997). Furthermore, professional development that is done effectively can be key in improving schools (Desimone et al., 2005). Research has identified key aspects that make professional development effective (Desimone, 2009), these keys were also identified as essential elements in the research conducted here.

One area that is deemed essential is the focus on one particular topic (Hawley & Valli, 1999; Kennedy, 1998; Wilson & Berne, 1999). This was an emerging theme from teacher interviews where they determined a barrier to the work was a lack of focus on one topic. Another key element was collective participation, which was addressed through communities of practice and described above. Also identified as a core aspect of effective professional development is active learning. In talking with teachers about the professional development, they recognized the value in being able to get up and move and interact with the work. The constructivist framework helps to clarify why teachers value the opportunity to move and interact with learning. If we value it for our children we also appreciate it as adults.

Constructivism is a theoretical framework that focuses on the role of the learner in developing their understanding. David (2015) states that knowledge must be constructed rather than acquired. As teachers gathered around a 20’ curriculum map and debated the placement of phonics rules, they were gathering knowledge. They continued to acquire new information as they looked at skills and expectations that came in the grade level before and what their students were expected to know as they moved on. Teachers were grappling with how they might alter their instruction to ensure their students were prepared for what came next. Teachers were able to build an understanding of early
literacy and what was expected as they constructed their knowledge of curriculum mapping.

The map that was created allows teachers to gain ownership over their curriculum by developing a deeper knowledge of the standards. The community of practice was essential in completing this work and fueled a collective expectation, an outcome which will make teachers more accountable to one another. Schools that are willing to allow teachers the opportunity to conduct this work will benefit from adhering to these emerging themes. This work will result in teachers with greater confidence regarding the curriculum and an avenue to improve their instruction, thereby improving outcomes for students. However, it takes a willingness to step off of the trail and into unknown territory. The process of finding this route can be exhausting and empowering and also make a difference in the lives of teachers and students.

**Limitations**

As with all research there are limitations to this study. The scope of this work was narrow and reached only into the window of one school. This case included seven teachers, one kindergarten, two first grade, two second grade, and two third grade. These teachers were chosen because of the intensive nature of the K-3 ELA curriculum and the need to clearly understand all of the elements. They have had some background in the process and provided a depth of information regarding the impact of this work on their practice.

The limited sample did not bring great understanding to how this process would
work within larger districts, or schools that do not have an established community of practice. It would be beneficial to replicate this work with a larger group of teachers, with multiple grade levels working simultaneously to see if the same outcomes would be achieved. It would also be beneficial if the design of the research would allow for more time to measure and observe impacts on practice.

An improved design would allow for professional development to occur at the beginning of a school year, or during summer months. This would give more time for instruction and work when teachers are not under the pressure of teaching at the moment. Furthermore, professional development provided during the summer would allow teachers the opportunity to adjust practice at the beginning of the year and observations to be conducted after there was time to implement the changes. This would also allow for significantly more observations to occur, revealing greater clarity into the impact on planning, instruction, and assessment.

My role within this research served as both a benefit and a limitation. My close interaction with teachers allowed me to know their work and their classrooms very personally. I was in their rooms frequently and knew their instructional practices well. However, my role as their administrator may have strained my ability to collect data as thoroughly as I would have liked. During professional development I was carefully juggling a research journal and conducting the work. It would have been ideal to film the professional development and code it afterward, but as an administrator requesting permission to film and collect data, this could have been viewed as coercion. Despite these challenges the data collected was valid and provided the necessary information to
answer the research questions.

The limitations of this work provide clues into how this research could be improved in a replication. The outcomes of this work speak of the experiences that occurred within this sample but have the potential to impact the larger community.

**Future Research**

Great effort has been made to define this route; unfortunately, the work is not done. We discovered in our curriculum development that this is an ongoing process that will take continual support and effort. It would be beneficial to continue research in this area as teachers progress further into the process. As described in the limitations, a continuation of this research would provide more insight into the impact on practice. A longitudinal study would also provide the evidence of any impact on student outcomes. Comparing a teachers’ outcomes over time would provide a picture into the long-term changes that are made through the development of a curriculum map and provide insight into whether this work could ever be declared done.

Another area worthy of further research is the creation of communities of practice within a school. The evidence from this research indicates that they are essential to this process; however, not all schools begin with a functional community of practice. The creation of this sort of team dynamic is not simple and requires strong leadership. The field would benefit from a clearer understanding of how a quality community of practice is created, and the impact of this group on the school as a whole.

The curriculum seems to be an ever-changing destination that requires teachers
have the knowledge to reach it multiple times. More work needs to be done in creating and refining the curriculum mapping process. This study could be replicated in another content area to determine whether the outcomes would be similar or if the process is as effective. Using the constructivist framework, much can be learned about how teachers build their knowledge and then apply it to practice. Future research could continue to study the process of route-finding.

Conclusion

This research aimed at understanding how curriculum mapping could impact teachers’ practices in delivering the K-3 English language arts curriculum. The journey from standards to instruction is not a well-carved route with clearly defined trail markers. Instead, it is an intensive process that begins with a descriptive curriculum that contains lists of standards and indicators that must be unpacked to define the next steps in the journey. As teachers were faced with this daunting task, they did not set out alone. A community of practice was essential in allowing them to embark with the support of others, equally willing to trek into the unknown, all hoping to find the same destination.

Teachers worked together to define waypoints in their common knowledge, mutual expectations, and shared domain. These served as cairns guiding the group from one section of the trail to the next. As they entered unfamiliar territory the search for cairns became more challenging and they leaned heavily into the group to help them sort out obstacles. They were able to identify key waypoints they had to reach en route, such as a continuum of phonics skills, or expectations in teaching sight words. These
waypoints forced them to press forward.

The final destination came in both a tangible map, perhaps not fully complete but certainly filled with the essentials of early literacy, and the changes in teachers that would impact their classrooms.

A long journey can be hard on the feet; for these teachers it was hard on the mind. They were forced to question their own understanding and knowledge; they had to reason with one another and learn when they identified personal gaps. Through the creation of their shared knowledge they gained a better perspective of the terrain. They understood where children were coming from and where they were going on their own learning journey. This clarity struck excitement and the desire to know and do more. Teachers pushed forward, taking ownership of the unknowns by questioning the community and then committing to the group when common expectations emerged. They wanted to maintain their focus on the final destination but also preserve their own autonomy. This balance occurred by being intentional with their instruction. Teachers understood where they were going, the cairns that were guiding their path, and the destination they needed to reach. This clarity helped them to focus and step forward with intentionality. Together we were route-finding.
REFERENCES


Lauridsen, D. (2003). *What are teachers’ perceptions of this curriculum development process?* (Unpublished doctoral dissertation). The Ohio State University, Columbus, OH.


Shanks, D. J. (2002). A comparative study on academic gains between students in second grade through sixth grade before and after curriculum mapping (doctoral Dissertation). Available from ProQuest Dissertations & Theses Global. (UMI No. 305443157)


APPENDICES
Appendix A

Professional Development
Professional Development

I. Instructional Block: *Reading Foundational Skills (RFS) - What are they?*

   A. Work Block

      1. Teachers will unpack the RFS standards to determine specific skills, questions and understandings of each standard.

      2. Teachers will create sticky notes for each standard or skill (some standards address more than one skill).

      3. Collaboratively the group will create a vertical scale of the standards/skills from K-3rd grade. A decision-making model will be used as standards are broken into a more granular level and discussion occurs about particulars for each grade level.

      4. Scope & Sequence maps will be updated to reflect the sequence

II. Instructional Block: *How do we address these skills in this progression?*

   A. Work Block:

      1. Teachers will use the vertical scale to begin building unit timelines. Within the timelines they will identify instructional practices for each standard.

      2. Each unit timeline will be reviewed by the group with discussion on instructional practices
Appendix B

Questionnaire
Questionnaire

1. Tell me about your background in teaching.

2. How comfortable are you with your ELA Standards?

3. Have you ever participated in curriculum mapping before? What was it like?

4. What do you see as the barriers or challenges of curriculum mapping?

5. How do you think we could overcome these barriers?

6. What do you see as the outcomes of curriculum mapping?

7. What do you think a community of practice is?

8. What would a community of practice look like at our school?

9. What role do you think this community of practice might play in this work?

10. What do you hope to gain from our professional development?

11. Do you have additional comments?
Appendix C

Interview: Semistructured Questions
Interview: Semistructured Questions

1. How do you think your knowledge changed after our professional development?

2. How do you think your comfort level with the curriculum changed?

3. What role did the community of practice play in our work?

4. What do you think were the greatest barriers to our work?

5. How do you think we overcame those barriers?

6. What do you think were the greatest outcomes of our work? Why?

7. Share with me your curriculum map and the changes that were made in our most recent work. How do you think this will impact your practice over the next month? Year?

8. What do you think will be your personal barriers in making this happen?

9. What do you think will be the outcomes of implementing this map?

10. Do you feel you have the time, support, and knowledge you need implement your curriculum map?

11. Is there anything else you would like to share about your experience?
CURRICULUM VITAE

LAURA J. REINA

Education

PhD  Utah State University. Curriculum & Instruction, Literacy Emphasis  August 2018
M.A.  Western Governor’s University. Master in Mathematics Education  2005
B.S.  University of Utah. Bachelors in Elementary Education  2002

Endorsements:

Utah State Office of Education
Dance Endorsement  2009
Drama Endorsement  2011
Math Endorsement  2011

Awards & Recognition
Graduate Teacher of the Year, School of Teacher Education and Leadership, Utah State University  2015
Continuing Education Departmental Scholarship, Utah State University  2015
Lawson Scholarship, Utah State University  2014
Presidenta...
University Teaching Experience
EDUC 4005: Intermediate Classroom Management Fall 2017 - Current
EDUC 4040: Assessment and Intervention for Struggling Readers Fall 2013 - Current
EDUC 3005: Beginning Classroom Management Spring 2013 - Current

Invited Teaching Presentations & Professional Development
- Reina, L. (2015, August). K-5 Math Integration. Arts are Core, Utah State University, Logan, UT.
- Reina, L. (2014, August). Arts & Math Integration. Arts are Core, Utah State University, Logan, UT.
Curriculum and Teacher Development Projects

**EBLS Journey Map.** Committee Chair. Systematic process for refocusing and refining Edith Bowen Laboratory School. This process included the development and implementation of a plan to rewrite the Mission and Vision and determine specific steps for school improvement. The organization was created with the support of Cantrell & Henry Assoc. and implemented beginning in the 2013-14 school year with continued work in subsequent years.

**Curriculum Development: Scope and Sequence.** Developer & Coach. As one goal area on the EBLS Journey Map a specific process was developed to lead teachers through the creation of a Scope & Sequence map, unpacking of standards, and alignment of common formative assessments. This process has been presented to teachers, and the continual focus of professional development.

**Improving the Instructional Process.** Developer & Coach. A teachers’ ability to analyze and reflect on the effectiveness of their instruction is another goal of the EBLS Journey Map. This process was developed for teachers to conduct multiple times per year in an effort to continually improve instruction. Teachers are supported through the steps and use outcome data within their Individual Development Plans.

**Individual Development Plan.** Developer. In an effort to meet the standards and expectations for teacher evaluation in a manner that is positive and informative, the Individual Development Plan was created to track and measure teacher progress on specific goals.

**Arts Integration.** Developer & Instructor. Integration of the arts into content areas shows high correlation with student success. Lessons, units, and events have been designed around the initiative to activate student learning through creative processes. These include Colonial Days, with dance & art integration into Social Studies; Grade level informances which incorporate multiple art forms into content areas in a presentation format; and, individual lesson plans for each grade level ranging from the Water Cycle Dance to using symmetry to create Totem Poles.

**Comprehensive Response to Intervention Program.** Developer & Instructor. Development of a program to provide time and service for all students on their instructional level in both math and reading. RtI groups are created using triangulated data and focused on specific content areas identified as needs. Instruction is tracked through a reporting system and aides are trained in instructional practices proven to be effective.

**Leveled Library.** Curator. Creation of the Edith Bowen Leveled Library which houses over 2700 book sets categorized by content area and labeled with reading and lexile levels. These books are also catalogued on a searchable spreadsheet and within a computer database used for checkout by teachers.

**Best Practices in Math Instruction.** Developer. As a part of our Response to Intervention program materials were developed to support teachers, aides, and student teachers in implementing best practices into their groups. These materials represent a summary of current research presented as teaching strategies and plans for classroom use.

**Best Practices in Reading Instruction.** Developer. As a part of our Response to Intervention
program materials were developed to support teachers, aides, and student teachers in implementing best practices into their groups. These materials represent a summary of current research presented as teaching strategies and plans for classroom use.

*Best Practices in Writing Instruction*. Developer. As a part of our Response to Intervention program materials were developed to support teachers, aides, and student teachers in implementing best practices into their groups. These materials represent a summary of current research presented as teaching strategies and plans for classroom use.

*School wide Assessment Plan*. Developer & Director. A plan was made to determine what assessments would be administered on a school wide level and the means by which this would be accomplished. Additionally, alternative assessments were found or created to complete the battery of information desired of each student. All assessment data was organized cohesively on a shared document, and synthesized for teachers to identify strengths and areas needing improvement. Data has also been disaggregated and presented to stakeholders as a reflection of school performance.

*School Musical Director*. Director & Choreographer. Each year, for the last 15 years, students have auditioned for a yearly school musical including children in grades 3-5. Rehearsals occur after school for several months and conclude in 3-4 performances for parents, students, and invited guests. Casts sizes range from 60-170 and some of the title performed are: Jungle Book Kids, Annie Jr., The Phantom Tollbooth, and more.

*Self-Manager Program*. Co-Developer. In support of the Leader in Me Program, school wide rules, and social responsibility skills a program was designed and implemented to track and monitor students management of self. Through the program, goals for behavior are achieved, allowing students to receive privileges.

**Articles in Review**


**Research Projects**
Co-Investigator with Dr. Courtney Stewart, *Phenomenology at EBLS; What makes change work?*. Utah State University 2015 - 2017


**Conference Presentations (Peer Reviewed)**
Reina, L. (2017, October). *Building Phonological Awareness through Purposeful Play*. Utah Council of the International Reading Association, Ogden, UT.


Association, Salt Lake City, UT.
Reina, L. (2014, September). *Creative Approach to Literacy*. Utah Chapter of the International Reading Association, Salt Lake City, UT.

**Grant Funding:**
*Toshiba Education Grant* (2017) School grant to provide science and math materials for the recently added 6th grade. Amount: $9500

*Utah Consolidated Application.* (Yearly: 2013 - 2018) School grant to fund early childhood, reading aides, and various other school allocations. Edith Bowen Laboratory School. Amount: $70-90,000

*Land Trust Grant.* (Yearly: 2013 - 2018) School grant to support goals outlined in the school improvement plan. Edith Bowen Laboratory School. Amount: $20-40,000

*USOE Arts Support.* (2016) Funds to support the school musical available through USOE and the Sorenson Foundation. Edith Bowen Laboratory School. Amount: $500

*Afterschool Equipment Grant.* (2014-15) Supplies and instruction to improve the implementation of STEM in the afterschool setting. Edith Bowen Laboratory School. Amount: $10,000.

*Beverly Taylor Sorenson Arts Learning Program.* (2013) Funding for an instructor to support arts integration. Edith Bowen Laboratory School. Amount: Yearly .75 FTE.


**School Service**
Volunteer, Reading Volunteer. Escalante Elementary, Salt Lake City, UT. 2008 - 2009
Volunteer, School Musical Director. Escalante Elementary, Salt Lake City, UT. 2008 - 2009

**Committee Service**
EBLS School Community Council 2014 - Current
EBLS Governing Board 2013 - Current
School Management Team 2012 - Current
Journey Map Core Team—Chair 2013 - Current
SpEd/RtI Team—Chair 2011 - Current
Humanities Team 2013 - Current
“Little Learners” Early Literacy Team 2012 - Current
STEAM Integration Team 2012 - Current