Instructional Leadership and Deliberate Practice: A Framework for Improving Student Achievement

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INSTRUCTIONAL LEADERSHIP AND DELIBERATE PRACTICE:
A FRAMEWORK FOR IMPROVING STUDENT ACHIEVEMENT

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL OF EDUCATION
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF EDUCATION

PROGRAM IN ADMINISTRATION AND SUPERVISION

BY

MATTHEW H. BANACH

CHICAGO, ILLINOIS

MAY 2015
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ACKNOWLEDGEMENTS

I would like to thank everyone who made this dissertation possible. To my entire family who gave me support during this process. To my wife, Tracy, an expert teacher herself, for her patience, understanding, and unwavering support of me. To my daughters, Audrey and Alexandra, who are always sources of inspiration to me. To my parents, Joseph and Susan Banach, who made many sacrifices for their family and who supported us in everything we did.

I also wish to thank Dr. Marla Israel, the director for my dissertation. She has been an invaluable source of guidance and encouragement during this process and during my time at Loyola. I also wish to thank Dr. Leanne Kallemeyn and Dr. Susan Sostak for serving on my committee and sharing their knowledge and insights with me during this process.

Finally, thank you to all of the principals and teachers that agreed to participate in my dissertation research. I appreciate their willingness to open their lives to me so I could learn about this topic. It has helped me not only write this paper, but grow as an administrator as well.
# TABLE OF CONTENTS

ACKNOWLEDGEMENTS ........................................................................................................ iii

LIST OF TABLES ................................................................................................................... vii

LIST OF FIGURES ................................................................................................................ x

ABSTRACT .............................................................................................................................. x

CHAPTER

I. INTRODUCTION .................................................................................................................. 1
   Context of Current Educational Reforms ........................................................................... 1
   Purpose of Research ........................................................................................................... 9
   Significance of the Study .................................................................................................... 12
   Current Trends in Professional Development .................................................................. 13
   Conceptual Framework ...................................................................................................... 14
   Research Design ................................................................................................................ 15
   Limitations of the Study ..................................................................................................... 18
   Researcher Bias .................................................................................................................. 19

II. LITERATURE REVIEW ....................................................................................................... 21
   Principals as Instructional Leaders .................................................................................... 22
   Expertise ............................................................................................................................ 27
      Experts Excel in Generating the Best Solutions ............................................................... 28
      Experts Can Detect and See Features that Novices Cannot .......................................... 30
      Experts Spend a Relatively Great Deal of Time Analyzing a Problem Qualitatively .... 31
      Experts Have More Accurate Self-Monitoring Skills .................................................. 32
      Experts are More Successful at Choosing the Appropriate Strategies ....... 33
      Experts are More Opportunistic than Novices ............................................................... 34
      Experts can Retrieve Information with Minimal Cognitive Effort ............................... 36
   Deliberate Practice .............................................................................................................. 38
      Appropriate Level of Difficulty .................................................................................... 38
      Feedback on Performance ............................................................................................. 39
      Allows for Repetition ...................................................................................................... 41
      Correction of Errors ....................................................................................................... 42
      Connection to Instructional Leadership ......................................................................... 43
   Identifying Expert Teachers ............................................................................................... 44
   Stages of Expertise Development in Teachers ................................................................. 47
   Teacher Professional Development ................................................................................... 49
   Summary .............................................................................................................................. 52
III. RESEARCH DESIGN ........................................................................................................ 54
  Introduction ...................................................................................................................... 54
  Case Study Methodology ................................................................................................. 55
  Case Selection .................................................................................................................. 56
  Procedures for Collecting Data ....................................................................................... 59
    Principal Interviews ........................................................................................................ 61
    Observation .................................................................................................................... 62
    Teacher Survey (Selection of Sub-Sample of Teachers) .................................................. 62
    Sub-Sample Teacher Interviews .................................................................................... 63
    Sub-Sample Teacher Lesson Plan Interviews ................................................................ 64
  Validity and Reliability .................................................................................................... 65
  Data Analysis ................................................................................................................... 67
  Ethical Considerations ..................................................................................................... 69
  Limitations ....................................................................................................................... 70

IV. PRESENTATION OF THE DATA ................................................................................. 71
  Introduction ...................................................................................................................... 71
  Research Questions ......................................................................................................... 71
  Description of the Schools Being Studied ...................................................................... 73
    Site 1 .............................................................................................................................. 74
    Site 2 .............................................................................................................................. 78
  Presentation of Data ........................................................................................................ 79
    Site 1 Principal Interview ............................................................................................. 82
    Site 1 Observation of Professional Development .......................................................... 89
    Site 1 Teacher Professional Development Interview .................................................. 91
    Site 1 Teacher Lesson Plan Think Alouds ..................................................................... 104
    Site 2 Principal Interview ............................................................................................. 109
    Site 2 Observation of Professional Development .......................................................... 119
    Site 2 Teacher Professional Development Interview .................................................. 120
    Site 2 Teacher Lesson Plan Think Alouds ..................................................................... 131
  Similarities between Sites ............................................................................................... 137
  Differences between Sites ............................................................................................... 138
  Coding of the Data .......................................................................................................... 139
    Appropriate Level .......................................................................................................... 140
    Feedback ........................................................................................................................ 148
    Repetition ....................................................................................................................... 163
    Correction of Errors ...................................................................................................... 171
    Other Code-Working with Students ............................................................................. 178
  Summary ......................................................................................................................... 185

V. ANALYSIS OF THE DATA .......................................................................................... 189
  Introduction ...................................................................................................................... 189
  Conclusions ....................................................................................................................... 192
    Research Question 1 ...................................................................................................... 192
    Research Question 2 ...................................................................................................... 211
    Research Question 3 ...................................................................................................... 216
Research Question 4 ................................................................. 221
Limitations .................................................................................. 233
Recommendations for Further Research ...................................... 234
Summary of Findings..................................................................... 235

APPENDIX

A. LETTER OF COOPERATION TO SUPERINTENDENTS AND PRINCIPALS ........................................................................ 242
B. CONSENT FORM FOR PRINCIPALS .................................................. 245
C. CONSENT FORM FOR TEACHER SURVEY ..................................... 249
D. CONSENT FORM FOR TEACHER INTERVIEWS .............................. 252
E. CONSENT FORM FOR TEACHER THINK ALOUDS ....................... 255
F. SCHOOL LEADER INTERVIEW PROTOCOL .................................. 258
G. ORAL CONSENT FOR OBSERVATION ........................................... 262
H. PROFESSIONAL DEVELOPMENT OBSERVATION PROTOCOL ...... 264
I. INVITATION FOR ALL TEACHERS TO COMPLETE QUESTIONNAIRE .... 266
J. TEACHER QUESTIONNAIRE PROTOCOL ...................................... 268
K. INVITATION TO NOMINATED TEACHERS TO PARTICIPATE IN INTERVIEWS ........................................................................... 271
L. TEACHER INTERVIEW PROTOCOL ............................................... 274
M. LESSON PLAN THINK ALOUD INTERVIEW PROTOCOL ............ 277
REFERENCE LIST ........................................................................... 279
VITA ............................................................................................... 293
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Number of Years Experience for Teachers in Their Current Grade Level</td>
<td>91</td>
</tr>
<tr>
<td>2. Number of Years Teachers Have Taught at Their Current School</td>
<td>91</td>
</tr>
<tr>
<td>3. Number of Years Experience Teachers Have as a Teacher Overall</td>
<td>92</td>
</tr>
<tr>
<td>4. Number of Years Experience for Teachers in Their Current Grade Level</td>
<td>120</td>
</tr>
<tr>
<td>5. Number of Years Teachers Have Taught at Their Current School</td>
<td>121</td>
</tr>
<tr>
<td>6. Number of Years Experience Teachers Have as a Teacher Overall</td>
<td>121</td>
</tr>
<tr>
<td>7. Continual Refining of Teachers’ Instructional Practices to Meet Students’ Needs</td>
<td>141</td>
</tr>
<tr>
<td>8. Flexibility to Try New Things</td>
<td>143</td>
</tr>
<tr>
<td>9. Foundational Expectations of Leaders</td>
<td>144</td>
</tr>
<tr>
<td>10. Training and Materials</td>
<td>145</td>
</tr>
<tr>
<td>11. Collaborative Culture</td>
<td>147</td>
</tr>
<tr>
<td>12. Teachers Want Regular Observations and Feedback</td>
<td>149</td>
</tr>
<tr>
<td>13. Leaders Give Targeted Feedback and Expect Small, Continuous Changes</td>
<td>151</td>
</tr>
<tr>
<td>14. Teachers Find Quantitative Feedback Helpful in Observations</td>
<td>153</td>
</tr>
<tr>
<td>15. Use of Student Data for Feedback</td>
<td>155</td>
</tr>
<tr>
<td>16. Use of Discussions and Observations of Other Teachers as Feedback</td>
<td>157</td>
</tr>
<tr>
<td>17. Use of Other Resources as Feedback</td>
<td>158</td>
</tr>
<tr>
<td>18. Teachers Want Practical Feedback for Changes</td>
<td>159</td>
</tr>
</tbody>
</table>
19. Willingness to Have Difficult Conversations ................................................................. 161
20. Leaders Had to Shift the Teachers’ Mindset ................................................................. 164
21. Environment for Practice ............................................................................................... 166
22. Teachers Need Time for Change .................................................................................... 168
23. Repetition Allows for Teachers to Develop A Repertoire of Strategies ...................... 170
24. Need to Build Relationships Over Time ........................................................................ 172
25. Teachers Re-Teach Concepts in Different Ways If Students Do Not Master Them .......... 174
26. Set Goals Based on Data ............................................................................................... 176
27. Need to See Success ...................................................................................................... 177
28. Appropriate Level-Work with Students ......................................................................... 179
29. Feedback and Repetition - Students ........................................................................... 181
30. Correction of Errors – Students ................................................................................... 183
31. Relationship between Components of Deliberate Practice, Effective Instructional Leadership, and Effective Professional Development ............................. 230
32. Comparison of Deliberate Practice for Teachers to Students ..................................... 232
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Progression of the Case Selection and Data Collection for the Research Study</td>
<td>17</td>
</tr>
<tr>
<td>2. Proposed Ideation of the Relationship between Components of Deliberate Practice, Effective Instructional Leadership, and Effective Professional Development</td>
<td>51</td>
</tr>
<tr>
<td>3. Progression of the Case Selection and Data Collection for the Research Study</td>
<td>60</td>
</tr>
<tr>
<td>4. Progression of Steps in the Data Collection Process</td>
<td>65</td>
</tr>
<tr>
<td>5. Triangulation of data looking at elements of deliberate practice</td>
<td>69</td>
</tr>
<tr>
<td>6. Progression of Steps in the Data Collection Process</td>
<td>73</td>
</tr>
<tr>
<td>7. Progression of the Case Selection and Data Collection for the Research Study</td>
<td>75</td>
</tr>
<tr>
<td>8. Composite Percentage of Students in Site 1 that Meet or Exceed Standards on the ISAT Test with New Cut Scores Being Applied in 2013</td>
<td>77</td>
</tr>
<tr>
<td>9. Composite Percentage of Students in Site 2 that Meet or Exceed Standards on the ISAT Test with New Cut Scores Being Applied in 2013</td>
<td>79</td>
</tr>
</tbody>
</table>
ABSTRACT

This study examined whether the theory of deliberate practice could be applied and expanded to the field of education to explain how school leaders successfully work with teachers to improve student achievement in schools with a high percentage of student identified as minority and low income. For the purpose of this study, deliberate practice is defined as practice that is “(a) at an appropriate level, (b) provides informative feedback, (c) provides for opportunities for repetition, and (d) allows for correction of errors” (Sternberg, Grigorenko, & Ferrari, 2002, p. 71).

The researcher completed a qualitative case study of two public elementary schools in the Illinois with more than 50% of students identified as low income and minority that raised student achievement as evidenced by the schools being selected for the Illinois Spotlight Award or the Academic Improvement Award in 2011. The researcher collected data through principal interviews, a survey of all teachers, two separate interviews with each member of a subsample of teachers, and the observation of three professional development activities. The data from these sources were analyzed using the framework of deliberate practice.

The results of the study indicate that the principals of the schools did use components of deliberate practice to increase student achievement. The principals actively worked to create intentional environments within their schools in which the principals expected and supported teachers to continuously refine their instructional
practices to meet students’ needs and create an environment of deliberate practice for students. The principals created this environment by focusing on what teachers can do to improve student achievement, taking a balanced approach to utilizing assessment data to drive improvement efforts, and giving teachers flexibility to meet the changing needs of students while also setting foundational expectations for teachers.
CHAPTER I

INTRODUCTION

In today’s educational environment with ever increasing calls for accountability, politicians and educators often look for simple fixes that will improve student outcomes on standardized test scores (Frontier & Rickabaugh, 2014). Contrary to this belief, school reform efforts will require sustained efforts of school leaders to improve the instructional practices of the teachers in their schools (Fullan, 2010; Schmoker, 2011). While research has identified instructional leadership activities that leaders have used to successfully increase student achievement, few studies have explicated the way in which these leaders have carried out these activities (Bambrick-Santoyo, 2012; Neumerski, 2013). This research study examined whether the theoretical framework offered by the study of experts and the development of expertise in psychology extends to the field of education. Specifically, the study looked at the concept of deliberate practice as a possible framework for how successful school leaders direct professional growth opportunities in their schools. The study aimed to help change the current rhetoric that there are quick fixes that will successfully change the educational system to having a conversation that recognizes the true work involved in sustaining teacher professional growth to improve achievement for all students.

Context of Current Educational Reforms

The quality of the education system in the United States has been under attack for the last several decades. In the spring of 1983, A Nation at Risk was released by the
National Commission on Excellence in Education as a scathing report about the state of the public school system in the United States. The authors of the report warned against the “rising tide of mediocrity that threatens our very future as a Nation and a people” (A Nation at Risk, para. 1). Consequently, the report set off a series of efforts to reform American education.

This report followed reform efforts where “in the 1960’s and 1970’s, the federal government enacted a variety of programs and policies to improve educational equity for minority children, poor children, children with disabilities, children with limited English proficiency, and women and girls” (Jennings, 2012, p. 2). These reform efforts often took the form of legislation and court decisions that included The Civil Rights Act of 1964 that eliminated legal segregation in schooling, Title 1 of the Elementary and Secondary Act (1965) that provided additional resources for students from disadvantaged backgrounds, the Education for All Handicapped Children (later termed Individuals with Disabilities Education Act) (1975) that required schools to provide students with disabilities a free and appropriate public education and other educational rights, the Lau v. Nichols (1974) Supreme Court decision that required support for English language learners within school districts, and Title IX of the Educational Amendments of 1972 that prohibited discrimination in programming based on gender. The focus of these programs was to provide equal access to education. However, later efforts looked at how to provide equity of academic achievement for all students (Zhao, 2009).

Among the eventual efforts for reform was the reauthorization of the Elementary and Secondary Education Act, later termed the No Child Left Behind [NCLB] Act
(2002), which set high standards for school improvement. Under NCLB, improvement would be measured by increases in student achievement on standardized tests, including looking at the achievement of specific subgroups within schools (e.g., students designated as minority and low income). NCLB set the deadline of 2014 by which time all students in public schools would have to perform at grade level on standardized tests. Schools that failed to reach this benchmark for all students in all subcategories and that did not meet adequately yearly progress towards that goal would face stiff sanctions including possible restructuring or closing.

Reforms under NCLB have not been entirely successful. Even after the government, school staff members and boards, and other organizations worked on “tens of thousands of initiatives aimed at improving the quality of education in the nation’s schools” after the enactment of No Child Left Behind, actual student achievement as measured by the national assessment program of the United States Department of Education, the National Assessment of Educational Progress, has remained nearly the same, especially for seventeen year-old students (Grant et al., 2014; Barber & Mourshed, 2007, p. 10; National Center for Education Statistics, 2013). In international comparisons on the Program for International Student Assessment (PISA), the 2012 results of 15 year-old students in the United States remained the same while results of students in other countries “soared” (Layton, 2013, para. 1).

According to Frontier and Rickabaugh (2014), leaders are trying to find simple, unsophisticated answers to meet these mandates that do not recognize the complexity of change needed to improve teaching. The measures schools take often assume that
teachers must be told what to do because they cannot handle the complexities involved in teaching (Duffy, 1994). Leaders thus devise “‘idiot-proof” (Hattie, 2003, p. 1) solutions with such things as scripted lessons and prescribed textbooks whose implementation by the teacher is evaluated for accountability, including the use of tests with a narrow view of achievement (Schmoker, 2011). Consequently, the reform efforts have little chance of success.

Some educators looked to fields outside of education for answers on how to help teachers improve and have used deliberate practice from the field of expertise in psychology as a framework to make continual improvements to teaching and learning (Bambrick-Santoyo, 2012). Within deliberate practice, people strive to become experts at what they are doing by using practice that is “a) at an appropriate level, (b) provides informative feedback, (c) provides for opportunities for repetition, and (d) allows for correction of errors” (Sternberg, Grigorenko, & Ferrari, 2002, p. 71). For example, if a school leader wanted teachers to utilize guided reading in classrooms, she would not expect teachers to implement it all at once. She would begin to work with teachers where they are at and help teachers to gradually master the skills necessary to utilize guided reading (e.g., managing classroom management so the teacher can work with small groups, setting up small group discussions, etc.). This work should allow the teacher to implement these skills within the context of his classroom, allowing him time to practice and adapt the skills based on feedback he receives from the school leader.

As the 2014 deadline approached under NCLB, it became evident that schools would not meet the goal. President Barack Obama (2011a) stated that approximately
80% of the 100,000 public schools in the United States could eventually be labeled as failing under the law. In the same speech, President Obama expressed the hope that Congress would reauthorize NCLB, which has been up for reauthorization since 2007, with changes that would still hold schools accountable while fixing the method in which schools were evaluated. As of this writing, this reauthorization has yet to be accomplished.

With the threat of a substantial increase in the number of schools being labeled as failing, President Obama (2011b) announced that states that would agree to certain reform measures (i.e., creating and assessing college and career ready standards, providing new monitoring systems for schools, and creating new principal and teacher evaluations) would receive flexibility from the requirements and sanctions in NCLB (e.g., changing the requirements of adequately yearly progress (AYP), not taking certain actions for failing to meet AYP, and having more flexibility with funding) (U.S. Department of Education, 2012). One of the reform measures that received the most attention was the creation of new state teacher evaluation systems that “use multiple valid measures in determining performance levels, including student growth data as a significant factor for all students (including English Learners and students with disabilities)” (U.S. Department of Education, 2011, pp. 51-52). Therefore, after admitting that a similar system did not work on the school level, teachers would be given an evaluation system to hold them individually accountable at the classroom level with a system also based on a growth model of total student achievement scores.
Sapphier (2011) states, that there is a belief that these new educator evaluation systems will suddenly create great educators. “Missing from the table, however, is the understanding that teacher evaluation alone does not develop high-expertise teachers” (p. 62). Schmoker (2012) believes that these evaluation systems are often overly complex and have not been researched to see if they successfully help teachers improve. He believes that the evaluations are yet another mandate that have little chance of success of actually raising student achievement.

The requirements of NCLB and of the new flexibility waivers do not appear to address the underlying problems in education, but try to provide more surface level fixes rather than the sustained professional development of teachers needed for true improvement. Wagner et al. (2006) states that the problem is “less about a ‘rising tide of mediocrity’ than about a tidal wave of profound and rapid economic and social changes” (p. 3) that most people do not understand. The country is moving from a time a century ago in which only one in ten people in the country received a high school diploma to one in which every student is expected to receive a high school diploma that has more meaning academically (Hess, 2013).

In order to be successful and competitive in today’s workplace, students require more highly developed skills and thought processes than schools have previously required. Wagner et al. (2006) used the term “adaptive change,” created by Heifetz (1994), since they believe there is no known solution to this issue and it will require a different way of operating than school leaders have done in the past. The United States Department of Education (2008) explained the situation using the work of Fisch and
McCleod (2007) saying, “we are currently preparing our students for jobs that don’t exist, using technologies that haven’t been invented, in order to solve problems we don’t even know are problems yet” (p. 15). Teachers are being asked to not only change what and how they teach, but to change their fundamental beliefs and what they have known and thought throughout their entire lives about teaching and learning (Boykin & Noguera, 2011; Frontier & Rickabaugh, 2014; Peterson, 1994).

Teachers often have a set of ideas of what teaching should look like that is often formed by their own experiences in school as a student (Kennedy & Barnes, 1994). Consequently, teachers are being asked to build new schema about what teaching and learning should look like. Currently, this work is often done in a relatively isolated manner. Most teachers have limited chances to talk about this change in relation to their teaching and to get feedback on how to improve in light of the changes that are taking place.

The factor these myriad of change efforts often miss is the importance of school leadership that is actively and effectively working with teachers to improve their instructional practices (Bambrick-Santoyo, 2012; Schmoker, 2011). Sources 2012, a survey commissioned by Scholastic and the Bill & Melinda Gates Foundation (2012), revealed that teachers were only observed and given feedback an average of 3.1 times per year. Even in the pilot evaluation program in Chicago using the new Charlotte Danielson framework, principals stated that they were unsure if they could even complete the two observations per year required for their staff under the new program (Sartain, Stoelinga, & Brown, 2011).
Bambrick-Santoyo (2012) likens these irregular visits to a tennis coach only watching players every six months to write detailed reports and then expecting the players to improve. If developing teachers is one of the main goals of the evaluation system, the current limited amount of feedback will not be enough. Dobbie and Fryer (2011) determined that teachers in high achieving elementary schools received feedback an average of 16.41 times per semester, compared to only 11.31 times in less effective schools in the study, with both of these numbers vastly more than the two to three times a year many teachers receive feedback.

Most school leaders have also not adapted their professional development programs to help teachers with these instructional shifts. NCLB (2002) calls for professional development activities that are “high quality, sustained, intensive, and classroom-focused in order to have a positive and lasting impact on classroom instruction and the teacher’s performance in the classroom” (Sec. 9101). Darling-Hammond, Chung Wei, and Adamson (2010) found that the average reported hours of professional development in the United States was approximately 44 hours per year across a number of different topics, which is far short of the “substantial number of contact hours on a single professional development focus” (p. 2) that they estimated to be at least 50 hours on a single topic.

Thus, while research exists that shows what activities can help improve achievement in the midst of these great changes, administrators and teachers continue to search for the quick fix to make students college and career ready (Schmoker, 2011). Nonetheless, the central role of the teacher being an integral part of this instructional
change is not in question. Hattie’s (2003) research demonstrates that teachers account for 30 percent of the variance in student achievement. Teachers at the 98th percentile of pedagogical skill would, on average, bring a student who enters their classroom at the 50th percentile up to the 77th percentile whereas the same student would see no improvement in a teacher at even the 50th percentile in terms of his/her pedagogical skill (Marzano, Frontier, & Livingston, 2011, p. 2).

Therefore, there is a need to determine how school leaders can best create expert teachers who are able to make the needed changes and close the gap in student achievement. In the meta-analysis of Hattie (2009), the instructional leadership of principals, including leading and participating in the teachers’ professional learning and development, is shown to have a high effect size (d = .91, with d = 1.0 producing two to three years of growth in student achievement). While strong leadership is important, there is still uncertainty about how leaders should undertake activities that help teachers grow professionally to become successful. In the United States Department of Education’s (2008) report, A Nation Accountable: Twenty-five Years After A Nation At Risk, the authors state this concern after discussing the importance of working with effective teachers to bring about education improvement, admitting that “we do not yet know as much as we would like about how to develop these great teachers” (p. 14).

**Purpose of Research**

Despite the lack of overall progress on a national scale, there are schools that have successfully increased student achievement and have made progress to close the achievement gap that exists. This research study examined whether the theoretical
framework of deliberate practice to create expertise and the development of expert pedagogy extends to the field of education and the way school leaders undertake the professional development of teachers. The purpose of this research was to understand how deliberate practice is used by leaders in these case study schools to help teachers adapt their instructional practice to successfully help students perform better. For the purpose of this study, deliberate practice is defined as practice that is “(a) at an appropriate level, (b) provides informative feedback, (c) provides for opportunities for repetition, and (d) allows for correction of errors” (Sternberg, Grigorenko, & Ferrari, 2002, p. 71).

Specifically, the fundamental research questions were:

1. How have school leaders used deliberate practice as a framework in conversations about professional growth to enable teachers in high poverty schools with a high percentage of students identified as minorities to improve their instructional performance?

2. How did school leaders provide an environment for teachers to implement deliberate practice to aid in the development of expertise in their instructional performance within the school?

3. What differences, if any, are there between the ways that school leaders differentiate support within the framework of deliberate practice for teachers at different levels of expertise within their school building?
4. What are the implications for school leaders as they try to enhance instructional practices through professional growth activities using deliberate practice in order to improve student achievement in their schools?

In the current era of school accountability, school leaders often seek to find professional development and curricular programs they can readily implement to improve student achievement without looking at the underlying principles needed for successful professional growth in their teachers. Herman et al. (2008) stated that “case research on school turnarounds and the business research clearly indicates that there is not a specific set of actions that applies equally well to every turnaround situation” (p. 7). Wayne, Yoon, Zhu, Cronen, and Garet (2008) further argue that although there is some agreement over effective practices to increase professional growth that increases student achievement, the research “lacks sufficient specificity to guide practice” (p. 470).

Opfer and Pedder (2011) suggest that the increased call for accountability and the use of research-based methods have diminished recognition that school change takes place in a complex system that is influenced by a number of different factors within the school and community. They call for the development of an explanatory theory of teacher learning that takes these considerations into perspective.

This research study examined whether the theoretical framework offered by the study of experts and the development of expertise in psychology extends to the field of education. Ericsson, Krampe, and Tesch-Romer’s (1993) theory of deliberate practice has been credited as explaining the appearance of experts within many different types of fields (e.g., sports, military, business). Researchers have demonstrated that the elements
of expertise are present in teachers and can explain why some teachers are more successful than others (Berliner, 1994; Hattie, 2003). However, there has been little research in the field of education about whether and how professional growth activities correspond with the theory of deliberate practice and improvement of expertise and if school leaders can drive improvement with these practices.

**Significance of the Study**

Research has shown that teachers have the highest impact on student achievement within schools, but “educational effectiveness has to do with outcomes and effectiveness in successive classes in a school and in the educational system as a whole” not just an individual classroom (Creemers & Reezigt, 1996, p. 198; Fullan, 2010; Marzano, 2003). Therefore, school leaders must guide their entire staff to enable students to perform to their full potential while also meeting state and federal mandates. Consequently, school leaders must determine how to enable their teachers to grow professionally by investing in human capital within the limitations of time and resources to meet these demands (Hargreaves & Fullan, 2012; Hattie, 2003). While many studies have identified specific instructional leadership activities principals can do to raise student achievement, few have looked in depth at how successful school leaders have implemented these activities within their schools (Bambrick-Santoyo, 2012; Neumerski, 2012). This study seeks to identify ways school leaders effectively foster deliberate practice during the professional development of their teachers so they can efficiently utilize their scarce resources to best serve their teachers and, thus, improve student achievement.
**Current Trends in Professional Development**

With the increase in the number and diversity of students in classrooms that now have the expectation that more students will receive a high school diploma, making them college and career ready, and the high expectations put forth by government regulations (e.g., NCLB, IDEA, etc.), educators have recognized that teachers can no longer remain isolated in their classrooms. School leaders have needed to re-evaluate how teachers work together for professional development and problem solving (Bidwell, 2001). One of the models that developed in response to the need for improved professional development for teachers was the idea of professional learning communities. Within a professional learning community, members create goals based on student achievement data about what each member will do to achieve a “clear and compelling vision of what the organization must become in order to help all students learn” (DuFour, DuFour, Eaker, & Many, 2006, p. 3).

There has been an increase in the number of schools using professional learning communities as a way to provide professional development. However, DuFour et al. (2006) warn that the use of the term professional learning community “has become so commonplace and has been used so ambiguously to describe virtually any loose coupling of individuals who share a common interest in education” (p. 2). While research has shown that professional learning communities can be effective; Saunders, Goldenberg, and Gallimore (2009) found that “providing time for collaboration and supportive administration alone appears to be insufficient to secure the desired outcomes” (p. 1028). Vescio, Ross, and Adams (2008) determined that professional learning communities need
to focus specifically on improving instructional practices in order to have an impact on student achievement. Consequently, while professional learning communities provide the framework for improvement efforts, it is clear that there must be a systemic way of approaching improvement of instructional practices to increase the effectiveness and expertise of teachers, which is not necessarily inherent in the PLC model. The concept of deliberate practice to develop may offer a plausible explanation for the success of efforts within professional learning communities.

Conceptual Framework

While researching expertise and its development, Ericsson, Krampe, and Tesch-Romer (1993) noticed several characteristics that were similar in how people developed expertise in different fields of work that may help provide insight on how teachers could improve their instructional practice. Experts typically require a long period of work to acquire the knowledge and skills necessary to excel within a certain field. The average length of time noted for people to develop expertise is approximately ten years or 10,000 hours of practice (Ericsson, Prietula, & Cokely, 2007; Gladwell, 2008; Simon & Chase, 1973).

Within this framework, people must not just practice and make changes, but use deliberate practice to improve their performance. “Deliberate practice is not just any sort of practice, but rather practice in which the task is (a) at an appropriate level, (b) provides informative feedback, (c) provides for opportunities for repetition, and (d) allows for correction of errors” (Sternberg, Grigorenko, & Ferrari, 2002, p. 71). At least initially, people using deliberate practice often must work with a mentor to help identify what
skills are necessary to learn and to develop a progressive sequence of instruction to achieve expert status in their performance (Ericsson, 1996).

Once the areas for improvement are identified, people must have the opportunity to practice and eventually master those skills and then continue to make incremental improvements to their skills as they or a mentor continually evaluates their performance and how it can reach the expert level status (Bryan & Harter, 1899; Hattie & Timperley, 2007). As people practice these new skills, deliberate practice requires that they use difficulties and failures as learning opportunities to better their performance (Gardner, 2002). With the challenges of continual improvement, expertise is often best developed in environments that support people as they continually strive to improve themselves and in which the process of improvement is a normalized part of the community (Bereiter, 1993).

Research Design

To understand how deliberate practice may be used as a framework for professional development in teaching, the researcher utilized a qualitative case study. The researcher focused on public, P-8th grade elementary schools in the state of Illinois that have successfully raised student achievement since the passage of NCLB as the subject of this case. The study focused on how school leaders enable teachers to improve student performance within the school using deliberate practice as a framework for teacher professional growth. In this study, improved student performance was determined by schools being selected for the Illinois Spotlight Award for high-poverty schools (greater than 50% of students qualify for free and reduced lunch) that are making
adequate yearly progress and/or the Academic Improvement Award for schools that have shown at least a 7.5% gain in test scores on student achievement tests over the previous year’s performance (Northern Illinois University, 2014).

Once the schools that meet these criteria were identified, the researcher ensured the schools had at least 50% of students qualify for free and reduced lunch and that the schools enrolled more than 50% of students who belonged to categories designated as ethnic minorities. The researcher looked for schools within this group that had teachers with National Board Certification as teachers with this certification are shown to rate statistically higher on identified characteristics of expert teachers (Bond, Smith, Baker, & Hattie, 2000).

This researcher then chose two schools that best met these criteria to use as the subjects of the case study. Once selected, the researcher interviewed the principals of the schools to obtain a better understanding of the context of the school, the professional development activities, and to begin to identify categories of teachers in various stages of expertise. The researcher observed several professional development activities with teachers at the school to determine if the components of deliberate practice were present in these activities and how they helped teachers grow professionally. The researcher also surveyed teachers at the schools to identify teachers who were in various stages of expertise.

Based on the principal and peer nominations from the principal interviews and teacher surveys, the researcher developed a sub-sample of teachers at various categories of expertise (Palmer, Stough, Burdenski, & Gonzales, 2005). The categories included
beginner teachers, who are new to the profession; intermediate level teachers, who have approximately three to four years of teaching; and expert teachers, who have approximately five years or more of teaching experience. These teachers were then interviewed to determine how deliberate practice has helped improve their instructional practice, thus increasing student performance. The researcher provided for triangulation of data by also having the teachers perform a think-aloud while developing lesson plans for their classes. The researcher coded data from the research using the characteristics of deliberate practice, but remained open to new codes as the analysis proceeds.
Figure 1. Progression of the Case Selection and Data Collection for the Research Study

Limitations of the Study

The research study has several limitations inherent in its design. The sample was made purposefully small with two schools. The study used student standardized test scores as the basis for selecting successful schools before examining other selection criteria (e.g., student demographics), which is a narrow view of student achievement. In the absence of a scientific way to identify expert teachers (with the exception of board certified teachers), the researcher utilized principal and peer nominations to determine teachers in the various stages of expertise for the sub-samples of teachers who the
researcher will interview. Furthermore, the research was conducted in public schools, which may reduce the generalizability to other types of schools. The method of a qualitative case study also does not yield causal relationships, but rather allows for a “rich, ‘thick’ description” (Merriam, 2009, p. 43) of the data. This description is important because, while research studies have identified specific instructional leadership activities school leaders can implement to improve student achievement, few researchers have studied how these leaders actually implement these instructional leadership activities and/or provide a framework (such as deliberate practice) to do so (Bambrick-Santoyo, 2012; Neumerski, 2012).

**Researcher Bias**

The researcher has several biases that will be taken into consideration during the completion of this study. The researcher is an administrator who provides professional development to teachers. The researcher is an administrator in a nonpublic school system, which may allow him to obtain more information as an outsider while also inhibiting him from understanding some of the nuances in the chosen public school systems. Therefore, the researcher utilized a journal to record experiences/questions and dialogued with his dissertation chair about them. The researcher also studied the data with a particular conceptual framework in mind. Consequently, to minimize the effect of the biases, the researcher kept a research journal throughout the study to document thoughts and ideas. The journal allowed the researcher to reflect on his thought process during the course of the study. In addition, the researcher used the process of member
checks with all interviewees and discussions with his dissertation chair to ensure proper interpretations were made from the data (Merriam, 2009).
CHAPTER II

LITERATURE REVIEW

This chapter summarizes research pertinent to the research questions of this study, namely:

1. How have school leaders used deliberate practice as a framework in conversations about professional growth to enable teachers in high poverty schools with a high percentage of students identified as minorities to improve their instructional performance?

2. How did school leaders provide an environment for teachers to implement deliberate practice to aid in the development of expertise in their instructional performance within the school?

3. What differences, if any, are there between the ways that school leaders differentiate support within the framework of deliberate practice for teachers at different levels of expertise within their school building?

4. What are the implications for school leaders as they try to enhance instructional practices through professional growth activities using deliberate practice in order to improve student achievement in their schools?

The literature will examine the changing role of principals as the instructional leader of the school and will explicate the concepts underlying the research questions including literature about expertise, the development of expertise, expert practice, and the application of the field of expertise to the teaching profession in particular.
Principals as Instructional Leaders

The role of the principal within schools began as schools started teaching a larger concentration of children than a single room schoolhouse could manage (Beck & Murphy, 1993). As a result of this change, someone needed to organize the administrative tasks and coordinate efforts in the school. Sometimes, a teacher would be designated as the principal teacher and would teach, while also being responsible for other administrative tasks within the school (Cuban, 1988). Eventually, the teaching role of the principal largely disappeared.

The principal role became formalized by a national educational body in the 1920’s when the National Education Association formed the Department of Elementary School Principals as people began to work for the professionalization of the position and increased standards for the selection and training of principals (Cuban, 1988). By the inaugural 1948 survey (which would eventually be done every ten years) of principals by the Department of Elementary School Principals, tension already existed between the administrative role of the position and the supervisory function to improve instruction. Supervisory principals in the study still reported spending only 24.1% of their time on supervision of teachers for which principals expressed they were most effective “by helping each teacher with her problems” (Department of Elementary School Principals, 1948, pp. 87 & 101).

In 1966, James Coleman released a report entitled “On Equality of Educational Opportunity” that dramatically changed the discussion of education in the United States. The report looked at different facets of schooling and determined that the socioeconomic
The background of students was the largest determining factor in student achievement— not school quality. This finding focused researchers’ attention on issues of school effectiveness as there were cases where students from different socioeconomic backgrounds were successful (Reeves, 2004; Hoff, 1999). In the school effectiveness studies of the 1970’s and 1980’s that resulted from the Coleman study, researchers found five characteristics that actually did correlate with improved student achievement in schools: principal’s instructional leadership, a focus on instruction, an orderly and safe learning climate (including connections to parents and the community), high expectations, and the use of data to evaluate the school’s effectiveness against expressed standards (Edmonds, 1982; Marzano, 2003; Robinson, Lloyd, & Rowe, 2008; Shatzer, Caldarella, Hallam, & Brown, 2013). These findings led to school improvement efforts with the instructional leadership of principals as one of the major foci.

The charge to improve public schools intensified with the issuance of the Nation at Risk report in 1983. The fear of the United States losing its global supremacy permeated the educational climate and national leaders increased the demand for accountability in education (Heck, 1992). Principals were to lead the effort to improve schools, being declared the instructional leaders of their schools since the school effectiveness research showed the link between effective principals and effective school (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010; Marzano, 2003; Stronge, 1993).

Researchers began to focus on what types of instructional leadership activities led to an increase in student achievement. The Center on Organization and Restructuring of Schools (1995) analyzed several studies on instructional leadership and found successful
schools had leaders who created clarity around the school’s mission and goals, instilled a “collective responsibility” (p. 30) to reach the goals, and created a professional environment to increase “organizational capacity” with reflection and professional development to enhance the commitment and competence of the staff to enable them to accomplish the goals. While some researchers initially thought that principals had an indirect impact on school improvement, it became clear that “principals are the key levers for school-based change” (Bryk et al., 2010, p. 61; Hallinger & Heck, 1998).

It is clear that the push for instructional leadership has affected how principals approach their position. In the most recent ten year follow-up study of school principals, the National Association of Elementary School Principals (2009) found that the principals have increased their focus on their role of instructional leaders using data-based decision-making. When asked about the five areas in which they spend the most time, 79.6% listed the supervision of staff as one of the areas. In another question, respondents reported there had been an increase in the amount of time they spend on the “use of assessment data in instructional planning” (86.4% of respondents), the “introduction and use of effective instructional practices (77.4%) (63.5% in 1998), and the “development of school as a professional learning community” (75%) (p. 29). The study noted that as more is put on a principal’s plate of responsibility, little is moved off.

Researchers began to focus on different forms of leadership for the principal, given their increasing amounts of responsibility and changes in social contexts, examining distributed leadership and transformational leadership as ways for principals to drive improvement efforts (Leithwood & Sun, 2012; Hallinger & Heck, 1998; Zepeda,
Spillane, Halverson, and Diamond (2004) discuss the distributed perspective as a way to “identify and explore the enactment of leadership tasks, as these tasks are performed by multiple formal and informal leaders,” specifically looking at the interplay between the leader, the followers, and the context within the school (p. 16). The authors see distributed leadership as how principals practice leadership in general and not how they approach specific tasks (i.e., instructional leadership). However, Hargreaves and Fink (2008) showed that in some circumstances distributed leadership is being harnessed and even hijacked to secure more efficient and enthusiastic delivery of unquestioned government purposes and targets in conventionally tested learning, rather than contributing to a redefinition of those educational goals and purposes in a more visionary, inclusive and transformational way appropriate to life and learning in the 21st century. The distributed leadership model offers a limited view of how principals should specifically approach the task of improving instruction in the school.

Researchers also looked to transformational leadership as a way for principals to lead the change necessary in schools. Leithwood (1994) describes transformational leadership as a response to the second order change faced by educators with expectations to close the achievement gap without being given clear guidelines of how to do so, while also preparing all students for the demands of the 21st century. He goes on to describe the need for “strategies that help frontline school staffs appreciate the purpose for change and that foster their commitment to developing, trying out, and refining new practices until those purposes are accomplished” (p. 500). He delineates five dimensions for transformational leadership- creation of a vision, commitment to group goals, expectation
for high performance, model of appropriate behavior, stimulation of intellect, and support for individuals.

While transformational leadership may enable a school leader to effectively lead change, there has been mixed results on how this type of leadership activity affects student academic outcomes as it does not always intensely focus on instructional practices. Several studies have shown that instructional leadership practices have as much as four times the effect size as do transformational leadership practices on student achievement outcomes (Robinson, Lloyd, & Rowe, 2008; Shatzer et al., 2013). These studies looked at effective instructional leadership practices associated with higher levels of student achievement and found practices of leadership that were similar to the findings from earlier instructional leadership research—creating clear goals and expectations and recognizing their attainment; providing resources to meet the goals; evaluating the curriculum, teaching, and student learning outcomes; providing for and participating in teacher professional development about how to meet students’ needs; and ensuring a safe and orderly environment (e.g., protecting time for learning).

Bambrick-Santoyo (2012) believes an important part of instructional leadership that is missing from most improvement efforts is coaching individual teachers to help them improve. When looking at what aspects of instructional leadership yielded the greatest results, May and Supovitz (2011) concurred with this belief as they found that instructional change was more likely when principals focused their work on helping specific teachers improve their practice rather than just instructional leadership in general. However, beyond the work of Bambrick-Santoyo (2012) in his school district,
the researchers did not specify how the principals should work with teachers to help them improve. This is typical in most research in instructional leadership. In fact, in her review of 129 journal articles on instructional leadership, Neumerski (2012) found that while researchers have identified certain instructional leadership activities that correlate with increased student achievement, the research has not readily identified the way in which leaders from effective schools carry out these activities. With the increased focus on accountability of leaders for improving student achievement with No Child Left Behind and other regulations, it is imperative that there is a clear understanding of how school leaders need to work with teachers to help them become experts in their instructional practice and increase student achievement (Nettles & Herrington, 2007).

**Expertise**

Throughout history, society has held people who have excelled in their fields, in everything from sports to the arts, with certain esteem. These experts were not just held in admiration, but people have studied them to determine how to replicate their success. According to Ericsson, Prietula, and Cokely (2007), an expert is someone who performs at a consistently superior level compared to colleagues in the same field, creates concrete results with successful outcomes, and can reproduce the expert performance in the lab. As the field of expertise developed, it became evident that there were similarities both in the characteristics that experts across domains exhibited as well as how that expertise was developed through a process described as “deliberate practice” (Ericsson, Krampe, & Tesche-Romer, 1993). Chi (2006) explicated seven similarities between experts regardless of the domain in which the experts performed:
1. Experts excel in generating the best solutions
2. Experts can detect and see features that novices cannot
3. Experts spend a relatively great deal of time analyzing a problem qualitatively
4. Experts have more accurate self-monitoring skills in terms of their ability to detect errors and the status of their own comprehension
5. Experts are more successful at choosing the appropriate strategies to use than novices
6. Experts are more opportunistic than novices; they make use of whatever sources of information are available while solving problems
7. Experts can retrieve relevant domain knowledge and strategies with minimal cognitive effort (pp 23-24)

These similarities correspond to current trends in the field of education and the characteristics of expert teachers as well (Berliner, 2004).

Experts Excel in Generating the Best Solutions

Experts in a field are better at taking information in a given domain and using it to come up with the best solution to a given situation (Chi, Feltovich, & Glaser, 1981). Experts are able to take in a large amount of information often present in problem situations and, based on their past experiences, focus on the information that is most important, which allows them to generate a solution to the problem based on the most pertinent information (Kuipers & Kassirere, 1984). Experts are able to chunk this information in meaningful pieces by detecting patterns quickly, which frees up mental processing capacity to look for a solution (Simon & Chase, 1973). Experts can then
apply the proper theories and information from a field to the situation that meets the pertinent information (Eysenck, Ellis, Hunt, & Johnson-Laird, 1991).

Similarly, expert teachers develop a “problem solving stance to their work” and are able to identify which problems are important to solve (Bond et al., 2000, p. 31). Expert teachers are better able to look at a situation and detect a pattern to what is going on. Berliner (2004) found that “expert teachers have fast and accurate pattern-recognition capabilities, whereas novices cannot always make sense of what they saw” (p. 201). For example, when Berliner (1986) showed a picture to both novice teachers and expert teachers, the novice teachers thought that the students in the picture were working on a science experiment since students were in a lab, whereas expert teachers rightly noted that the students were working on some sort of assignment since there were books present. However, expertise and pattern-recognition often do not carry over to new situations or environments as Bullough and Baughman (1995) found when a teacher changed schools and had a difficult time determining how to best serve a new student population.

This skill is at the heart of improvement efforts in schools as leaders often try to find simple solutions for complex problems instead of determining the best solution based on the school’s context (Frontier & Rickabaugh, 2014). Educators (both teachers and school leaders) must understand the underlying issue with a problem they face before arriving at a solution. School leaders and teachers are now being asked to generate the best instructional decisions that will allow all students to achieve success in school and that will leave no child behind (NCLB, 2002).
Experts Can Detect and See Features that Novices Cannot

Experts in a field have spent a considerable amount of time learning about aspects of the field and, therefore, have automatized tasks within the field, which allows them to focus on other features and aspects of situations they encounter, similar to an experienced driver who is able to attend to other things going on while driving (Sternberg & Frensch, 1992). Experts have built frames to use as they look at information, which allows them to take in information and categorize it based on schemas they have found when dealing with previous situations (Zeitz, 1997). For instance, Schmidt (1989) found that expert painters were able to pull out critical information from paintings and analyze the information in coherent ways to give reasons for the information based on their knowledge in the field.

Expert teachers develop automaticity of skills and routines that allows them to focus on the impact of their lessons with students in their classrooms and respond with appropriate feedback and adaptations of the lessons (Berliner, 2004; Bond et al., 2000). Leinhardt and Greeno (1986) found that experts used a wide variety of routines while instructing students. These experts were able to call on a number of different routines to improve learning and manage behavior in the classroom. The routines allowed the teachers to more fluidly move through a lesson and focus attention on student learning and how to adjust their lesson. In contrast, novice teachers often had to spend a large amount of time explaining steps the class would take to accomplish various tasks, taking up much needed instructional time. Thus, expert teachers are able to create an “optimal climate for learning” (Bond et al., 2000, p. 31) in their classrooms.
Within education, this skill is becoming significantly more important as educators are asked to work with increasingly diverse populations of students due to such things as educating students in the least restrictive environment, changing demographics, and increases in English language learners (Wagner et al., 2006). As such, teachers need to understand the differing needs of each of these populations and how they might present themselves in the classroom and school (Boykin & Noguera, 2011; Tomlinson & Imbeau, 2010). Zhao (2009) calls for “personalized learning [that] recognizes that every child has different talents and different needs, and educational institutions and educators should be responsive to individual children” (p. 186).

**Experts Spend a Relatively Great Deal of Time Analyzing a Problem Qualitatively**

When approaching a problem, experts spend time to understand the problem unlike novices who usually attempt to solve a problem before fully understanding the situation (Glaser & Chi, 1988). Experts look at the information and try to categorize it based on schemas they have created from solving previous problems (Voss & Post, 1988). This allows experts to understand problems at a much deeper level than novices (Chi, Feltovich, & Glaser, 1981).

Expert teachers also approach problems in “qualitatively different ways than do novices” (Berliner, 2004, p. 201). In schools, educators must understand what is worth monitoring in a school to see if students are successful, consistently monitor these important data over an extended period of time, and analyze how the actions of stakeholders are helping or inhibiting student learning (Kanold, 2011). When something is not working, educators must analyze the issue in depth rather than just try to choose a
strategy they think fits as the “most effective improvement models are those that have been adapted by staff to fit the situation in their schools and communities” (DuFour et al., 2006).

Expert teachers are able to represent problems at a deeper level than novices and have a “multidimensionally complex perception of classroom situations” (Bond et al., 2000, p. 31). For example, Hanninen (1985) found that expert gifted teachers were better able to better understand the needs of students on an individual level and develop a solution to the problem using the information the teacher discovered about the student. Novice teachers were more likely to choose a strategy without regard to the context or individual student.

**Experts Have More Accurate Self-Monitoring Skills**

Experts are better at self-monitoring their performance and making self-corrections compared to novices (Chi, Bossok, Lewis, & Reimann, 1987). Experts have a better understanding about what their performance should look like and what the outcome of a situation should be. Therefore, they can compare their actions to the ideal, especially since they have developed the automaticity that allows them to do so, and make corrections when necessary.

Expert teachers are also “more opportunistic and flexible in their teaching than are novices” (Berliner, 2004, p. 201). Expert teachers are better able to adapt a lesson based on a student comment or what happens during the course of a lesson than novice teachers (Borko & Livingston, 1989). Bambrick-Santoyo (2012) also finds that as leaders work with teachers in evaluating performance, expert teachers are better at evaluating their
performance and determining underlying issues that will help them improve their performance. Danielson (2007) believes that “it is through critical reflection that teachers are able to assess the effectiveness of their work and take steps to improve it” (p. 92). Reflection begins as novice teachers make generalized judgments on their lessons to experts who make “skilled reflection [that] is characterized by accuracy, specificity, and ability to use the analysis in future teaching” (p. 93) to improve their instructional practice. Consequently, expert teachers are more effective at creating hypotheses about ways they can improve and testing those hypotheses in the classroom (Bond et al., 2000).

**Experts are More Successful at Choosing the Appropriate Strategies**

Johnson (1988) found that experts use a deductive approach when analyzing information, combining information from the problem, the environment, and from their own background information. Experts then determine a schema that bests fits the situation at hand based on the information (Lesgold et al., 1988). Once they determine the proper schema that fits the situation, the expert can then choose the appropriate strategy that fits the situation.

Expert teachers are also “bring richer and more personal sources of information to bear on the problem they are trying to solve” (Berliner, 2004, p. 201). Frontier and Rickabaugh (2014) liken the choices educators face in choosing between the myriad of strategies available to them to improve student learning as choosing which lever to pull. According to them, “knowing which lever to pull has a tremendous impact on the results we achieve and the efficiency with which we achieve them” (p. 20). Expert teachers are able to more effectively identify and use context information to determine the best
response to a situation (Bond et al., 2000). Fairbanks et al. (2010) found that expert teachers:

- know when to apply “what” and “how” knowledge and when not to; they know why certain knowledge would be appropriate in one situation, but not in another;
- and they proactively look for multiple perspectives and pursue multiple possibilities because they recognize and respond to the complex needs of their students. (p. 167)

Expert teachers utilize such information as student cues, content matter, and prior knowledge at a deeper level than novice teachers (Fogarty, Wang, & Creek, 1983). They also consider more instructional goals when choosing that would fit the current situation when determining their actions. This skill is important as, unlike in other fields like medicine that only work with one person for a short period of time, teachers have to work with many students for extended periods of time during the day for many days in the year. Consequently, expert teachers are able to make decisions about what is best for their students based on the particular context in which they teach (Tsui, 2003).

**Experts are More Opportunistic than Novices**

Bereiter and Scardamalia (1993) state that expertise is a continuous process and not a final state of being. Experts must consistently look for ways to improve themselves rather than adapt their environment to their present skill levels as nonexperts often do. Since experts are able to self-monitor their performance, they are able to readily set new goals for improvement and know what is needed to achieve these new goals (Glaser, 1996).
As experts continually determine their new goals, they are able to anticipate what opportunities and experiences they will need to achieve those goals when they encode the goals in their long term memory. This allows experts to more readily identify the opportunities and experiences when they appear (Seifert, Patalano, Hammond, & Converse, 1997). Experts are able to determine what Bereiter and Scardamalia (1993) call the “promisingness” of a situation, which allows the expert to determine how successful a situation will be. Consequently, the ability to both identify opportunities and whether they will be successful allows an expert to be more opportunistic than nonexperts.

Expert teachers are also “more sensitive to the task demands and social situation when solving pedagogical problems” (Berliner, 2004, p. 201). Expert teachers are more adept at planning and adapting instruction to meet the needs of their students (Bond et al., 2000). Borko and Livingston (1989) found expert teachers were better able to use opportunities to advance their learning goals in their classrooms. The teachers in the study “were very skillful at keeping the lesson on track and accomplishing their objectives, while also allowing students’ questions and comments to be springboards for discussion” (p. 481). They also were able to spontaneously develop questions and problems to guide instruction.

According to Wagner et al. (2006), these skills will become more essential for teachers and school leaders since there is “no school for leaders that will teach them exactly how to make their district into one that will leave no child behind” (p. 11). Expert teachers will need to find opportunities to connect with all students and enable them to achieve their instructional goals. Even with these increased demands, expert
teachers show great passion to improve student learning and show great respect for students (Bond et al., 2000). These expert teachers work to continually adapt their instruction to meet their students’ needs. Working at the edge of one’s competence is not an easy task (Bereiter & Scardamalia, 1993). School leaders need to develop an environment in which teachers can speak about their practice so the leaders can determine teachers’ true needs and help teachers find their inner truths within “communities of mutual support” (Palmer, 2007, p. 166).

**Experts can Retrieve Information with Minimal Cognitive Effort**

Experts often have a deep knowledge and representation about the specific domain in which they operate. This knowledge is often developed after a long period of training and intense practice within the subject, estimated to be about 10,000 hours (Ericsson, Prietula, & Cokely, 2007; Simon & Chase, 1973). As the knowledge in the domain increases, learners are able to automatize certain skills, allowing them to focus on other details in their environment and on new skills they need to develop to improve. However, since such a long period of time is needed to gain expertise, the expertise people have does not usually carry over to other fields (Ericsson, Krampe, & Tesch-Romer, 1993). For example, an expert mechanic will not necessarily be an expert at cooking. Within education, a researcher had a similar finding in that teachers who consistently teach the same grade improve at a faster rate than teachers who switch grade levels, the latter often needing extra support and professional development to be successful in their new assignment (Ost, 2011).
In addition, the increased knowledge about a particular domain allows the experts to analyze problems and new situations in a different way than novices within the domain. Experts have a variety of experiences to which they can compare a new situation to see how they might use previous knowledge in dealing with the problem or new situation (Zeitz, 1997). Consequently, they often seek out information and represent problems at a deeper level than novices. These skills often allow experts to generate and choose the best strategies for dealing with these situations.

In education, expert teachers are also able to “perceive meaningful patterns in the domain in which they are an experienced” (Berliner, 2004, p. 201) that allows them to draw on corresponding knowledge. Shulman (1986) discusses three areas in which teachers must draw knowledge from in order to effectively teach: (1) rich content knowledge about a subject to understand it at a deep level; (2) pedagogical knowledge to understand a subject and how it should be taught; and, (3) curricular knowledge to know what materials would be best to use while teaching. Tomlinson and Imbeau (2010) believe that teachers must adapt the content, process, product and affect as teachers answer the question, “‘what does this student need at this moment in order to be able to progress with this key content, and what do I do to make it happen?’” (p. 14). As teachers build their repertoire of strategies, they can quickly draw on these strategies to work with students as they proactively identify their needs and changes in the classroom environment (Bond et al., 2000).
Deliberate Practice

Researchers have also determined similarities of how people gain expertise across different fields. It takes about 10,000 hours, or ten years, of practice to become an expert in a particular field (Ericsson, Krampe, & Tesch-Romer, 1993). However, it is not just any practice that makes an expert—people need to practice activities in a particular way to gain expertise in a given field. Sternberg, Grigorenko, and Ferrari (2002) found that people need to undertake deliberate practice that consists of practice at an appropriate (but increasing) level of difficulty, includes feedback that allows people to improve performance, allows for repetition of actions to achieve mastery, and allows people to correct errors committed in previous tasks.

Appropriate Level of Difficulty

A major difference between experts and non-experts is that experts continually work at the edge of their capability, trying to increase their knowledge and skill set, where as non-experts try to conform their work so it is aligned with what they are able to do (Bereiter & Scardamalia, 1993). In order to be effective, people seeking to become an expert must have increasingly challenging, yet attainable, goals that will allow them to master previously learned skills while continuing to learn new skills in the process (Ericsson, 1996). Often, beginners in a field need to have a trainer help sequence tasks to ensure they are at the appropriate level of difficulty and are progressing at the proper level (i.e., increasingly difficult, yet attainable). Furthermore, it is important that learners seek to deeply understand new problems and situations they encounter rather than try to
match new experiences to something they already know and respond in way they have done before (Bereiter & Scardamalia, 1993).

Similarly, Danielson (2007) believes supports must be structured for teachers at different levels and that novice teachers need help from school leaders to discern what steps they should take to improve their instructional practice. Teachers are expected to perform at a high level from their first day on the job unlike other fields where extensive internships take place before a person practices alone (e.g., doctors, plumbers). As a result, school leaders should give specific guidance and training on how teachers can improve in incremental steps as they progress towards expertise in the profession (Bambrick-Santoyo, 2012).

**Feedback on Performance**

When practicing a skill, people seeking to become experts must obtain feedback on their performance that will allow them to make changes and improve (Ericsson, Krampe, & Tesch-Romer, 1993). Initially, learners need a separate source to give feedback on the task, often an expert within the field or training publication, as what happens frequently in chess (Charness, Krampe, & Mayr, 1996). However, people begin to automatize certain aspects of their performance as they increase in skill level, which frees up mental processing capacity. This freed capacity allows people to begin to monitor their own performance (Glaser, 1996). Consequently, the learning is often scaffolded so that the leaner receives a lot of support in the beginning and then takes over their own training as they progress.
As people progress in skill mastery, they are also able to shift from focusing on the mechanics of performing the task (e.g., how to hit a serve in tennis) to performance goals (e.g., how to strategically hit the serve to gain a point) (Zimmerman, 2002). With experience, people form a conception of what the ideal performance of the task would look like, which allows them to self-reflect and judge their performance against that image. Consequently, there is a gradual release of responsibility for the teacher. This feedback on performance goes somewhat beyond cognitive coaching, which has shown success instructing teachers to become self-reflective by helping teachers analyze their own performance, in that deliberate practice recognizes that teachers need more support in the beginning stages of their career to identify how to improve their performance (Batt, 2010; Garmston, Linder, & Whitaker, 1993)

Teacher evaluation systems should have these same components to guide teachers in their improvement. Darling-Hammond (2012) recommends that school leaders develop evaluation systems that have “multiple sources of data that reflect a teacher’s instructional practice, and they provide timely and meaningful feedback to the teacher” using standards-based evaluations with multiple observations over the course of a year (p. 16). Feedback should give teachers specific, action-oriented suggestions for how to take the next small step toward expertise since “effective feedback makes big shifts in teacher practice by focusing on small changes in quick succession” (Bambrick-Santoyo, 2012, p. 75). Teachers also need scaffolded support based on their level of expertise, with beginning teachers needing more help than experts (Bronkhorst, Meijer, Koster, & Vermunt, 2011). Beginning teachers tend to focus only on their lessons or planning
activities and school leaders need to help them learn how to self reflect on the effectiveness of their own teaching within the specific context in their classroom.

**Allows for Repetition**

Deliberate practice also requires that a person is able to repeat the performance of a task to gain mastery and to try new skills. Bryan and Harter (1899) found that telegraph operators needed time to master skills before they were ready to acquire new ones. Through repetition, the learner was able to automatize some of their actions, which freed up mental processing to learn more tasks. While this step is necessary, it can also be a danger for people since they can become complacent with their current level of performance and not seek to progress to the next level (Bereiter & Scardamalia, 1993). Therefore, the practice must be to both master existing skills and to practice new skills at the next appropriate level (Ericsson, Prietula, & Cokely, 2007).

Within education, there is an increased call for sustained, job-embedded professional development with teachers that allows teachers to fully develop skills and practice their implementation within their classroom, rather than quickly move on to a new topic (Croft, Coggshall, Dolan, Powers, & Killion, 2010). Professional development that had “multiple activities to provide follow-up reinforcement of learning, assistance with implementation, and support for teachers from mentors and colleagues” were common components in a meta-analysis of 16 studies of math and science professional development activities that “reported significant effects of teacher development on improving student achievement” (Council of Chief State School Officers, 2009, p. 27) after a median contact time with the teachers of 91 hours, typically over a period of six
months or more. In their implementation of a reading program in a district, Fisher, Frey, and Nelson (2012) found that “it took several years of professional development with follow-up coaching and team planning to realize increasing success” (p. 561) and fidelity of implementation in the classroom.

**Correction of Errors**

Experts differ from non-experts in that they learn from their mistakes and try to correct their performance (Gardner, 2002). If people practice the incorrect way of doing something, then they will not improve their skill set to become an expert. It is important for people to be willing to learn from their mistakes rather than to rely on talent they think they may have (Starkes, Deakin, Allard, Hodges, & Hays, 1996). Part of this willingness is for people to not let their performance become so automatized that they do not allow for adjustments in their performance to fit the current situation (Ericsson, 2002). The fact that deliberate practice takes a long time and involves people practicing at the edge of their ability, often facing failure, people undertaking deliberate practice are in need of support and encouragement in an environment that allows risk-taking (Gardner, 2002).

Slavin, Cheung, Holmes, Madden, and Chamberlain (2013) discuss that school leaders often use student data to analyze whether their instructional practices are effectively improving student achievement. In their study of districts implementing data-based models, they found that “helping school leaders understand student data is helpful but in itself does not produce educationally important gains in achievement. Schools must actually take action to change teaching and learning” (p. 390). Consequently,
schools and districts need to use data in order to identify areas on which to focus for professional development and monitor progress of its implementation (Bambrick-Santoyo, 2012; Fullan, 2010).

**Connection to Instructional Leadership**

The components of deliberate practice appear to correspond to the activities found in successful instructional leadership: creating clear goals and expectations and recognizing their attainment; providing resources to meet the goals; evaluating the curriculum, teaching, and student learning outcomes; providing for and participating in teacher professional development about how to meet students’ needs; and ensuring a safe and orderly environment (Robinson, Lloyd, & Rowe, 2008; Shatzer et al., 2013). The setting of clear goals and providing the resources and professional development teachers need to meet these clear goals recognizes the importance of setting an ideal level of performance and helping teachers develop from where their current level of performance is to this ideal level (appropriate level of difficulty) (Danielson, 2007). The evaluation of teaching and student outcomes against these goals would both allow for the giving of informational feedback and provide an opportunity to adapt strategies when student learning does not meet the goals set by the school (feedback on performance and correction of errors).

Furthermore, setting a safe and orderly environment would ensure that teachers feel comfortable taking risks and remain focused on a select number of improvement efforts, allowing them to work on a few select skills, rather than having to continually respond in new ways because of an unstable environment (allows for repetition).
Current leadership theory recognizes the importance of focusing improvement efforts on only a few select items so that the organization can learn to excel at them. Collins (2001) uses the hedgehog concept to show the importance of an organization only focusing on a few items and doing them well. Schmoker (2011) states that school leaders should focus on only a specific, small set of improvement efforts until the school excels at them, which he believes are a “coherent curriculum (what we teach); sound lessons (how we teach); and far more purposeful reading and writing in every discipline” (p. 2).

**Identifying Expert Teachers**

Teaching is often considered a difficult field to study within the context of expertise. Unlike sports and other fields in which there is a clear way to determine who is an expert, the definition of an expert teacher can differ based largely on the context in which a person finds themselves teaching (e.g., grade level, urban/rural environment, etc.) (Berliner, 2001). Furthermore, researchers “do not know how to assess teacher quality reliably” (Bryk et al., 2010, p. 201). Often, student achievement data is used, but that is not measuring teacher performance directly from people as is done in other fields. In addition, some factors that affect student achievement remain outside of teachers’ control. Bryk et al. found that “higher levels of stagnation observed in nonintegrated schools can be largely accounted for in terms of lower levels of community social capital and higher density of abuse and neglect in these communities” (p. 186) when looking at reading and math scores in a longitudinal study.

The National Board for Professional Teaching Standards sought to identify what characteristics distinguish expert teachers from other teachers (Bond et al., 2000).
Researchers developed thirteen prototypical features from expertise research on which national board certified teachers (NBCT) “obtained higher mean scores obtained higher mean scores. In 11 of the 13 comparisons, the differences were highly statistically significant” (p. 139) in studies done comparing national board certified teacher and teachers without that certification:

1. Experienced expert teachers have deeper representations about teaching and learning.
2. Experienced expert teachers adopt a problem solving stance to their work.
3. Experienced expert teachers can anticipate, plan, and improvise as required by the situation.
4. Experienced expert teachers are better decision makers and can identify what decisions are important and which are less important decisions.
5. Experienced expert teachers are proficient at creating an optimal classroom climate for learning.
6. Experienced expert teachers have a multidimensionally complex perception of classroom situations.
7. Experienced expert teachers are more context-dependent and have high situation cognition.
8. Experienced expert teachers employ flexible and diverse strategies to solve instructional problems.
9. Experienced expert teachers are more adept at monitoring student problems, level of understanding, and progress, and they provide much relevant, useful feedback.

10. Experienced expert teachers are more adept at developing and testing hypotheses about learning difficulties or instructional strategies.

11. Experienced expert teachers are more automatic.

12. Experienced expert teachers have high respect for students.

13. Experienced expert teachers are passionate about teaching and learning. (pp. 469-470)

Expert teachers with the above characteristics are more effective at increasing student achievement, allowing them to understand material on a deeper level, and increasing students’ motivation and self-efficacy (Berliner, 2001). However, there has been mixed research on whether teachers with national board certification have a positive effect on student standardized test scores compared with non-national board certified teachers (Harris & Sass, 2008).

Since not all teachers participate in national board certification, researchers have examined other ways to identify expert teachers. Palmer et al. (2005) reviewed 27 research studies involving teacher expertise, examining how researchers identified expert teachers, and developed a multi-tiered process to identify expert teachers. First, teachers should have “(a) three to five years of experience in a specific teaching content area and with a particular population of students, and (b) teacher knowledge as reflected in relevant certification and degrees that correspond to the field in which these teachers are
currently teaching” (p. 23). Then, they should have performance indicators including “recognition as an exemplary teacher by (a) multiple constituencies, for example fellow teachers, researchers, administrators… and (b) should be confirmed with documented evidence of teacher impact on student performance” (p. 23). Consequently, this study will utilize peer nomination as part of the process for identifying teachers at various stages of expertise.

**Stages of Expertise Development in Teachers**

As in other fields, teachers advance through several stages in order to become an expert. Berliner (1994) took the work of Dreyfus and Dreyfus (1986), which determined stages through which novices move on their way to developing expertise, and related these stages to teachers. First, teachers begin at the novice stage in which they adhere to any rules they have learned regardless of the context. Second, teachers enter the advanced-beginner stage as they begin to determine when to follow or ignore rules based on the context of the situation. Experiences the teachers have allow them to learn when to utilize or adapt their knowledge base, but they still cannot determine which information is really important for them to use to make decisions.

Third, in the competent stage that occurs in approximately the third year of teaching, teachers begin to consciously plan and set priorities. They also start to discern what information they need to consider when considering their actions (e.g., teachers determine which student behaviors they need to correct and which ones they need to correct). Fourth, the teacher moves in to the proficient stage when they make their decisions fluidly as they have gained experience that has taught them how to act in
various situations. Lastly, expert teachers act fluidly, but appear not to need to consciously think about their actions. It is estimated that it takes at least five to seven years of teaching in order to become a teacher and their expertise is often restricted to a particular subject area or context of their school (Berliner, 2004; Palmer et al., 2005).

Teachers at these various stages often need different kinds of support (Danielson, 2007). School leaders often need to inform novices about the most important areas in that need improvement and need to give them very explicit directions for how to improve or let them observe other teachers (Marzano, 2010). As teachers move through the stages of expertise, they become more self-regulatory and are able to apply current knowledge or know where to seek out information on how to improve (Bambrick-Santoyo, 2012; Zimmerman, 2002).

This move can be characterized as moving from a survival orientation in which teachers take directions and do not have the capacity yet to learn from their situation, to a reproduction orientation in which teachers begin to identify problems and seek strategies they can readily implement, to a meaning orientation in which teachers begin to discern information from several sources and analyze the rationale of suggested strategies as well as looking at their effects on student achievement (Bronkhorst et al., 2011; Oosterheer & Vermunt, 2001). With the shifting demands of education, developing a meaning orientation in teachers becomes paramount as teachers face shifting demographics and more advanced expectations for these students that require them to understand their practice at a deeper level than often once required. Recognizing these changes in
teachers’ development should have implications on how school leaders approach professional development of teachers.

**Teacher Professional Development**

The professional development of teachers has gone through several major shifts in the recent past (Kersten & Israel, 2005). The space race of the 1950’s caused national leaders to push for reforms to improve education. The result was the intensifying of the factory model of education in which teachers where expected to teach the same thing. Textbook and reading series were mandated within the educational system. There was another shift in the 1970’s and 1980’s in which leaders mandated the way that teachers should teach with such things as the Madeleine Hunter lesson planning model. These two eras focused almost entirely on what the teacher was doing in the classroom to determine whether or not the teacher was effective.

In the last few decades, there has been another shift with the advances of medical technology that has allowed researchers to see aspects of learning that were previously unavailable to them (Erlauer, 2003). Brain research has given insight to how the people learn effectively in different situations. This research shifted the attention from focusing entirely on how teachers are teaching to how students are learning. As such, there was a change in how school leaders approached professional development of teachers.

Avalos (2011) reviewed ten years of professional development literature and found several themes for current professional development practices that resulted from this change. First, it is recognized that professional development of teachers is a complex process because of the intersection of policies, culture, and other social factors. As such,
there is an identified movement for professional development to be more prolonged and
intensive to make lasting changes in all of these areas. Furthermore, school leaders are
beginning to find ways to remove the isolation that teachers often face to create a culture
in which teachers learn together. External support is especially important for new
teachers. Quinn and Andrews (2004) found that new teachers often feel best supported
when their principal shows support for their development.

Reeves (2010) states that professional development must focus on student
learning, analyze the decision-making of the adults, and focus on the practices of the
people, not programs. Similarly, Darling-Hammond, Wei, and Adamson (2010) report
that while it is known that “effective professional development is intensive, ongoing, and
connected to practice; focuses on teaching and learning of specific academic content; is
connected to other school initiatives; and builds strong working relationships among
teachers,” (p. 5) still 90% of teachers report participating in short, sporadic professional
development.

These findings about effective professional development appear to correspond to
the components of deliberate practice in teaching. Bronkhorst et al. (2011) state that
deliberate practice in teaching is “‘deliberating teaching to enhance learning’” (p. 1127).
In looking at what constitutes deliberate practice in teaching, teachers identified planning
and preparing for instructional activities and evaluating student progress among the
activities that best reflect the meaning of deliberate practice (Dunn & Shriner, 1999).
Marzano (2010) extends this definition and believes “deliberate practice, when applied to
teaching, has four major components”: 1) “a common language of instruction,” 2) “a
focus on specific strategies,” 3) “tracking teacher progress” until their use of strategies has a positive effect on student achievement, and 4) “opportunities to observe and discuss expertise” (pp. 82-83). These views of deliberate practice in teaching correspond with the fact that the development of expertise is an extended process that requires a large amount of deliberate work. Teachers have the responsibility to be involved in a career-long quest to improve practice (Danielson, 2012).

Note: Based on Darling-Hammond, Wei, & Adamson, 2010; Ericsson, Krampe, & Tesch-Romer, 1993; Marzano, 2010; Sternberg, Grigorenko, & Ferrari, 2002, p. 71; Robinson, Lloyd, & Rowe, 2008; Shatzer, Caldarella, Hallam, & Brown, 2013.

Figure 2. Proposed Ideation of the Relationship between Components of Deliberate Practice, Effective Instructional Leadership, and Effective Professional Development
The field of education has undergone major shifts in recent years. With the focus on such things as least restrictive environment, shifting demographics, the advances in teaching English language learners, and the infusion of brain research; teachers are being asked to deal with a profound shift in the way they teach. Furthermore, the job market for students in schools today has shifted from one in which “two generations ago students could leave formal education knowing most of what they need to succeed as adults” (Frontier & Rickabaugh, 2014, p. 5) to one today where that is no longer possible with the continual advances in technology and shifting demands in the economy. With these changes, the professional development of teachers has shifted from focusing on how teachers teach to how all students as individuals best learn. To successfully meet these new demands, educational leaders will need to change the current rhetoric of looking for quick fixes with surface level changes to a conversation about how the sustained professional development of teachers is needed to increase achievement for all students in our schools.

School leaders, particularly principals, have been called to lead the educational community through this change (Bryk et al., 2010). Instructional leadership provided by principals has been shown to be the “key levers” (p. 61) to help teachers improve and help them through this profound change in education. Certain activities have been shown through research to help improve student achievement including creating clear goals and expectations and recognizing their attainment; providing resources to meet the goals; evaluating the curriculum, teaching, and student learning outcomes; providing for and
participating in teacher professional development about how to meet students’ needs; and ensuring a safe and orderly environment (Robinson, Lloyd, & Rowe, 2008; Shatzer et al., 2013). The professional development activities associated with these efforts are most effective if they are intensive efforts linked directly to the teachers’ practice (Darling-Hammond, Wei, and Adamson, 2010). However, research has often focused on what activities school leaders can do for instructional leadership and not how to do them (Bambrick-Santoyo, 2012; Neumerski, 2012).

The field of expertise in psychology offers a possible explanation for the underlying methods school leaders can use to bring about change in their schools by developing teacher expertise. Specifically, the notion of deliberate practice (appropriate level of difficulty, informative feedback, correction of errors, and repetition) may be one way some professional development activities have led to increased student achievement levels. The focus in instructional leadership activities on student achievement, planning, feedback, and professional development or professional learning communities appear to correspond with the tenants of deliberate practice. In an age where there is high stakes in accountability for student achievement, determining the best way school leaders can help teachers become experts is paramount to the success of the school leader and schools.
CHAPTER III
RESEARCH DESIGN

Introduction

The research study will utilize a qualitative case study to gather data to answer the following research questions:

1. How have school leaders used deliberate practice as a framework in conversations about professional growth to enable teachers in high poverty schools with a high percentage of students identified as minorities to improve their instructional performance?

2. How did school leaders provide an environment for teachers to implement deliberate practice to aid in the development of expertise in their instructional performance within the school?

3. What differences, if any, are there between the ways that school leaders differentiate support within the framework of deliberate practice for teachers at different levels of expertise within their school building?

4. What are the implications for school leaders as they try to enhance instructional practices through professional growth activities using deliberate practice in order to improve student achievement in their schools?
**Case Study Methodology**

A qualitative case study was chosen as being most appropriate to gather the data needed to answer the research questions. According to Mabry (2009), purely quantitative studies seek to understand the broader population though the use of random sampling and reducing data to variables used in statistical analysis to find patterns that can be applied to the larger population without regard to context. Qualitative case studies, on the other hand, seek to understand specific instances of complex phenomena within a given context to provide a generalizable explanation. This study did not seek to generalize about how all teachers grow professionally within their schools. Rather, the study examined how teachers in specific contexts (schools that have successfully raised student achievement) use various actions to improve their practice and, thus, student achievement.

Thomas (2011b) states that a case study must have two components: the subject of the case and the object or analytical/theoretical framework. The subject of the case needs to be a bounded phenomenon that is an example of what the researcher desires to study (Merriam, 2009). The subject for this case study was two public elementary schools in the northern region of the state of Illinois that have successfully raised student achievement since the passage of NCLB (the approximately ten years from the passage of NCLB to the study corresponds with the amount of time needed to develop expertise under the framework of deliberate practice), which will serve as the unit of analysis. Since teachers are the variable under the school’s leader control that is shown to have the greatest effect size on student achievement (Hattie, 2003), the researcher used teachers as
the embedded unit of analysis. The object of the study looks specifically at how school leaders enable teachers to grow professionally to help increase student achievement.

The term “school leader” was purposively left in general terms until the researcher discussed with teachers about who leads the professional growth of teachers within the school. This process was done according to Wells, Hirshberg, Lipton, and Oakes (1995), who state that cases are “socially constructed and co-constructed between the researcher and the respondent. In this way, cases are not really defined or bounded until data collection - and even analysis - is finished” (p. 21).

Case Selection

In selecting the subject/case, context is important as “cases are shaped by their many contexts- historical, social, political, ideological, organizational, cultural, linguistic, philosophical, and so on. “Relationships between contexts and cases (and among contexts) are interdependent and reciprocal” (Mabry, 2009, p. 217). This study utilized public schools as part of the context for the sites in which the researcher will analyze teachers because this category of schools is seen as having the most barriers to school reform. Public schools often face resistance from teacher unions requiring equal treatment, numerous reform efforts vying for the staff’s attention, turnover of school leadership, and the difficult nature of staff realignment to meet reform goals due to contractual obligations and politics (Fullan, 2010; Hess, 2013; McDermott, 2000). If certain public schools can increase student achievement with these barriers, then other school systems (e.g., charter, private, and parochial) which typically have less barriers may be able to implement the findings within their systems with greater ease. Therefore,
the case serves as what Flyvbjerg (2006) describes as a “critical case” since it has “strategic importance in relation to the general problem” (p. 229).

The specific context within the public schools was chosen based on the specific goals set by No Child Left Behind (2002) to decrease the achievement gap that exists for high poverty and minority students. Consequently, schools were selected that have a context that includes both a high minority population and a high free and reduced lunch count. Northern Illinois University (2014), with support from the Illinois State Board of Education, developed the Illinois Honor Roll that “celebrates the accomplishments of exemplary Illinois public schools.” One of the awards is the Spotlight Award that recognizes schools in which at least 50% of the students are designated as low income and must “make Adequately Yearly Progress (AYP) during the award year and two prior years,” which means that 85% of students meet or exceed standards on state standardized tests. A second award, the Academic Improvement Award, recognizes schools that achieve at least a 7.5% improvement in student performance on standardized tests over the previous year. Schools that met the Spotlight Award and/or the Academic Improvement Award were considered for this study. The researcher used awards given in 2011 and look to ensure that schools either maintained or continued to increase student achievement after that time.

A case study can be bound by using the time period in which growth occurs in some aspect of the case or context (Thomas, 2011a). This case study was bound by the time period before and during the study in which teachers took specific actions to raise student achievement. The case focuses on the actions of the school leaders and how these
leaders facilitated improvement in the instructional practice of the teachers during this specific time period (2010-2014).

Since there has not been consistent success overall with increasing student achievement and since there is not agreement on a definitive model or theory to increase the capacity of teachers to do so, the object of the study is to analyze if there are underlying theories or concepts that are similar in successful reform measures in terms of school leaders enabling teachers’ professional growth. This study tested specifically if the framework of deliberate practice can be extended to the field of teacher professional growth. The researcher sought analytical generalization to a specific theory, which would be strengthened through multiple cases that have variation (Firestone, 1993). Consequently, the study utilized multiple cases with maximum variation between cases so that the cases are different on a particular dimension (i.e., grade level of students served) (Flyvbjerg, 2006). The study utilized a sequential nested sampling technique that involved choosing a sample of schools and then choosing a subset from that sample using a combination of quantitative and then qualitative data (Collins, Onwuegbuzie, & Jia, 2007).

The first sample of schools was chosen using extreme cases, cases that represent an especially good at a certain phenomenon- in this case raising student achievement in schools with high poverty and high minority populations (Flyvberg, 2006). The researcher utilized quantitative data, student test scores as evidenced by the school winning one or both of the Illinois Honor Roll awards, to determine the first sample of schools. The researcher also ensured the schools have at least 50% of students
considered low income and at least 50% of students who would be designated as ethnic minorities. In order to give a chance for the researcher to use an expert teacher, the researcher only included schools that employed teachers with national board certified teachers as listed on their database (National Board for Professional Teaching Standards, 2014).

For this case, the variation between the cases was in the populations of students the schools serve. By analyzing cases that produced similar results in different environments, the researcher will show “how and why the exemplary outcomes might have occurred and hoping for literal (or direct) replications of these conditions from case to case” (Yin, 2009, p. 59). Consequently, the case study was instrumental in that it sought to find an underlying theory or framework for why teachers within the school were successful in raising student achievement by improving their practice (Stake, 1995). In this study, the purpose was to find possible connections to the theory of deliberate practice to achieve expertise to determine if its scope extends in to the field of how school leaders direct teacher professional development (George & Benet, 2005).

**Procedures for Collecting Data**

After the researcher obtained permission from the local superintendent (see Appendix A) and consent of local participants (see Appendices B- E), the research study utilized several sources of data including principal interviews, surveys of all teachers in the building, interviews with select teachers, and interviews with selected teachers in which they think aloud about their lesson planning.
Public schools in Illinois with students in preschool through 8th grade

Schools that won the Illinois Spotlight and/or the Academic Improvement Award in 2011 and maintained high scores

Schools with at least 50% of students receiving free and reduced lunch and with at least a 50% of students designated as ethnic minorities

Schools with National Board Certified teachers

2 Schools
Figure 3. Progression of the Case Selection and Data Collection for the Research Study

Principal Interviews

First, the researcher interviewed principals of the selected schools. Interviews are considered the “essential source of case study information” (Yin, 2009, p. 106). The research study used interviews several times throughout the study. The researcher interviewed the principal of each of the schools to learn about the case and its context and to gain information to answer the research questions. The principal also was an informant to learn about the case and to help the researcher identify who to use in the research study and where to look for additional information about the study (Stake,
1995). The researcher used a semi-structured interview structure (see Appendix F) in all of the interviews in which the researcher guides the interview with an interview guide, but flexibility was allowed with the order of questions and the researcher may ask probes or follow-up questions (Merriam, 2009).

**Observation**

Second, the research study also gathered data from making direct observations of a sample of activities that principals indicated are important for teachers’ professional growth. After receiving oral consent (see Appendix G), the research took open jottings during the observation of activities to document physical space, actors, activities, events, goals, and interactions (Emerson, Fretz & Shaw, 1995). The researcher documented the actions, conversations, and other sensory details during these activities and produced descriptive field notes needed for data analysis. The researcher utilized a semi-structured protocol (see Appendix H) to facilitate the collection of data during the observations (Merriam, 2009).

**Teacher Survey (Selection of Sub-Sample of Teachers)**

Third, the research study included a survey of all of the teachers within the schools. A survey allows “the collection of data from a large number of people” (Mertens, 2010, p. 173). The researcher invited participants (see Appendix I) to complete the survey through an online survey program (Survey Monkey), to help maintain confidentiality so that participants’ responses could not be seen by other participants as they completed the survey or returned it to the researcher. The principal interview (see Appendix F) and teacher survey (see Appendix J) asked respondents to give examples of
teachers who fall into categories of skill development towards expertise as outlined by Berliner (2004). The categories included beginner teachers who are new to the profession, intermediate level teachers who have approximately three to four years of teaching, and expert teachers who have approximately five or more years of teaching experience (Palmer et al., 2005). The survey asked specifically for nominations of teachers who are successfully continuing their professional growth, since research has shown that people involved in skill development can remain fixed at a certain level of skill attainment if he/she does not consciously make efforts to continually improve their performance (Ericsson, 1998).

While there were limitations with using recommendations and years of experience in identifying the levels of teachers, no other way to identify teachers currently exists (Tsui, 2003). The only exception is that teachers who have received National Board Certification (NBC) have been shown to rate statistically significantly higher on identified characteristics that identify expert teachers that correspond with the characteristics of teacher expertise in the review of literature (Bond et al., 2000). Furthermore, the students of teachers with NBC were shown to learn content at a deeper level than teachers without NBC. The researcher purposefully chose schools with NBC teachers within them for the study and asked for their participation in the interview process.

**Sub-Sample Teacher Interviews**

Fourth, the researcher interviewed six teachers in site 1 and five teachers in site 2 who were nominated by both the principal and their peer teachers and/or teachers who
were nationally board certified. If more than two teachers were identified per category, the researcher strived to achieve maximum variation (e.g., grade level, subject, etc.) between those selected within each level of expertise. After identifying teachers that fell in to these categories and inviting them to participate in the study (see Appendix K), the researcher interviewed the identified teachers to go in to more detail about how school leaders help them grow professionally and what obstacles they face when doing so to analyze similarities and differences in how professional development is approached by teachers in different phases of expertise skill attainment and how school leaders can support them. The researcher once again utilized a semi-structured format during these interviews (see Appendix L).

**Sub-Sample Teacher Lesson Plan Interviews**

Fifth, the researcher conducted a second interview with the sub-sample of teachers about how they approach lesson planning. Several studies on teacher expertise have noted differences in the ways that teachers plan for their lessons (Tsui, 2003; Westerman, 1991). However, the studies looked at teachers’ cognitive process in developing lesson plans and how it has changed, including how/whether there was help from school leaders. For this study, the researcher looked more specifically at whether/how the teachers adapted their teaching practices within their planning and what they look at to determine whether or not that is necessary. The researcher used the interviews to “learn about what you cannot see and to explore alternative explanations for what you do see” (Peshkin, 1999, p. 69). The researcher asked the teacher to consider a particular lesson they taught the day of the interview and then asked the teacher to think...
aloud about what they planned to do for the next day and the reason for their plan. The researcher utilized a semi-structured format (see Appendix M).

![Figure 4](image)

**Figure 4. Progression of Steps in the Data Collection Process**

**Validity and Reliability**

Validity within a research study ensures that “researchers’ claims about knowledge correspond to the reality (or the research participant’s construction of reality) being studied” (Cho & Trent, 2006, p. 319). Merriam (2009) further explains that
external validity is providing enough detail so readers can determine how the information can transfer to different situations. Reliability is showing how the study can be repeated with similar results (Yin, 2009). Merriam (2009) provides eight strategies to promote the validity and reliability of a research study: “triangulation; member checks; adequate engagement in data collection; researcher’s position or reflexivity; peer examination/review; audit trail; rich, thick description; and maximum variation” (p. 229). The research study utilized these strategies.

The triangulation of data sources from the interviews, think alouds, and surveys enhanced construct validity as it provides “multiple measures of the same phenomenon” (Yin, 2009, pp. 116-117). Member checks were utilized in the study in which the researcher will present findings to participants in the study to ensure the findings from data have been interpreted correctly (Stake, 1995). The researcher remained engaged with each case until the data collected showed little new knowledge that was not collected before. The researcher maintained a journal throughout the research project to document his changing beliefs and thoughts in addition to listing the biases and limitations within the research study. The researcher remained aware that his role as a regional director who supervises principals of elementary schools may influence his analysis of the data. In addition, the researcher was aware that he has a bias towards a collaborative approach versus a bureaucratic approach of leadership. He used the research journal to monitor these biases and triangulation of data to support his findings.

The data and findings were presented to the researcher’s dissertation committee for discussion and analysis. The researcher created a case study database that will allow
for audit and review of the data collected during the course of the project (Yin, 2009). The researcher endeavored to use “rich, ‘thick’ description” (Merriam, 2009, p. 43) in the research report to ensure readers could identify the source of the findings and decide what they could generalize to their own situations. Lastly, variation was sought between the two schools in terms of how they prepared teachers to increase student achievement within their schools and the populations of students they serve.

**Data Analysis**

The researcher coded these data starting with a list of codes that came “from the conceptual framework, list of research questions, hypotheses, problem areas, and/or key variables that the research brings to the study” (Miles & Huberman, 1994, p. 58). The codes included the main components of deliberate practice: (1) appropriate level, (2) feedback on performance, (3) opportunities for repetition, and (4) correction of errors (see Figure 5).

“Appropriate level” refers to the fact that “the aspiring expert performer must constantly keep working toward the next higher level of performance” (Ericsson 2002, p. 32). Therefore, the researcher looked for statements in which respondents spoke about how they received help in learning more about a topic to raise their instructional practices to the next higher level of performance. “Feedback on performance” means that “the trainees’ selected actions can be evaluated by comparisons against gold standards, such as the best possible action or the action taken by expert performers with the highest performance index” (Ericsson, Roring, & Nandagopal, 2007, p. 26). Thus, the researcher
looked for how respondents received feedback on their performance and how leaders compared their performance against some standard or other teachers.

“Opportunities for repetition” mean that the person has time to practice the skills to achieve mastery as they continue to improve their performance (Ericsson, Prietula, & Cokely, 2007). One of the dangers of repetition is that trainees can become complacent at their current level of performance (Bereiter & Scardamalia, 1993). Consequently, the researcher looked for how school leaders provided an environment in which teachers could practice their instructional strategies and whether/how they had to address the issue of teachers becoming complacent. “Correction of error” involves aspiring experts looking at their performance to see how they can learn from their mistakes in a safe, encouraging environment that allows risk-taking (Gardner, 2002). As a result, the researcher looked for ways that the leader established an environment in which teachers could feel safe and examined the transcripts for how teachers identified where they needed to improve.

The researcher remained open to developing new codes that could have altered the proposition or provided additional insights to the study (e.g., the researcher found that teachers created a deliberate practice environment with their students as well). Data were triangulated between sources of data and the methods used to collect the data to “confirm emerging findings” (Merriam, 2009, p. 229). The researcher used Yin’s (2009) explanation building as the basis for analysis of data to make an analytic generalization back to the theory of deliberate practice. Using this analytical technique, the researcher compared findings of the first case against the original theory. The researcher determined
if any revisions needed to be made and then compared the revised proposition to the second case in the study.

Figure 5. Triangulation of data looking at elements of deliberate practice

Ethical Considerations

The subject of the research study involved teacher professional development. While the case looks at exemplars, the new focus on teacher and principal evaluation and the adoption of the new evaluation framework created some possible risks for the teachers involved in the study as they are talking about the ways they approach their professional growth. During the initial process, the researcher explained to the participants the inherent risks involved in the project and required all willing participants to sign an informed consent form. In addition, participants were told that their answers would be kept confidential and no personally identifying information would be presented.
in the study. All information and data was kept in a secure location during the data collection and analysis process.

**Limitations**

The following are considered potential limitations for the study:

1. The study used standardized test scores as indicators of student achievement. This is a simplistic measure of student achievement that does not take into account many other facets of learning as it is currently designed, but is what is currently being required through national legislation and policy.

2. The selection of teachers who represent the various stages of skill development was chosen through peer nomination in the absence of national board certification. This is an unscientific way of selecting the teachers, but the only consistent measure found to relate with the levels of skill development has been national board certification as an indicator of achieving the status of expert teacher (Bond, Smith, Baker, & Hattie, 2000). No other research has given a method for identifying the other levels of expertise. The researcher recognizes that a teacher does not need to have national board certification to be an expert teacher as some people are unable to seek the certification due to cost, time, or other factors. The teacher nomination process sought to ensure other teachers could be nominated as expert teachers.

3. The research was conducted in two public elementary schools since these schools often face the most barriers to change. This may reduce the generalizability of the study to other types of schools.
CHAPTER IV
PRESENTATION OF THE DATA

Introduction

The purpose of this dissertation was to perform an in depth study of two schools with over 50% of the student population identified as ethnic minorities and 50% or more of the population identified as being low income that have successfully improved student achievement as evidenced by being recognized with the Illinois Spotlight Award and/or the Academic Improvement Award in 2011. The study sought to determine how the school leaders of these schools worked with the teachers to improve their instructional practice and, thus, student achievement using the lens of deliberate practice. For the purpose of this study, deliberate practice is defined as practice that is “(a) at an appropriate level, (b) provides informative feedback, (c) provides for opportunities for repetition, and (d) allows for correction of errors” (Sternberg, Grigorenko, & Ferrari, 2002, p. 71). The goal of the research is to provide educational leaders with a framework for improving student achievement.

Research Questions

The fundamental research questions of the study are:

1. How have school leaders used deliberate practice as a framework in conversations about professional growth to enable teachers in high poverty schools with a high percentage of students identified as minorities to improve their instructional performance?
2. How did school leaders provide an environment for teachers to implement deliberate practice to aid in the development of expertise in their instructional performance within the school?

3. What differences, if any, are there between the ways that school leaders differentiate support within the framework of deliberate practice for teachers at different levels of expertise within their school building?

4. What are the implications for school leaders as they try to enhance instructional practices through professional growth activities using deliberate practice in order to improve student achievement in their schools?

The research study used a case study methodology that included interviews with the school principals, a survey of all of the teachers in the schools to identify teachers at various levels of expertise, two interviews with the identified subsample of teachers about the way they improve their instructional practice and the way they approach lesson planning, and observations of activities within the schools that are meant to improve teachers’ instructional practice. The researcher used Yin’s (2009) explanation building to analyze these data to make an analytic generalization using the theory of deliberate practice.
**Figure 6. Progression of Steps in the Data Collection Process**

**Description of the Schools Being Studied**

The researcher chose to use extreme cases that consisted of schools with over 50% minority populations and 50% free and reduced lunch students that were successful in raising student achievement when many similar schools have not successfully done so (Flyvberg, 2006). In this study, the researcher defined improved student performance as being selected for the Illinois Spotlight Award for high-poverty schools (greater than
50% of students qualify for free and reduced lunch) that are making adequate yearly progress and/or the Academic Improvement Award for schools that have shown at least a 7.5% gain in test scores on student achievement tests over the previous year’s performance (Northern Illinois University, 2014). Since research has shown that teachers with National Board Certification rate statistically higher on identified characteristics of expert teachers, the researcher chose schools from the list of awardees that employ teachers with national board certified teachers as listed on their database to allow for the possibility that they would participate in the study (Bond, Smith, Baker, & Hattie, 2000; National Board for Professional Teaching Standards, 2014).

Site 1

The school used for the first case is located in a large unit district in a western suburb of Chicago, Illinois that has 19 schools and over 17,000 students (Northern Illinois University, 2014). The school educates students in kindergarten through 5th grade with close to 900 students. The school was the recipient of the Academic Improvement Award in 2011. The academic performance of the school remained high relative to the district and state after winning the award in 2011. In 2014, the school served students with the following major demographic groups represented: 50.7% Hispanic, 34.4% White, and 7.1% Black. Comparatively, the state of Illinois averages for the same groups are 24.6% Hispanic, 49.9% White, and 17.5% Black. The school has 63% of its students identified as being low income as compared to the state average of 51.5%. Over 34% of the students in the school are identified as English learners whereas the state averages 9.5% of students. The school district spends $7,520 per student on instructional
spending, higher than the state average of $7,094. The district spends $12,114 on operational spending per student, also slightly higher than the state average of $12,045. It has two national board certified teachers on staff.
Figure 7. Progression of the Case Selection and Data Collection for the Research Study
The principal in site 1 has held the position for six years and was the assistant principal of the same school for two years prior to becoming principal. When asked about how her school was able to win the Academic Improvement Award in 2011, she stated,

I was going to be their [the staff’s] third principal so they needed to start trusting me that I wasn't going to go anywhere and that I was there to support them. So, we really started with relationship building. I needed to develop relationships with them and I needed them to understand the importance of developing relationships with their students and, not only their students, but their students’ families as well. Once they started doing that, we started seeing some enormous success.

Her sustained leadership at the school appears to be a factor in the success of the school since the culture took several years to form. She observed,
We definitely have a risk free environment - a culture where error is acceptable… That has taken a couple of years to follow up with that culture that they feel like they can come to me… [and it] has taken a few years to cultivate so they feel comfortable and safe with one another.

Site 2

The school used for the second case is located in a large district in a south suburb of Chicago, Illinois that serves Kindergarten through 8th grade in a district with five schools serving over 1,900 students. The school educates students in preschool through 5th grade and has approximately 200 students. The school received the Academic Spotlight Award in 2011 and the test scores remained relatively high compared to the district and state averages after that time. In 2014, the school served students with the following major demographic groups represented: 92.6% Black and 6.4% identifying as two or more races. The school has 67% of its students identified as being low income. The school does not have any students identified as English learners. The school district spends $7,649 per student on instructional spending and $15,059 per student on operational spending. It has one national board certified teacher on staff.

The principal of site 2 has held the position for 11 years. She has been in education for 36 years, including thirteen years as principal, two years as an assistant principal, and she was a classroom teacher as well. She believes that her school was able to achieve the Academic Spotlight Award in 2011 because “when I came in 2003, there was no system in place. I do believe that there has to be a certain amount.” Therefore, she stated that she spent time fixing structural problems in the school (e.g., she had the district spread out the special education population rather than housing all of the special education students in her building and she improved discipline within the school),
establishing professional learning communities and improving teachers’ performance. She needed to ensure she had people in the school that could do the job and, similar to principal 1, she also wanted people who cared (“I want people that love kids and are willing to teach—bottom line”). It took her several years to gain momentum with her change efforts (“Once they see success, everybody jumps on the bandwagon. The first year, I might have had 50% of my teachers.”). Consequently, the longevity of her leadership also played a factor in the school’s success as she put the systems and culture in place within the school.

![Figure 9. Composite Percentage of Students in Site 2 that Meet or Exceed Standards on the ISAT Test with New Cut Scores Being Applied in 2013](image)

**Presentation of Data**

The following data are from interviews with the principals at both schools (n=2); separate surveys of all of the teachers at both schools (site 1: n=22 returned responses out
of approximately 53 teachers (41.5% response rate), site 2: n=10 returned responses out of approximately 31 teachers (32.3% response rate)); interviews of identified teachers including two teachers at the beginner, intermediate, and expert level (n=6 from site 1 and n=5 from site 2 as the researcher was unable to secure a sixth participant); and observation notes from professional development activities (n=2 from site 1 and n=1 from site 2). The researcher used quotes from the principal interviews, observations of professional development sessions, the results of the survey with all teachers, the professional development interviews with the subsample of teachers, and the lesson plan think alouds with the subsample of teachers in the descriptions below.

The researcher spent about 60 minutes for the principal interview for site 1 and 120 minutes for site 2. The researcher attended two professional development sessions for about 60 minutes each at site 1 and one professional development session at site 2 for about 30 minutes. The professional development interviews with the subsample of teachers took on average 30 minutes for each site 1 teacher and 25 minutes for each site 2 teacher. The lesson plan think alouds with the subsample of teachers took on average 13 minutes for each site 1 teacher and 14 minutes for each site 2 teacher. The researcher spent approximately 7.3 hours at site 1 and 5.2 hours at site 2 for a total between the two sites of 12.5 hours.

The research study sought to examine how teachers at different skill levels (beginner, intermediate, and expert) approach the improvement of their instructional practice. To identify teachers at each of these different levels, the researcher first looked at whether there were any teachers who obtained national board certification. These
teachers were invited to participate in the research project. In site 1, this resulted in the researcher not asking a teacher (Teacher 1-3) who received ten nominations, one of the highest, to participate in the study since the two national board certified teachers agreed to participate.

Then, the researcher used peer nominations by the principals during the interviews (see Appendix F) and teachers through an online survey (see Appendix J) to identify teachers at the different levels. The researcher asked teachers to nominate teachers for the expert level first, the beginner level second, and the intermediate level third in order to identify teachers at the extremes before identifying teachers in the middle of the skill levels. If there were a low level of nominations for a particular skill level, the researcher used the principal’s nomination as the primary driver for the choice of participants. Furthermore, the level (expert, beginner, or intermediate) the principal gave a teacher was used in cases where a teacher was nominated at different levels by the teachers who responded to the nomination survey.

There are several interesting things to note. One of the top reasons teachers from both sites cited for choosing teachers for the expert level on the survey was that the teacher was good at developing relationships with students/families (site 1) or the teacher cares about the students (site 2). Another item to note is that after the nominations the researcher asked eight people in site 1 to obtain the six participants whereas the researcher asked 17 people to participate in site 2 and only obtained five people to participate. In addition, at site 2, two of these participants asked the researcher to interview them together.
In addition, for several of the skill levels, teachers used a non-descript response like “excellent teacher” as part of their answer. Furthermore, there were 66 nominations for teachers from site 1 and 29 nominations for teachers from site 2 for the expert level whereas only 20 nominations for teachers from site 1 and 10 nominations for teachers from site 2 for the intermediate level. There was also very little agreement in the responses for characteristics used to identify teachers at each skill level (only two qualities given by respondents occurred in more than 30% of the responses for their respective category - “Growth as a Professional” in site 2 for the intermediate level and stating the number of years of experience in site 2 for the beginner level). Additionally, the teacher respondents, as well as the principals, did not appear to choose the leaders of their grade level teams for the expert skill level. Consequently, the nomination survey results raise a question as to whether there is a shared understanding amongst the teachers and principals of what qualities expert teachers should have and how one progresses to become an expert teacher.

Site 1 Principal Interview

The principal at site 1 was a female with six years of experience as a principal both overall and at the current school. Before becoming an administrator, she was a teacher. Although she says that “I have been out of the classroom going on 9 years so they are much more the experts in curricular areas than I certainly am,” being a teacher influenced her as an administrator. During the interview, she reflected, “I have gone through difficult times in my life where my administrators have helped me get through things. I always said that if I were to become an administrator, I would do that for my
staff as well.” She was an assistant principal for two years at the school and “definitely assisted” the former principal. When she assumed the principalship, she stated,

I felt that we needed some redirection in terms of relationship building and that is where I began. I knew the staff- I was here for two years. I was going to be their third principal so they needed to start trusting me that I wasn’t going to go anywhere and that I was there to support them.

She stressed the importance of relationships throughout the entire school-

I needed to develop relationships with them and I needed them to understand the importance of developing relationships with their students and, not only their students, but their students’ families as well. Once they started doing that, we started seeing some enormous success.

This is especially important for her school because

we have a lot of students here in the school community that are bused to us for the bilingual program and it is very important that they feel as welcome here as they would at their own school because it is a big shift for them.

As principal, she has many duties. “I work very closely and well with our maintenance department making sure we have hot water and clean water and that our staff has what they need structurally so their students are in the best learning environment they can be.” However, she sees having students be successful as her most important duty within the school. “My biggest responsibility is that all, close to 900 of my students, excel and make the growth that they need to make.”

She believes that for students to be successful “we have them understand that we care about them.”

We can't just say that at the end of the year you need to know your math facts. We need to demonstrate what steps we are going to take to get them there so that they have that vision. They need to understand once they reach that, what we are going to do to assess that they have actually gotten there and mastered that material. They need to be a part of all of that journey. They need to own their
learning. It should not be driven by the adults in the building. They need to be driving that. That is a mind shift that we are working on still.

She believes that student success can be measured through assessment. “It can be a summative assessment, it can be a formative assessment. It does not have to be a standards-based assessment… It can be something home grown that we have done here.”

However, she does believe that “achievement and growth are two different concepts.”

She stated,

I always reflect to the fact that I am a mom and I have two kids. When I send them to school, I want their principals and teachers to feel that they should get a year's growth out of a year's instruction. I want nothing less from my children and I want nothing less for my children here. That is my end goal.

The principal immediately expressed the need for change to the teachers.

I remember my first meeting with my staff on institute day as the principal. They knew me for two years as the A.P. And I was very honest with them. I remember saying to them, “Our backs are against the wall and we are in a hole. We have got to get out of this hole. I came from another school in the district. I taught 1st grade there for 15 years. Their population was a lot more in need than this population and they were out-achieving us and I said that there was no excuse for that. There is no reason for that. I don’t want to hear anymore that our kids don’t have this, that our kids don't have that, that their moms are here, that their moms don't do that. We have to completely remove all excuses and focus on why we are here. Like the superintendent says, ‘Can you teach our kids? Can you teach these kids? And if you can't, maybe this is not the place for you.’ So, once I said that and I saw some true emotion coming from people, it was gradual. The principal built relationships with the teachers and created an environment in which they could take risks and collaborate with one another in order to improve student achievement.

We are all very supportive of one another. We definitely have a risk free environment- a culture where error is acceptable. Because of that, we have a lot of teachers that will come and say, “I found this great interactive website or I found this great word work component that I want to bring in to the benchmark series we are working on- what do you think?” As long as they can give me some data behind it or some statistics stating that someone has used this and has found
success with it, then I am fine to put the time and money in to it. That has taken a couple of years to follow up with that culture that they feel like they can come to me.

Besides coming to the principal with ideas, the teachers also used one another for support. She established grade level teams and “each grade level has a key leader... I meet with them once a month as well. They are the facilitators of the grade level meetings. They develop the agenda other than... the one or two items that I dictated.” It is interesting to note that these grade level leaders were not chosen as the experts for this study. She also has these grade level teams meet with each other-

I want my first grade teachers to meet with my kindergarten teachers at some point, but I also want them to meet with my second grade teachers because the second grade teachers can tell the first grade teachers that they come to us every year and they are weak in this area- can you strengthen that.

The principal of site 1 also started sharing data with the teachers, which was not done extensively before. “Once I started sharing with them, slowly, but surely- it took a couple of years, it was not done in a year- they started asking me for the data.” She began to utilize data to track the success of programs they were implementing. She learned that she had to make changes gradually.

We were throwing tutoring programs in to the mix and word work things and just throwing different ideas and one of the teachers stopped me and said, “At the end of the year when our data comes back- either way if it is good or bad, because we are doing so much, we are not going to know what it was that made us successful or what it was that did not make us successful.” That was very eye opening for me. That was almost nine years ago and I still remember that. I said, “OK, you are right, we have to slow down.”

Since their math scores were good, they decided to focus on literacy first.

We have kept adding and it is exhausting my staff, but we are seeing progress so let's keep doing what we know works and add to it or tweak it if we find something better or different. But, I think from what I have seen with other
administrators who I have worked for and with that if you move too fast, it scares some people.

She also started to have teachers look at each other’s data as a point of comparison.

“How are you getting your students to get ahead in comprehension when MAP is showing that is not my area of expertise?” or “How are you able to move your students in vocabulary when obviously my scores are not that great?” It is a great time to reflect and discuss and have those collaborative work times so that they can support one another. That has moved us along as well.

The sharing of data has also led to a healthy sense of competition. “We are all competitive- not all, but a lot of us are competitive now because we are used to seeing great things and we want to stay there.” She also has data days during which she sets quantitative goals with her teachers and follows up with them during the year. “We meet individually, privately so they can be vulnerable if they need. Things of that nature- just touching base with them and supporting them to be the best they can.”

The principal stated she complements the use of data with regular observation and feedback of the teachers. “My assistant principal and I are in every classroom every day.” She has classrooms in another building next door and, “it is a half mile there and back. It is effort to get there and remembering to get there.” “Sometimes we will have a specific purpose to go in to classrooms. The month of September…the staff knows this is learning target month and when I go in I will specifically be looking for that.” She says that she gives the teachers written feedback on a regular basis. “Each classroom teacher receives feedback from me weekly as my walkthroughs are targeted. As I complete that targeted walkthrough for a grade level, I send them an email with my findings/data.”
She tries to depersonalize the data. “I find that if you can quantify it- that 8 out of 10 or I noticed that 15 out of 23 times- they are less defensive because it is a fact.” If there is an issue with a teacher,

we are going to have a very difficult conversation about where I am seeing your data is, this is where the data of your peers is, explain to me why it is not at that level. I always bring it back to what can I do to support you. I am ultimately responsible. So I never want them to leave defensive from my office or with not knowing where their plan is or where their next step is going to be. When we have those difficult conversations, I do put it back on me and what I can do to support them.

With the assessment data, teacher evaluation data, and observation data, the principal will determine the professional development needs of the individual or staff as a whole. If a staff member is struggling, she is known for offering them the opportunities to ask me for support and then me pushing them in to some classrooms. If you are struggling in the area of classroom management, I am going to get you a sub and I am going to send you in to a classroom that has stellar classroom management just to get some more ideas. Just to get some tricks in your hat in case you need to pull something out.

If teachers find professional development they think will support them, “I am very rarely going to say no to that. If I can financially fund that, I am going to do that.”

There is also a lot of professional development as a group within the school that is offered by both the district and the school.

We offer a lot of professional development. Through the teacher contract last year, we embedded an hour's worth of PD a month. Staff is with me an hour for a staff meeting, they are with me an hour for a grade level meeting, they are with me for an hour for PD every month. PD is often directed by the district.

Sometimes, the principal will use literacy leaders in the building to determine what teachers need. “I will sometimes send literacy leaders in to classrooms and say, ‘Just spend some time observing. Give me feedback. Give me your ideas as well.’ They will
share with me what they feel the teachers need in terms of support.” However, these literacy leaders were also not readily identified as experts for the subsample of teachers used in the study.

She has experienced some roadblocks while trying to change. “Not everybody is ready for change. Not everybody is ready to take the responsibility off of the children and put it back on to them.” She tries to work with people who are resistant to change in a positive way because “I find that if I push we get resentful, we get defensive and students are not going to benefit from any of those traits.”

You have to go slow and gradual with some. You have to have those conversations- can you explain to me why you are not comfortable doing this? What can I do to support you so you are comfortable making that mind shift of that strategic shift or that instructional shift? Again, it goes back to relationships. The principal also felt her “scores did not look so great on ISAT this past year” because she “put a lot of emphasis on the MAP assessment that we do 3 times a year for our students- it gives me a great gauge” to look at student growth.

She also tries to show teachers success in order to help them change. One teacher was resistant to using flexible grouping in math with the other three teachers at her grade level. She told the teachers that “when your scores start to improve, this teacher is going to want to be a part of that. That is exactly what happened and now all four of them are doing that.” Success also helps keep all teachers motivated. “We are still not 100% there. It is definitely contagious. I am a very competitive person. I want the school to be at the top always, not for accolades for me, but for our students and for our families- they deserve that.”
Site 1 Observation of Professional Development

The researcher observed three professional development sessions at the school sites. The first session observed at site 1 focused on questions teachers use with students at which the principal and assistant principal worked with teachers to implement text-dependent questions and then practice ways to use them. The session took place in the library with all K-5 teachers present and sitting in grade level teams. The principal and assistant principal connected this topic with a previous presentation on the new PARCC standardized test the school would take and the use of text-based questions on that assessment. They identified learning targets for the teachers. Then, they shared examples of text-based questions and had teachers talk with their grade level teams about questions they use within their own classroom and how they can change them to text-dependent questions.

After that, the principal showed the teachers an example of an article and she demonstrated a text-dependent question by asking the teachers the meaning of a word and what part of the text allowed them to figure out the meaning of that word. The principal and assistant principal already sent the teachers articles for each of the grade levels present that were at an appropriate level. The principal asked teachers to develop questions based on those articles. When they were done, volunteer teachers shared the questions they developed and the principal gave specific feedback.

The second session at site 1 was similar to the first session in that it focused on a specific, narrow topic. A staff member from a local social service agency provided information for teachers about a new state law and gave them concrete steps for how to
respond if a student discloses that he/she is being sexually abused. All teachers in K-5 attended the session with the assistant principal. The principal was not in attendance for the whole session. The leader explained the new law and gave examples of situations to which it would apply. She instructed teachers on how to converse with a child that has made a disclosure about sexual abuse (e.g., reassure the child and don’t make promises). The leader went through signs children exhibit when they are victims of sexual abuse and the steps the teachers should take to report suspected abuse.

The leader then read a book aloud as an example of a resource the agency would use in a classroom to initiate the conversation about the topic. She then gave teachers specific ways to speak to a child and how to follow-up with a child after a disclosure was made. She ended by giving the teachers her contact information and told them to contact her with any questions or issues they have.

The principal also gave the researcher a description of data days in which the school leadership works with teachers to examine data from standardized and formative assessments. The principal and teachers of site 1 examine these assessment data and looks for trends. If a teacher is performing better than the other teachers, the group looks at what that teacher is doing differently. The principal also develops professional development topics based on trends found overall. She then has follow-up meetings with the teachers based on these initial meetings.

**Site 1 Teacher Professional Development Interview**

The researcher interviewed six teachers from site 1, two teachers at each level of expertise (expert, intermediate, and beginner). The teachers included a kindergarten
teacher, 2nd grade teacher, three third grade teachers, and a special education teacher that worked with multiple grades. With the exception of the special education teacher who focuses specifically on reading and math, all of the teachers in the subsample from site 1 teach all of the subjects within their grade level. It did not appear that these teachers were the grade level leaders or literacy coaches identified by the principal. The following tables identify the number of years of experience the teachers had in their current grade, at their current school, and overall as a teacher.

Table 1

*Number of Years Experience for Teachers in Their Current Grade Level*

<table>
<thead>
<tr>
<th>Level</th>
<th>Minimum Number of Years</th>
<th>Maximum Number of Years</th>
<th>Average Number of Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert (n=2)</td>
<td>6</td>
<td>14</td>
<td>10.0</td>
</tr>
<tr>
<td>Intermediate (n=2)</td>
<td>2</td>
<td>8</td>
<td>5.0</td>
</tr>
<tr>
<td>Beginner (n=2)</td>
<td>3</td>
<td>3</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Table 2

*Number of Years Teachers Have Taught at the Current School*

<table>
<thead>
<tr>
<th>Level</th>
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<th>Maximum Number of Years</th>
<th>Average Number of Years</th>
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Table 3

*Number of Years Experience Teachers Have as a Teacher Overall*

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The interviewer asked respondents how their school was different from other schools since their school was able to dramatically improve student achievement when many other schools have not been able to do so (Question 6). The responses the teachers gave to this question provide a framework for looking at the answers to the rest of the interview questions. The teachers stated that the climate and care shown by the teachers enabled them to collaborate amongst their grade level teams (4 responses). The teachers discussed that they have “good grade level cohesion” and that “every team seems to be cohesive in how they plan and approach teaching.” One expert level teacher said that they have professional development in which “we have had some people bring in some good processes of instruction like the Daily 5 and things like that.”

Teachers also find the fact that “as long as you are showing great results and have positive interactions with students and families and other teachers, they [the administration] actually are pretty flexible with how you meet those goals” (3 responses). In addition, the teachers believe that the support they get from their administration is helpful (5 responses). One of the intermediate level teachers believes the administration uses data to ensure that students are “yielding great results” in people’s classroom (1 response) and the leaders regularly observe in classrooms.
The following themes emerged from the answers to question 6: climate and collaboration, professional development, flexibility to try new things, and the use of data. Respondents added details to these themes in subsequent interview questions. The teachers also discussed the change process overall and how the school principal could help with that process.

**Climate and collaboration.** Respondents shared how their school leadership works with teachers to improve teaching and learning (Question 7). Teachers identified that the culture of the school enabled them to seek help from their fellow teachers and the administration (4 responses). “It is very easy to stop someone… and ask about strategies for specific students that maybe they have worked with before.”

If you have a question, you can go in there and they [the administrators] will definitely help you with it. They are there for you as a person, too, not just as a boss. I know I had rough days when I began, just stressed out. They were there to say, “How can we help you?”…I recently asked for a book this summer to improve on my reading and, right away, my principal said, “Oh yeah, I will get that for you.”

One expert teacher also found it helpful that they could “go in and look at what someone else’s classroom looks like, seeing how even someone takes attendance on the wall just to get ideas.”

**Professional development.** In Question 7, teachers also found the professional development offered by the district and school helpful. An intermediate teacher said, “We definitely have professional development that walks you through new initiatives before they expect you to implement them.” For instance, the district brought in a math consultant who a beginner teacher thought was effective because she offered “a lot of
hands-on training like different games you could play… We would actually play those games and see different ways to approach something.”

The administration lets teachers know if teachers are required to implement the professional development (Question 10) (3 responses).

We get specific strategies. If it is something that we are expected to try, they let us know—“We are going to be looking for these. These are the things we will be looking for.” Other times, it is, “If you would like to try this, try it. If not, then don’t.”

If it is required, the administrators will often follow-up with their walkthroughs (2 responses). “They actually explicitly tell you, like, ‘When we come in for a casual walkthrough, we are looking for x, y, and z. It is really important that we see this.” They will even sometimes show you a piece of paper that they will bring in for your casual walkthrough where they have to check off what they see.

The administrators “encourage us to try different things” (1 response from an expert teacher) and ask people to be the “go-to” person on the subject they learned (1 response from a beginner teacher). One of the expert teachers discussed the importance of seeing “’How do I do that in my classroom? This is very good theory. How do I bring it to my classroom in the 45 minutes I have to do this, and this, and this? How do I put that together?’”

However, teachers were not clear how the professional development was chosen (Question 8) as it was often determined by the district (4 responses). It appears that teachers did not count such things as data days or grade level team meetings in the school as professional development. One intermediate teacher expressed “that it would be even more effective to have teachers tell you what they would love to have more development
on.” A beginner teacher stated that there is also a mentoring program in which she had to choose a specific number of courses offered by the district, but she could choose the courses. Teachers were unsure how the professional development was evaluated by the administration as well (Question 9) (2 responses). While there is usually an evaluation or survey (4 responses), there were questions as to whether those forms were actually read or taken seriously (3 responses).

**Flexibility to try new things.** During the interview, all of the respondents were able to speak about changes they made in their classroom, showing they had flexibility to try new things. One of the expert teachers described the difference in the school from somewhere she used to work.

In my old school, I had two different administrators for a couple of different years. When I came here, it was such a big change and I did not realize why until I started working with these and I was like, "that is why it was so much harder." It was not because I was a new teacher, it was because I was rather boxed in. I like the freedom that we have here in many things to do things how we want to do them, to change them if we want to change them, to talk to people to get good ideas from teammates and others- that is why I want to work here forever... with the same people, though. As much as the classroom is isolated, the people that I work with has made a world of difference.”

The respondents spoke about why they try new instructional practices within their classroom (Question 11). The two expert teachers and one intermediate teacher spoke about finding something new and more effective. One intermediate teacher discussed the need to change because “each year the group is completely different, so you can't guarantee that what you used the year before will work the next year.” One beginner teacher spoke about taking responsibility for things that do not go well and finding a way to fix it. “If something is not working, I think it is really easy for teachers to be like, ‘Oh,
my kids are so bad today.’ It is usually because of something you are doing or something you need to change.’

Teachers also make changes based on whether students understand the material (3 responses). “I realized, ‘OK. I need to change what I am doing tomorrow because they had no clue’ or ‘They really do understand it so I can skip a lesson completely and move on from there.’” One intermediate teacher also stated that she would change “if I hear about or see another teacher doing something wonderful.”

Teachers spoke about flexibility with the change- one intermediate teacher said that she will “hold on to things that have yielded great results” and not change them. An expert level teacher said that

when it is something that I would not have done normally and I changed it and it worked for the kids now, maybe when I teach it again, I am going back to the way that I like, but I still have a different way I can do this because the kids change, really, day-to-day.

There was a difference in the types of changes the respondents discussed in the interview (Question 12). Beginning level teachers were more likely to describe a more simple strategy that they put in place in their classroom (e.g., “the agree or disagreeing with the tapping because I wanted a way to informally assess them without having to pull them aside or ask them” and “the use of exit slips”). Intermediate teachers described a more involved strategy as a change they have made (e.g., “I started using reading response journals” and “using Daily 5 as a basis for my mini-lesson”). Expert teachers spoke about changing how they approached an entire subject or implementing a new program within the school (e.g., “this school year is the first time that I have tried a
guided math method of teaching math” and a reading intervention program adopted by the district).

Teachers made these changes for several different reasons (Question 13). The beginner teachers described changing based on what someone else said (e.g., “I have heard that one of my friends who was being evaluated got in trouble for not having them” and “I think there has been a lot about ‘don't work harder than your students’ and so I think that is something that kind of motivated me”). The other levels spoke about meeting the needs of their students (3 responses) and continuing the change after seeing that it worked successfully (e.g., “When I started this second program, one of my very low children, special ed. low children, turned to me and said, ‘I can read.’ Once I hit that stride, I'm going.”)

Respondents offered a variety of ways they learned about the details necessary to implement the change in instructional practice in their classroom (Question 14). One expert level teacher found it helpful working with colleagues and she found it useful that she was given the flexibility by her principal to implement guided math as a team because “we do a lot of sharing- ‘Here are some other ideas for some independent activities.’” Other teachers said they found ideas from the math consultant (1 response), hearing about it from other teachers (1 response), books (2 responses), websites (1 response), and from the curriculum (1 response).

One expert and one beginner teacher made the change all at once, although the expert teacher prepared all summer (Question 15).

I spent a lot of time over the summer back and forth with my colleagues all over the internet finding independent activities for all different levels. Having it all at
once made it so when the students came in to my class- this is all they know of this grade's math.

The other teachers implemented their change over time (e.g., one expert teacher used it as an intervention with the lowest students first).

Teachers experienced several roadblocks (Question 16) while implementing the change including time (both to create the materials necessary for the change and for students to answer the new types of questions) (2 responses), teaching the students the procedures while learning new content (2 responses), dealing with teachers that do not like change (1 response), and learning how to take the concept from the book and implementing it within the classroom (“I felt like I was really having to go back and re-read even before I did my lessons every day, I would have to go over it in my mind before I did it again.”) (1 response). One beginner teacher also discussed the difficulty students had with increased academic expectations from the change.

There are some kids that are super high and they grasp things really easily and they have higher vocabularies so they can talk with each other more deeply about topics. There are some students that have limited vocabulary and background knowledge is not there so it is harder for them to ask those questions and think about something deeply like that.

To overcome these roadblocks (Question 17), teachers often turn to other colleagues (4 responses). One beginner teacher said,

I think what I do a lot is rely on my teammates and other teachers in the building, like, “Have you done this before? Has it worked? How does it work? How do you do this?” I really rely heavily on their experiences.

Other teachers turn to online websites (2 responses) and one of the intermediate and one of the beginner teachers will backtrack and talk with the students about where they are having difficulties.
Support from the administration. Teachers also stated that the principal and assistant principal were also people they can turn to for support (2 responses) (Question 17).

I will go down to the office and talk to the principal and just tell her, “This is what I want to do. This is what I am trying to do. What do you think?” I will ask her to come and see this because I miss things. Having someone else looking at it because that is something I can't do- I can't get my teammate to look and see what is going on when I am teaching because she is doing the same thing.

Respondents said that they get feedback on their instructional practices (Question 18) from their leaders through their formal evaluation (4 responses) and the leaders’ regular (“at least four days out of the week,” “two or three times a week casually”- which is different than the principal’s response that she visits classrooms daily) walkthroughs (6 responses) and teachers often get feedback through emails (1 response).

They have put more informal evaluations in to place, which is kind of nice. As we do stuff for quite a while, we sometimes forget the little things- “Oh yeah, I should have done that. That would have been better.” It is nice to have someone come through and say, “Could you have done this?” It is not like you are ever doing anything wrong, but they are just, “Have you thought of this other idea?” There are a lot of ideas bouncing around. That is more the atmosphere. The leaders try to quantify their feedback for the teachers (2 responses).

She would tally how many questions I asked them and then how many of those questions were high order thinking questions and how many were just simple response questions. She tallies how many kids are on task and she would be able to say, “100% of your students were on task.”

One of the expert teachers said she enjoyed their specific feedback because “that changed what I did… this is a) really easy to implement- I can start this in twenty minutes when the next lesson starts. That feedback is helpful and I really enjoy it.” Teacher also received feedback from co-teachers within their classroom (1 response) and from the
ways students respond (1 response)- “that they are having fun, that they are engaged, that they are growing, that they feel like they could do what I am asking without me being there telling them.”

If there is something the leaders want changed in a classroom (Question 19), they will ask the teacher to “‘stop by this morning’” (2 responses). She often presents them with some sort of quantifiable data (2 responses) that allows the teachers to “reflect on my practice.”

She emailed me- a very positive email, like, “I came in your room today”- I saw she was walking and talking to kids- “This is what I saw. This is what I noticed. This is what you did really well. Here are some things that I think you need to work on.” Then, she presented me with a little sheet that broke it down and said, “Student 1, Student 2, Student 3- this was their answer to this question. Was it what I was looking for? Yes or no.” I think one out of my three students actually successfully answered the question. So, I took that as, “OK. We need to discuss this specific aspect of the classroom more with the kids.’

The leaders discuss how they can specifically support the teacher to change.

They will initially start out by saying, “What can I do? Personally, what can we do as your leaders to help you?” before they say, “You need to be doing this, that, or the other. How can we help you?” That is a great way to be. I think it is a great way, especially for step one of solving a problem- feeling like you are supported.

The leaders follow-up with the teachers after having these conversations. “I think that as they are looking for something, if they miss it or don't see it, they come back and look for something again.”

**Use of data.** In addition to the observations, teachers also utilize student data to judge the effectiveness of their instructional practices (Question 20). Teachers take ownership of student achievement. “I am my worst critic. If they do well, it is because of me. If they do poorly, it is because of me. It is never, ‘Well, that kid is lazy’ or
whatever. It always falls back on me.” They look at whether students mastered the material to determine the effectiveness of what they are doing (5 responses). “When kids move up in their reading levels, I feel like I have accomplished something. If a child has finally accomplished some sort of math strategy or idea/concept that they did not get before, it gives me a better basis of where to drive my instruction.”

One intermediate teacher also spoke about comparing her scores against other teachers in her school and district. “I definitely care about having great scores and seeing great results and looking at my student growth and seeing how it compares. I always think about what I am doing versus what they are doing. Then I reflect on whether I think that something that I was or was not doing played a part.”

Besides the administration using observations (3 responses) and formal evaluations (3 responses) to judge the effectiveness of the teachers’ instructional practices (Question 21), they also use student data from the various tests the students take including MAP, district assessments, and state assessments (3 responses).

They are very data-driven and it is a non-threatening way. I have sat in meetings where, “This is an issue. Let’s brainstorm why this is an issue. We are not saying something is being done wrong, but there is a trend here.” They are very much in to trying to figure out the pieces to the puzzle. It is very nice, positive atmosphere.

The MAP tests are one of the biggest tests that are used to evaluate effectiveness right now using student growth and the achievement, as well. I do like the fact that they are looking at both. They want everyone to be here, but there is an expected level of growth from wherever you start.

They also compare test scores. “They measure you against your peers and they meet with you to talk about that. They measure you as a grade level against other 2nd grade groups at other schools.”
Navigating change. The district asks teachers to change aspects of their instructional practice. For example, one respondent stated, “This morning we found out the district is changing something. It was basically the amount of support the reading support our kids are going to get is going to be lessened for the upper grades.” Teachers discussed questions they would have if they were asked to change something (Question 22). Teachers want to know why the new practice was better than what we were doing and how they have seen it make changes in other schools and other districts and if it is really worth the change because there is constantly something new being thrown at us (2 responses).

The teachers would also inquire where the change is coming from- whether it is based on research and if anyone else has been successful using it (4 responses). In addition, teachers want to find out whether administrators would give them “time to feel like we really understand it before we have to present it to the kids because if the kids know, like I said, if you are not feeling comfortable or confident, it does not go well” (2 responses). Teachers also wanted to ensure they would get the materials (1 response) and training to implement the proposed change (3 responses).

I am asking for a demonstration- show me something. Show me what it looks like so I have an idea of what you are talking about. I don’t want a manual that says “Say this, then this, then this” because I do not want to sit there and read because someone is back there playing with his shoe.

One intermediate teacher would want to find out whether administrators would “give us the amount of time to feel like we really understand it before we have to present it to the kids because if the kids know, like I said, if you are not feeling comfortable or confident,
it does not go well.” A beginner teacher would ask how the new practice would change how students and teachers were evaluated.

The teachers would look for their leaders to provide support during a change (Question 23). The teachers would want to see grade appropriate demonstrations about what the change should look like (6 responses).

It is really hard or if the district wants us to make changes, they show us a lot of examples at the upper grades and a lot of times the lower grades are thinking, “How does this look in a kindergarten room or a first grade room?”

Teachers would also like administrators to allow

us to see it actually happening in other classrooms and watching it happen with other students- whether they are high students or low students and watching how the teacher can get a good basis of that new concept and using it in their classroom (2 responses). The teachers would like the materials to help with the change (2 responses).

Additionally, a beginner teacher would want the administrators to roll it out in phases to make it manageable (1 response). “We can only do so much at a time. I hate when administrators throw 20 things at you and are like, ‘Do this now.’ Rolling it out in phases and then providing us help if we need it.” Teachers also want administrators to give feedback (1 response) and “to be open to the aches and pains. That is what good school leaders do. They are open to that. They share our low points.” “I think that when teachers don't feel appreciated or valued it is really hard to make those changes in the classroom. They feel overwhelmed and that they don't know where to turn.” One expert teacher said the principal of site 1 was good at providing the needed support. “They give us the time for training. They support us. They are wonderful. ‘So you need resources? We will find the money somewhere.’ They are very accommodating with the physical
materials, with the information, and allowing us to get the training. I think that is one of the best ways. “

Site 1 Teacher Lesson Plan Think Alouds

Teachers plan their lessons in a variety of ways in site 1 (Question 1). A beginner teacher spoke about planning for the week ahead where as one of the expert level teachers spoke about planning day-to-day- “I see how my classroom is going- was there a particular concept with which they are struggling, if they are ready to move on past wherever we are.” The two expert level teachers spoke most directly about adjusting plans to give students “what they need.” Teachers also discussed using curriculum maps from the district (2 responses), developing SMART Board lessons (1 response), and using folders to keep track of materials (1 response). Overall, teachers spoke of using a format that works best for them.

It has everything I need in a day with things I jotted down that I think are important to remember and forms that I can keep data. It is actually probably casual compared to many other teachers, but I feel like it works for me to do it that way. If it is working well for me that way, then it is probably best for me to stick with it.

The interviewer asked teachers to think about a lesson they were going to do in class the next day and how it related to the current day’s class. Teachers spoke about math (3 responses) and language arts lessons (3 responses). All of the teachers spoke about a concept they would teach (e.g., “I am focusing on text importance based off of characters”) rather than just the activity they were going to do (e.g., “as I am reading, we will be pulling out any evidence about how the character's name influences their actions or their behaviors”).
When asked whether they needed to change the lesson based on what happened in class today (Question 3), teachers used what happened in the class as a reason for or against making changes (e.g., “Tomorrow, I will continue the same thing just because they are engaged in the book that was chosen and they seem to understand what they should be able to do” and “They had more trouble when they were given the out, but not the in”). One of the expert level teachers said that she “can change even during the lesson plan.”

While planning a lesson, teachers think about several things (Question 4). Five of the teachers spoke about ensuring students understand the target for the lesson—making sure that I am covering a standard in which I am expected to be taught. Making sure that I am building upon something they have done prior and, if I am not, that I am doing a lot of modeling and going slowly and showing them. Any time that I can possibly show them that there is more than one way to do something, that I am open to that and encouraging them to talk to me about what they know.

An expert and beginner teacher also spoke about using formative assessment to ensure that students reach that target. One expert teacher will go through the lesson and work on implementing more formative assessment. I happen to think that is the most wonderful thing since sliced bread to see if our students have found, have figured out, have understood what I have taught— that means a lot of note cards.

An intermediate and beginner level teacher spoke about making sure the lesson is engaging and fun.

In order to prepare for their lesson, teachers at each skill level spoke about practicing the lesson in their head or going back over how it happened in the past (4 responses) (Question 4). “I am picturing in my head is an idea of how I expect it to go;
how it has gone in the past; or, especially if it is an activity I have not done yet, how I think it might work.”

One intermediate teacher spoke about being excited to know how her lesson went based on her students’ performance on a formative assessment.

I will even peek out my head in the hall after math and be like, “Angela got a two out of four on her exit slip. I don't know what I am going to do.” It is a direct reflection on me and it is exciting for me to see how they do and I want to know exactly who is getting what.

All of the teachers discussed using some kind of formative assessment to determine whether their lesson was successful or not.

Usually, right there in the middle of a lesson, as I am teaching and watching the kids doing their work, talking with them, listening to the types of questions they are asking. If they are asking me questions that are going above and beyond what that learning target was, then I know they are ready to move on. If they are asking questions or if they are getting stuck on pieces within that lesson, that learning target, what it is they are supposed to learn, then I know that either some-it depends on how many times it happens, most, just a few still need more work and we need to try it again and usually differently.

One beginner level teacher will ask the students “to reflect and tell me if they get it or not, which I learned a lot where I think that they get it and they can't do it.”

If a lesson is not successful, all of the teachers said that they would find a new way to re-teach the lesson to the students (Question 7).

With math, I do the lesson in the beginning. It is the first thing that we do and then I will go and pull kids back in to a small group and do a re-teaching. Or, if I feel the whole class does not understand it, I will push the next day's lesson back and do another re-teaching and do a whole group lesson.

One intermediate teacher stated that she would ask “the kids outright, ‘What was confusing to you? Where did you feel that you were struggling?’”
The other intermediate teacher spoke about the need to move on after she has tried other ways of teaching the material and then she will “send a note home. I type out, ‘So-and-so is still having trouble counting by two's or finding the patterns in numbers. Please, in the car or at home, if you have any extra time...’ And then I cross my fingers that they work on it at home.” Another teacher said she will ask her teammates for help when her students are struggling.

There have been times where I said, “Are your kids getting this?” or “Have you struggled with this?” If, “Yes,” then me and my teammates brainstorm together what are some other ways we can come at this or if something else works for them.

When teachers do learn something new from teammates or a professional development workshop, they try to incorporate it in their lesson plans (Question 8). The two beginner teachers and the intermediate teacher spoke about implementing the change right away.

Whenever I learn something in professional development, I try to use it right away which is extremely stressful because I get these great ideas and I see that they are great, people have proven that they are great, but it's stressful because you can't do it all at once.

An expert level teacher said that “when I decide what it is that I want to do, I think about when would be a good time to use it.”

One of the expert and one of the intermediate teachers spoke about always trying to learn something new.

I would say after fourteen years that this should be a cake walk for me, but it is not because I don't want to be a teacher who does things the same way all the time and the kids are so different each year. I try to be really conscious of new things that I have heard or learned and new things that I have noticed about the kids and trying to make things different or better regularly instead of sparingly.
The teachers reflected on how their lesson planning is different than how other teachers’ plan (Question 9). Three of the teachers reported that “I don't know. I am not really sure. I don't see other people's lesson plans.” One teacher discussed that she does day-to-day planning and another teacher stated that she uses folders and is more casual. The two beginner teachers said that they take more time on their lesson plans than other people. “Some people I know will just look at the book and they can do it more by the seat of their pants, but I cannot. I am more of a planner. I need to have everything ready.” “I think more veteran teachers just have a plan in their head.”

The teachers also discussed how their lesson planning had changed since they first became a teacher. The expert teachers both said that they were more flexible in their lesson planning- one of them switching to planning on a daily basis. This insight matches the comment by a beginner teacher that “when I was first a teacher, it was way more detailed. There was a lot of scripting. It would be like pages and pages- kind of unnecessary because so many spontaneous things happen in the classroom that you kind of go with sometimes.” Three of the other teachers said that their lesson planning has not really changed.

When asked how school leaders have helped with lesson planning (Question 11), one beginner teacher observed,

I think it has been helpful that the leaders in my building are so flexible with it. My first year teaching, I was teaching in an urban school setting in a different city and we had to turn in our lesson plans every week to the principal. That was really stressful because we knew they were looking over it and it had to have a certain number of things on it. It was not really realistic for developing good lessons because it was really stressful. I think this is better where it is kind of up to us and what makes sense to us. I am a lot more comfortable with it. It helped me develop what works for me instead of what works for other people.
An expert teacher concurred. “I am quite surprised. At the last district I worked in, before you left on Friday, you had to have your lesson plans in to the principal. It was a small district, but rarely am I asked to see my lesson plans.”

An expert teacher also said that the leaders have helped teachers focus on “learning targets as opposed to learning activities.” In addition, two teachers discussed that the leaders stressed the importance of formative assessments. “They have definitely changed our expectations on the evidence that is kept on how your lesson went.”

Besides formal lesson planning, teachers have other ways they prepare for their lessons (Question 12). Teacher review their lesson by either going over their actual plans or reflecting on them (2 responses). “It’s all I think about, really especially on my way here and when I am getting ready. I am always going through my day in my head.” Three teachers discussed the need to have the materials ready for the lesson. Two other teachers responded that they do research on the internet for their lessons.

**Site 2 Principal Interview**

The site 2 principal is a female and was principal at the school for 11 years at the time of the interview. She was also an assistant principal for two years and a principal elsewhere for two years. She has been in education for 36 years. Her experience during these years had an impact on her style of leadership. She spent part of her career in East St. Louis with thirty-six students in 2nd grade. Principal 2 “grew up in East St. Louis, Illinois. I was poor. I was female. I was black. I was part of the 1960’s Brown vs. Board of Education,” but she found that, in East St. Louis, “the people had changed. The
mindset had changed. There was so much poverty and so much hopelessness. When people have hopelessness, they do some really bad things.”

When she first started teaching in East St. Louis, she asked her principal for some basic supplies for her classroom and his response to her was, “You have most of your books.” When she complained to her grandmother about the difficult situation she was in, her grandmother stated, “Try slavery and then come back and tell me if this is hard… You have a great job and I know that you love it. You have the opportunity and chance to change the mind of the child.”

As a result, she became determined to change the mindset of her children and combated the negative images that permeated the neighborhood:

making that child get rid of the records that they heard, “You are a loser. You are no good. Your daddy went to jail- you’re going to jail. Your momma is a crack head. You’re not going to be anybody.” If you can erase those records and children get small successes and you can say, “You know what, you are really great in math. When you first came in here, you could not add or divide, and I have given you multiplication problems. My God!” Children begin to believe what you believe for them.
She decided to purchase the materials for her classroom herself and have her father come in to help her clean the classroom since he owned a cleaning company.

When she found out that students were beating other students up at recess if they answered questions correctly in math, she bought a huge fishbowl and put candy in it. When students answered a question correctly, she had them pull out a huge fistful of candy and share it with students around him/her.

When we started sharing and celebrating people doing what was right and what was good and everybody earned, then they would change and it was, “Come on so-and-so. You can do it. You are good at math. You’ve got this. Show us that you can do it.” But, no one got beat up outside.
In addition to using candy to change the students’ mindset, she also created an author’s corner to help the students think of themselves as writers and worked with her college-age children to help establish pen pals with other college age children. She had parents tell her,

“My kid believes he can go to college. I don’t know if he can go to college, but you gave him something he didn’t have last year.” And that is what we are obligated to do as educators. We are obligated in this field to give you something you didn’t have and to make it real to you.

She now believes that “we have a wide gap when it comes to affluent areas versus non-affluent areas. We just have to know that every kid deserves public education- it is the only thing that will save a child.”

As the principal of site 2, she has a lot of responsibilities. One of the jobs she described was making sure the environment was conducive to learning.

I have to make sure that the building is running very smoothly. It would appear that it is not really a big deal, but when teacher’s room is too hot or things are too cold, or when kids are going outside to play and we realized we had a bees nest under the playground equipment... I police the building and make sure it is a safe and clean environment that is receptive and warm and caring for our parents, our students and our teacher.

However, she sees improving student achievement as her main concern. ““My most important duty, though, is the instruction, and that students are learning and that they are leaving here with a sound foundation.”

She believes that all students should reach high standards. “I do believe that, and it is not just a slogan with me, that all children can learn. I know we come from different backgrounds and different lifestyles, but that should never inhibit your love for learning or your ability to learn or your ability to go above and beyond where you thought you
would be.” Teachers should work with students until they are able to achieve these high standards.

When a child does not learn, you don’t leave him behind, you go back and you look at the gap and where the child was not succeeding and you give him an opportunity to succeed before you go on to the next level.

She had to confront people that wanted to keep the status quo at the school. She eventually had a conversation of the need for change with her teachers similar to the principal of site 1. She told her staff,

“When I came here, 29% of our children were meeting and exceeding standards, and 32% or our children were meeting and exceeding standards in math and that wasn’t working and we don’t change what we do, how will that work?” And I asked them, “How will that work? If we do the same thing, expecting the same thing, and the results were poor, are we willing to continue down that road?” I am very sincere when I say, “You ought to earn your check.”

When she came to site 2, the principal found a variety of things she needed to change in the school to make the environment conducive to learning. She found out that “this school in the district was considered to be the throw-away school. When I walked in, I had all of the special education population for the whole district.” She changed this district structure so that the students were equitably distributed throughout the district. In addition, she discovered other principals sent students with behavior issues to her school.

I also stopped when principals got students that became unruly, I cannot tell you why- I do not know, they put them on a bus and sent them to this school. I stopped that policy. If they were in my building, they were my students. If they were not in my building, they went to their own home school.

After stopping that practice, she still had behavior issues in the school. She stated that she wanted students to see her presence in the school, so

I did something that was kind of Joe Clark. I got a desk. We did not have the camera that we do now. My biggest problem was occurring back in what is my
5th/6th grade wing. So I had them set me up a desk and give me a computer and a telephone and my office was down there. When the kids came out- I had junior high at the time, they would come out and I would be standing in the hallway. So when they went from classroom to classroom, I was there. I was bringing order.

However, she also experienced that “every Friday, I don’t know why the children did this- I can’t explain it, but they would come over and bust out my windows. They would bust them out in my kindergarten hallway and out the back.”

She determined that she needed to change the mindset of the children. “I just began to think, ‘What would make the community embrace this school? What would make the children embrace this school as well as the teachers and give them a different mindset?’” She believes “in this field, what goes a long way, is caring. My dissertation had to do with caring because I think if kids don’t think you care for them, you can work all day long” and not see results. As a result, she found ways to build relationships with the school and community and show them that she cared about them. She and her husband started Friday basketball nights and served hot dogs to the community at the back-to-school picnics. Teachers eventually became involved in these activities as well.

The principal also learned students’ names because that says I have taken the opportunity first of all to care enough about you to embrace you and to know your name and then I would be there at the front door every morning saying, “I am so glad to see you. I am so glad you came this morning. You have really made my day.”

She wants her teachers to show students the same care- “I want people that love kids and are willing to teach- bottom line.”
Concurrently with trying to improve the culture, she began to look at the academic side of the school as well and realized there was a lot of work to do. She found that there was no system in place. I do believe that there has to be a certain amount… there is chaos because it is a school building and nothing is going to be running like a clock, but there was no instructional leader sitting at the helm. Teachers were doing what teachers wanted to do. I was a little concerned that some teachers felt that instruction was a matter of worksheets and that it was ok to read the paper while the students did the worksheet.

She stated that she made herself visible within the classrooms.

I initially put on a stepper, a counter, and if I did not do 5,000 steps a day during my day, I had not done enough. The first thing I did was get out of this office. I got in to the classrooms. The first six months, I really did not do anything but observe.

The principal of site 2 worked to find people to help her also change the culture of the teachers. “I went to people that wanted change, that were positive and I asked them to be team leaders.” She tried to change the mindset of the teachers during team meetings by creating professional learning communities and changing the focus of the meetings.

I would cringe because all it was about was what kids couldn’t do, how bad the kids were, how hard they were working, how it wasn’t working. So, I said, “Let’s look at team meetings and what is working. Can you share something with another teacher that worked for you that that teacher may be having problems with?”

She started with something simple for the teachers to change when she saw the bare walls in the hallway- “Every month, we will do some type of bulletin board that deals with the learning that is going on in your room, or something that your children have done or some type of student work.”
The principal began to ask teachers to raise the rigor of their instruction and ensure students were reaching the new high standards.

I started with Kindergarten. I told my Kindergarten teachers, “I am not happy with this level of instruction. The kids work on letters in Pre-K and they come right in to Kindergarten and work on letters- why?” “Well, that’s the way we do it.” I said, “Why aren’t they reading? Why aren’t you giving them spelling words?” “That is too hard for them.” “I need you to try it.” They would not. “Nobody in the district is doing this. Why do we have to do this?” I got rid of one of the kindergarten teachers and hired a new one in. I had one transfer in and said, “This is what I need. I need children in Kindergarten to work on the 220 Dolch words and that be a part of their spelling. Can you do that?” “We can do it.” “Ok. Let’s move on.”

Giving the students a solid foundation allowed the other teachers to build on it rather than have to go back to re-teach things they should already know. “If you have these kids and they are already where they need to be, then you can build on that. It took five years for teachers to see that.”

The principal started asking the other teachers to raise their expectations and level of instruction as well.

If a child was doing math and didn’t pass with 70 percent, I set it at 70, then the teacher was to give that child a manila folder and have it in the center with that child’s name on it. When the child had time that they were sitting with nothing to do, then they could go and get their folder and they would have worksheets- this was a worksheet activity, or something they could do to build on the skill that they were missing. The teacher would come back, working with them in small groups and then she would come back in two weeks and do an assessment and they had to have 80 percent.

After the school began to see success with this level of achievement, a teacher suggested going beyond that level. “One day a teacher said to me, ‘How comfortable do we feel if we said 80% for the pre-test and the goal is 85%?’ And, of course, I said, ‘That is a great idea.’”
She tried to create a culture with her staff where they felt like they were appreciated. She did special things for people that arrived early in the morning or showed up to a meeting first (e.g., “I laminated something for them or I had a small candy bar”). She began to give teachers more ownership and had them run professional development sessions. She would compliment them and thank them. As a result, people begin to take risk and share information with you. “I just wanted to let you know that I tried this in my classroom today. I was having a difficult time with it and, oh my God, I saw the light bulbs go off.” Then, I say to them, “Would you mind coming in to a meeting and sharing that with the other teachers?” And then you sit back and let the teachers run the staff development.

She also has an open door policy for teachers. “My door is open 24/7 or while I am here within the working hours. I always encourage my teachers to use me as a sounding board.”

The principal uses data as a way to ensure that students are progressing in an appropriate manner.

I believe in data because although you can’t get in every classroom to look at teachers every time, the data does not lie. If children aren’t learning, the data shows up. Once you look at the data, then you can talk with teachers about what their curriculum looks like.

She has data meetings with her grade level teams in which she has them identify goals for improvements without “pointing fingers.” She then follows up with the teams to ensure they are making progress on those goals.

The principal from site 2 expects to see growth in the assessment data for students throughout the year. She expects teachers to figure out the level of their students based on pre-assessments and formative assessments and then work with the students at the appropriate level.
I had teachers telling me that “I have kids in my room, and I am a 2nd grade teacher, and they don’t read at a 2nd grade level.” “What grade do they read on?” “They read on a 1st grade level.” “Well, then guess what, you have to get 1st grade books and you have to differentiate instruction because you cannot give them 2nd grade materials. They don’t understand it. So you give them 1st grade material.” “I am not a 1st grade teacher.” “Well guess what, if you want this job, you are going to meet the children where they are.”

The principal also ensures that teachers are working at an appropriate level for the students by collecting a lesson plan template she requires teachers to complete on a weekly basis. “I collect lesson plans every Monday and I am only looking at reading, math, and science. I know everything else will be in order if those three things are in place.”

The principal stated that she gives feedback to teachers after observing them. I always tried to lift the teachers up by not saying, “You have a weakness.” I would say, “Here is my concern” or “What did you see your challenge as during that lesson?” Never mind that there were two children running around while you were teaching it. When I went in, I wanted to be of help, so if it was classroom management, I found things at the regional office and would tell the teacher, “You have an issue with classroom management and you need to go to this workshop.”

She tries to limit the amount of concerns she shares with teachers so they are not overwhelmed. “I do not hit people with every concern I see because that is like you are trying to reach the mountaintop and you’ve got ten different things to do before you get there. I may choose one or two things to work on.” Often, she begins with discipline because

if you are in a classroom and you can’t get a child to sit down, that is going to be an instructional problem. That is what we tackle first. And then we can get in to the, “When you gave this skill to the child, did you come back to check to see if children understood what you were saying?”
The principal stated that she also wants to be a support for teachers (“My approach is one of assistance”). “I model for people. I work in their classrooms with them. I try to be a support. I team them with a person that I feel will invest in them and not put them down or make them feel bad about the skill level that they have.” In one instance, she modeled a lesson about Hanukah by doing such things as showing a video, bringing in food, and working with the librarian to have relevant books ready for the students. However, she only gives people a limited amount of time with her because the child is not a car. I cannot put any of these kids back in, put in a bolt, and say, “You know that year that they lost, I got it all back.” What I lose, I lose and every year that child is going to lose a little bit because they did not have what they needed. I cannot afford that.

You have two years with me. At two years, you can say you are not going to take a teacher back and you will not have repercussions. The first year I give you. I go in and work with you. I will model for you. I will give you support. I will have you go to other classroom teachers that are strong. I am hands-on. The second year, I am still hands-on, but everyone is not a teacher even if you go in to it. We have to tell the real truth. If you are not able to do good for children, then you have to find another career.

To achieve the success with the students, she had to overcome some roadblocks. She felt that when she started the “expectation is that children of color couldn’t think.” In addition, people asked why she was expecting more of them than previous principals. She took a hard stance against people that stood in her way.

After I was in this building and showed a lot of gains, I took more risk. I said, “You don’t have to like the bus. You don’t have to like the driver of the bus. But, you will, if you are going to stay on the bus, work with everyone on the bus collectively. We have to have a spirit of collaboration. If you don’t, if you just want to be one of these people throwing things at the bus, then you know what, go home.”
She did find that it was easier to get teacher buy-in after they experienced some success in their efforts, similar to the principal of site 1. “Once they see success, everybody jumps on the bandwagon. The first year, I might have had 50% of my teachers.” However, she also realizes that she continually needs to move forward. “I will be 62 this year and there is still more for me to learn. It will be a different experience every time.”

Site 2 Observation of Professional Development

The researcher observed a professional development session at site 2 that was led by a teacher from the school in the school’s learning resource center. She gave teachers concrete ways to teach comprehension and vocabulary strategies to students as well as a way to organize materials for their new reading series. The session was attended by all K-6 teachers at the school. The principal was not present as she said that she was delayed by traffic. The teacher leader from the site gave teachers copies of vocabulary strategy note cards they could use with their students that fit their new reading series. She also showed teachers a way to organize their materials for the units in the new reading series. The leader presented these topics based on teachers expressing a need to learn more about them. The leader stayed after the meeting was over and answered questions from teachers. She gave some specific ways teachers could speak with students while working on vocabulary strategies (e.g., (“If it were me, I would say, ‘What text evidence would you use to answer the question?’”)).

The principal also gave the researcher a description of data days in which the school leadership works with teachers to examine data from standardized and formative
assessments. The principal and teachers develop goals based on these assessment data. She uses the meetings to find solutions and not to place blame on anyone. She holds follow-up meetings with the teachers based on these initial meetings to ensure students are achieving appropriate growth throughout the year.

**Site 2 Teacher Professional Development Interview**

The researcher interviewed five teachers from site 2, two teachers at each level of expertise (expert, intermediate, and beginner) with the exception that the researcher only interviewed one teacher at the beginner level. The teachers included a preschool teacher, 1st grade teacher, 2nd grade teacher, 4th grade teacher, and 5th grade teacher. Two of the teachers, an expert and an intermediate teacher, asked to be interviewed together. All of the teachers in the subsample from site 2 teach all of the subjects within their grade level. The following tables identify the number of years of experience the teachers had in their current grade, at their current school, and overall as a teacher.

Table 4

*Number of Years Experience for Teachers in Their Current Grade Level*

<table>
<thead>
<tr>
<th>Level</th>
<th>Minimum Number of Years</th>
<th>Maximum Number of Years</th>
<th>Average Number of Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert (n=2)</td>
<td>8</td>
<td>28</td>
<td>18.0</td>
</tr>
<tr>
<td>Intermediate (n=2)</td>
<td>7</td>
<td>8</td>
<td>7.5</td>
</tr>
<tr>
<td>Beginner (n=1)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 5

*Number of Years Teachers Have Taught at the Current School*

<table>
<thead>
<tr>
<th>Level</th>
<th>Minimum Number of Years</th>
<th>Maximum Number of Years</th>
<th>Average Number of Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert (n=2)</td>
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<tr>
<td>Intermediate (n=2)</td>
<td>7</td>
<td>8</td>
<td>7.5</td>
</tr>
<tr>
<td>Beginner (n=1)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 6

*Number of Years Experience Teachers Have as a Teacher Overall*

<table>
<thead>
<tr>
<th>Level</th>
<th>Minimum Number of Years</th>
<th>Maximum Number of Years</th>
<th>Average Number of Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expert (n=2)</td>
<td>8</td>
<td>29</td>
<td>18.5</td>
</tr>
<tr>
<td>Intermediate (n=2)</td>
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<td>10</td>
<td>9.5</td>
</tr>
<tr>
<td>Beginner (n=1)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

The interviewer asked respondents how their school was different from other schools since their school was able to improve student achievement when many other schools have not been able to do so (Question 6). The answers to this question also provided a framework for looking at the answers to the other questions in the interview. Teachers responded that the teachers in their school collaborate well with each other (2 responses). One teacher highlighted discussions the teachers held with the grade levels around them to discuss the expectations of the students going in to that grade. “The teachers really joining together, talking with each other, trying to say, ‘Next year, I would like to see this from the students.’ That helped a lot because then I knew what they were expecting the following grades.”

Teachers also spoke about the importance of professional development that the school and district provides (3 responses).
When guided reading came out, she [the principal] was very adamant about making sure we were well equipped. She set up a professional development in the summer time and teachers came in. I remember that dearly because we learned so much about small groups and centers. I think that had a major effect.

In addition, the teachers recognized that they needed to improve and change what was taking place in the school (2 responses). “I think that all of the teachers bought in to it is one of the things. We knew we needed to improve.” It helped that there leader was supportive in the change process (1 response). “The leader plays an important role in overall school improvement. I think our leader definitely makes us feel like we are qualified, we are capable, and she supports us. She has been instrumental in pushing professional development.”

Furthermore, teachers strengthened their use of data to look at how best to help students achieve success (2 responses). With the assessment data of students, “we can group them and meet them where they are at, see what they are missing, and get them to where they need to be.” The teachers also discussed the fact that families tend to stay in the school (1 response) and that the teachers show great care for the students (1 response).

The following themes emerged from the answers to question 6: collaborative environment, professional development, the need to make changes in instructional strategies, support from the administration, and the use of data. Respondents added details to these themes in subsequent interview questions. The teachers also discussed the change process overall and how the school principal could help with that process.

**Collaborative environment.** Teachers explained how their school works with teachers to improve teaching and learning (Question 7). Teachers stated that the
professional development from the school helped them improve not just how they teach, but allowed them to come together as a staff (4 responses). When the school adopted guided reading, the professional development was done with all the teachers instead of grade-by-grade.

We all were there together and we bounced off of each other and helped each other. I really see that that helped a lot of us and that kind of took off. When we had that little boost of that, it is like we all just took off. It was like, “OK. We can do this. We can do that. We can try this. Oh. Guess what I have. I have something.” Once you get all of the teachers involved in one thing and they really buy in to it, I think it is easier to keep going like that and I think that is what we do.

Teachers also spoke about the grade level meetings they hold (2 responses). “We have grade level meetings that when implemented full time and paid attention to can be very effective because we get to share; we get to collaborate, share resources and ideas and bounce issues and concerns off one another.” Teachers said they can also go to people like their literacy coaches or other teachers for support (2 responses).

If I need help from the reading specialist, I go to her, I talk to her, we talk, we set up a plan for the child. That helps me learn what they need and that helps me as a teacher. Plus, also, we try to target some of the middle students where I think we always targeted the low end students. So, we had this high group, the middle group, and the low group. We always targeted the low group and we got no progress, no progress. We started targeting that middle group, pushing them a little further. And when we targeted that middle group a little bit and they moved up, that gave our scores a little bump and gave us more time to work with the lower group because that middle group was already gone.

**Professional development.** Teacher reflected on the professional development they receive from the school and district (Question 9). One teacher shared that “not the school itself, but the district kind of chooses it.” Although two teachers said they did not know how professional development was chosen, the other teachers said that the
professional development that is chosen is often based on what is new in education ("like, you are talking about the PARCC now, you are talking about the computer programming that we have now") (1 response), based on new curriculum adopted by the school/district (2 responses), and “a lot of these developments are based on... the assessments that we take” (2 responses). The preschool teacher attends a conference for preschool teachers (1 response).

The school previously participated in a math initiative offered by the local intermediate service center (3 responses), but, in the interview with the expert and intermediate teacher, the expert teacher stated “we have somehow gotten pushed out. There was not as much support at our school as far as our administration. The other schools still participate, but we don’t as much anymore.” The intermediate teacher stated, “We just had training for PARCC and even to this day our principal thinks we are best in the classroom and not out of the classroom.” The expert teacher added, “When they pull us during the day, she does not like it.”

Teachers talked about how the district evaluated the effectiveness of professional development that is offered (Question 9). Teachers said that there is a form that they use to evaluate the sessions (3 responses). One teacher stated, “There have been a lot of questions about what happens with those surveys. They say that they look at them, but it is not a ‘What would you like to see further on?’ it is just ‘How was the presenter?’ That’s about it.” One intermediate teacher stated that they speak informally with their principal about sessions (1 response) and a beginner teacher stated that “our principal does come in and she does do an observation three times a year for us. With this being
my first year, I am part of the mentor program so I have a mentor that comes in four
times a year to observe me as well and see how I am implementing those things I am
learning from the professional development days and seeing what I can do to better
myself.”

Teachers stated that they were supposed to implement professional development
in their classrooms (Question 10). “They want us to take it back to our classroom and try
using it. A lot of it is even technical training so when I bring it back to my classroom,
now I know how I am going to use that technology with the students or how I am going
to look at their scores and say, ‘Ahh. This is where I need to focus more on.’ They will
tell you, on our testing especially, what areas your children are low in so, as a teacher, I
can target in on that” and helps her know “what I need to put in place a little bit more in
the classroom.”

**Need to make changes in instructional strategies.** Besides identifying changes
from their professional development, teachers also acknowledged other reasons for
making changes in their instructional strategies (Question 11). Four of the teachers stated
that they make changes to meet the needs of the students “because kids are different
every year and even on a daily basis.” “Five years ago, I probably would have just kept
chugging along, but now you can see it, you recognize things are not clear.” In addition,
an expert and beginner teacher spoke about the need to make changes to “keep it fresh for
me to teach. If I am not enthused about teaching, they are not going to be enthused about
learning.”
All of the teachers in site 2 were able to describe a change they self-initiated in their classroom (Question 12). Similar to site 1, there was a difference in the type of change described based on the level of the teacher. The beginning level teacher described a more simple strategy that she put in place in her classroom (e.g., “I have recently added a picture schedule to my classroom). Intermediate teachers described a more involved strategy as a change they have made (e.g., “I have included what is called ‘brain breaks’ and “I can see a world of difference in my classroom management”). Expert teachers spoke about changing how they approached an entire subject or area of their instructional practice (e.g., “the way that I look at assessments is completely different” and “I’ve been doing more hands-on science”).

The teachers chose these particular changes for a number of reasons that did not appear to vary based on their skill level (Question 13) - new science standards were coming out (1 response), it was mandated with the new curriculum (1 response), building relationships with the students (1 response), and to meet the needs of students in the class when something was not working (2 responses). The teachers also learned about their new practice through a myriad of ways (Question 14) including being on a textbook committee (1 response), professional development (2 responses), reading books and magazines (2 responses), and speaking with a teaching colleague (4 responses).

We all share. I can go to her and talk to her. I can go to my teaching partner or go to the kindergarten teacher or go to the fourth grade teacher and say, “Help” because of that sharing- that really helps.

In terms of the pacing of the change (Question 15), the two expert level teachers said that they were implementing changes slowly over time, often as materials to support
the change became available. The two intermediate teachers spoke about implementing it “all at once. I just introduced it.” The beginner teacher also spoke about doing it slowly over time, but because

I felt that if I implemented things all at once, it is too much and what happens if one thing that you implemented doesn’t work. I like to implement things bit-by-bit. We are in November and I am still changing things, like, “Ok. That’s not working. That’s not working.” I go back and I go home and I am like, “How can this work for this child? How can this work for the needs of this one?” I will figure it out.

While implementing the changes, the teachers faced some challenges they had to overcome (Question 16) even though the beginner teacher said she did not “consider roadblocks because I feel like with a roadblock you just stop. That is not me. I am one of those people that go around it.” Although usually “this district is very good at giving you every little piece of the equipment that you need,” the expert teacher changing the science units did not have the materials yet to do so. Two of the teachers spoke about the difficulty when teachers don’t fully buy-in to a change.

If everyone doesn’t buy-in to it, it is pretty difficult because maybe in second grade they buy-in to it. In third grade, they may buy-in to it halfway. Then, when I fully buy-in to it, it is hard to teach it because there are so many pieces missing for them.

In addition, teachers discussed how students struggled to meet the new standards, similar to a teacher in site 1.

The bar was raised tremendously and the vocabulary and the lexile was just way above what our kids were used to reading because our curriculum before was probably over ten years old… They don’t ever really take an independent test and then in second grade it’s like, “Here you go. Have a good time.”
The teachers listed several ways they could overcome the obstacles (Question 17).

The expert teachers and one intermediate teacher said they could go to colleagues for help.

I do talk a lot with my colleagues. I think that is a big part of why we work so well together is we talk to each other. I mean I hear people tell me that are friends of mine that are teachers, “Oh. We don’t do that. We don’t talk. We kind of go in our room and do what we do.” We are not like that here. If I have any type of problem, I can go to anyone in here and say, “What do you think about this?” or “I am hitting my head against the wall right now. What should I do? Do you have any ideas?” I think that is one of the big things that helps us here is there are so many places I can go to find out an answer- be it go to the office, be it go to another colleague.

Teachers also stated they can consult research (1 response) or go to professional development (1 response). The beginner teacher and one intermediate teacher also said that they would reflect “and then go back and say, ‘Ok. How can I have done that, said that, exposed the kids to this differently?’ and then go back and try it again and see how that works.”

**Support from the administration.** The teachers discussed how they receive feedback on their instruction (Question 18). With the exception of the beginner teacher, they explained that they get observed by their principal only every other year for their evaluation.

The principal does observe us every other year and she tells it like it is. She is very straightforward. She will tell you what she thought she should have seen or what she needed to see. She has us help each other sometimes, like, “Can you go tell her that needs to be done?” or “Can you go tell them that needs to be done?” I do get a lot of feedback that way… But, we do get evaluated every other year and she is very strict with the evaluation so we all get a little nervous.

The frequency of observations reported by the teachers differs from the report by the principal that she is very visible in the school. Teachers also get feedback from the
literacy coach (1 response), mentors for new teachers (2 responses), and co-teachers (2 responses). “When we co-teach, that is probably the best way we usually give feedback to one another. ‘Oh. I love that idea, the way you did this. Maybe we should change this.’”

There was a difference in reports about how the principal gives difficult feedback to teachers (Question 19). Teachers generally reported that the principal tells teachers what happened in the lesson and how she wants them to improve. One expert teacher explained it as

she will tell you exactly every word that you said. She is good at typing every word you say through the whole entire lesson. She will pull it out and say, “This is what you said and this is what you should have said.” She brings us in to a meeting and she sits down and she will tell it like it is. She will say, “This is what I want to see. This is what I think you can do. You need to improve this or this is a person you can go to that does this job really well. Speak to them and maybe they can help you with that part.”

However, an intermediate teacher stated, “I have known people that have not received the best evaluation and there is not much, ‘You should do this.’ It is just ‘Fix it and figure out a way to fix it.’” Two teachers did say that they would like more observation and feedback from someone in the building, not necessarily the principal.

Constructive criticism would be nice every once in awhile. Pop in when you are obviously not expecting it. There are times when I am at the board doing stuff with the kids and it would be a great time for someone to walk in- just an “aha” moment. It doesn’t happen very often.

When we look at our observations, it makes it seem like everything is perfect all the time. It would be nice to have somebody say, “The whole time you were doing this, this kid was building towers out of crayons.” Because they do.

**Use of data.** Teachers discussed how they know if their instructional practices are effective (Question 20). An expert teacher and the beginner teacher spoke about
making sure that students were engaged in the lesson and having fun. “It’s got to be enjoyable to them and that is how I hold my standard is, ‘Are they learning because they are enjoying learning?’” An intermediate level teacher said that she bases her judgment on student achievement. An expert teacher and an intermediate teacher spoke about comparing what they are doing to their peers.

When we sit down at data days, we get our data for our classroom and the data for the other classroom. It just gives me a chance to say, “OK.” I am just saying, as an example, as a whole, all of second grade is weak in this area- why? What happened with that? Or, my kids did really well on informational texts. It must be those nine weeks we spend reading that. Or, her kids always score better in phonics than my kids. So, that is a question, too. What instructionally can I do there, too?

This comparison of student data happens at both sites.

The teachers reported that the principal also uses assessment data to judge teachers’ instructional practices (3 responses) (Question 21).

For primary, our test scores are Discovery Education tests. They do pull those out and they do look at them and they do compare teachers and say, “OK. This is what you need to work on.” They bring us in, teaching partners, to talk about it with each other. So, testing, we do have these data days. The data days we come in and they do talk and look at our test scores and see if they have improved or how much they have improved.

The principal also looks at their teacher evaluations (3 responses) and examines the students’ report cards (1 response).

Navigating change. Teachers discussed what questions they would ask if they were told to change something about their instructional practice (Question 22). Teachers would want to know why the change was taking place (2 responses). Next, they would ask for the principal to provide the training and materials necessary to implement the change (3 responses). Furthermore, one teacher would want to ensure that it would be
successful and “would ask the principal how successful this program has been somewhere else” (1 response).

Then, teachers discussed how they would want their school leaders to help with a change (Question 23). An expert and an intermediate teacher said that they would want the leader to support the change.

Give me specific ways because I have heard school leaders say, “We need to pay more attention to our higher achievers, our higher learners.” And that is great to say it, but where is the plan? Give me a specific to-do. So, if you would like for me… if I am teaching third grade and move them to fourth grade for math or… point me in the direction. Don’t just present the problem, but help me with the solution.

The beginner teacher would want someone to observe her and give her feedback. “You need to have that principal or that mentor or that leader to come in and observe you because you could be thinking you are doing something right all along and then, in the end, you are not.”

The expert and intermediate teacher interviewed together discussed that they would like the leader to implement the program with them.

She [the principal] has probably been out of the classroom for twenty plus years. To have criticism based on something that you have not really had to experience… it is difficult to swallow. I would like somebody to come in to the trenches with us and see what it is like to teach this on a consistent basis. To see what it is like to have them not understand it or see what it is like to have them understand it and see where you go from there.

**Site 2 Teacher Lesson Plan Think Alouds**

Teachers use several different ways to plan their lessons in site 2 (Question 1). Unlike site 1, the principal has a required format for teachers to use (1 response).
We also do another lesson plan for the principal. That is basically a math and reading one that gives us all the common core standards and tells us all of the objectives. It is a very laid out plan that we have to turn in every week.

An expert teacher does another lesson plan besides the required plan for herself. One of the intermediate teachers looks at student achievement to determine “are we ready to move on? Are we not ready to move on? And where we need to go, what we need to cover.”

The district has curriculum maps that teachers use as the basis for their planning (3 responses), although some teachers feel that the maps are “unrealistic” (2 responses). One of the expert teachers will “look at it monthly based on what I have done in the past and then I break it down each week. I actually don’t do my lesson plans until the weekend before that week that is coming up.” The beginner teacher says that she will create a plan by “Monday before the week happens and then probably halfway through I am changing things again.” One of the intermediate teachers will “anticipate where the roadblocks will be” as she plans.

Similar to site 1, the interviewer asked teachers to think about a lesson they were going to do in class the next day and how it related to the current day’s class (Question 2). Teachers spoke about math (1 response) and language arts lessons (4 responses). Also similar to site 1, all of the teachers spoke about a concept they would teach (e.g., “We will go over the essential question and break apart the genre and what details in this nonfiction, what features of this nonfiction text help you identify it as nonfiction”) rather than just the activity they were going to do (e.g., “I am going to do a lesson that teaches them about the 3-D printer”).
The teachers reflected on any changes they were going to make to tomorrow’s lesson based on what happened in class today (Question 3). All of the teachers, except one of the intermediate teachers who said “today went pretty smooth,” indicated that they were going to or had made changes. In general, one of the expert level teachers stated, “I will tweak things as things go along if I think they need a little bit more, we will continue on or if I think they are a little restless, we will stop.” The beginner level teacher indicated that in “my morning class, we did the book, the letter H book, and the kids had a hard time grasping the letter “H” sound and how to make it. For my afternoon class, I shortened the book and we talked more about what sound H’s make and what are some words that go along with that and the same with the numbers.”

The teachers think about a variety of things while planning lessons (Question 4). One expert teacher thinks about the objective she wants students to learn and she “try to give every child a chance to show me some success in my lesson so that they are all listening and involved and, ‘I can do it.’” One of the expert and one of the intermediate teachers thinks about the pacing of the week and tries to remember “what kind of interruptions we might have during the week.” The other intermediate teacher will discern where students might lack foundational skills for the lesson and try to “give them some background.”

The beginner teacher thinks about how to adjust the lesson to meet the needs of all of her students based on such things as their ages, special education plans, and skill level.

Actually, for instance, I had an activity for the morning class that did great. I was like, “Great. I am going to use this for the afternoon.” I had it out in the
afternoon and the kids said, “This is boring.” I was like, “OK. I know you can count to ten.” So I got these puzzle parts that are one through twenty. I took the eleven through twenty and mixed them up for them and I was like, “OK. Let’s do this. Let’s work on this together. Do you think this is boring now?” He’s like, “No. This is fun.”

All of the teachers except one of the intermediate teachers stated that they run through the lesson in their head as they are planning (Question 5). “It is kind of like a movie, play it through and figure out what is going to happen.” One of the expert level teachers added, “Especially if you have done a lot of lessons over the years, you kind of know how to run something a little differently or how to tweak it.”

In order to gauge the effectiveness of a lesson once it is taught, the expert and intermediate level teachers watch how students participate and engage in the lesson. “I base it on engagement of the kids and how we are interacting as the lesson is progressing.” One expert teacher and the beginner level teacher will also use student assessment to gauge whether the lesson was successful. “We do a real quick check, depending on what it is. Some things, if it is a first introduction, I don’t worry so much about it because I know it is going to keep going over and going over.”

If the lesson is not successful, all of the teachers stated that they would go back and re-teach the lesson a different way (Question 7). “I try to go at it at a different angle.” “The next day I will re-teach it in a different way and see what happens then and see how that goes and how the kids respond to it then.” One of the intermediate teachers added that “sometimes I have the kids help each other, too.”

When they learn something new, all of the teachers try to implement it in their lesson plans “immediately.”
Like right now, I am learning how to group differently. I have never grouped my kids according to their learning styles. So, some of my grouping will be with visuals or the auditory and I think that is pretty exciting. That is what I have learned lately and I just implement it. I am going full steam ahead and see how it works.

One expert teacher stated that “some things work and some things don’t. You get all excited about trying it and I implement it and I try it and see if it works. Some things I have kept. Some things I haven’t.”

When asked how their lesson planning is different from their colleagues (Question 9), an expert and intermediate teacher said they did not know. The expert teacher commented that everyone does “this form for the principal. I know everyone in the school is doing that.” The intermediate and expert teacher interviewed together said that their lesson plans are more than just

“Do page 48…” I would venture to bet that we have colleagues that will not do any lesson plans outside of that matrix that they are required to do for our principal and the matrix is just kind of a quick snapshot. The other intermediate teacher said that “other people may be more detailed than I am.”

The beginner level teacher said that “the other teachers will plan weeks ahead. It’s something I am trying to work myself up to.”

The teachers reflected on how their lesson plans have changed since they first became a teacher (Question 10). One expert teacher said, “I am still very detailed. I started off very detailed my very first year.” The other expert teacher went in the opposite direction. “I spent hours- multiple, multiple hours typing out lesson plans… I feel like I am more comfortable with what I am teaching.” The beginner teacher said she plans more using the objective or theme. “I feel like I take more time in to planning out things rather than just picking a book that goes with a theme and then doing an activity
that goes along with the book. I plan it out.” One of the intermediate teachers recognized that she has to plan more when “we first got our reading curriculum last year or our math curriculum three years ago, you had to bring it home and look at it. You couldn’t just stand up there and be like, ‘Duh’ with the kids, the first time seeing it.”

The teachers discussed how the school leader helps them with lesson planning (Question 11). One expert teacher said that she gives them the form to use and “we all very religiously do it and turn it in and we have to do it every week and turn it in. She will check them and leave you little comments and things.” The other expert teacher believes there is a required form now because “our ISAT data was not as good as what they wanted and then we also have a relatively new assistant superintendent who is making our principals more accountable.”

One of the intermediate teachers expressed that “it would be nice if we could sit down and really pick apart a lesson plan and have a model of a really great one to make sure we are hitting learning styles because I know most teachers don’t hit the modalities nor do we really think about that.” The beginner teacher said that she gets feedback from her mentor and principal when they do their observations.

The teachers prepare for their lessons in other ways as well (Question 12). Both expert teachers and the beginner teacher spend time finding and making classroom materials. “If there is a kid that likes blocks, I am going to use blocks to help them count. That is how they are going to be able to make the connection.” An expert teacher stated, I think to be a good teacher sometimes it has to carry over in to your personal life because you are always looking for something at the grocery store for the children… You are always spinning everything in your head what you are going
to do.” One of the intermediate teachers agreed that she reflects “about what happened during the day and what we need to cover again.

The beginner teacher also looks for ideas online that she can use in her classroom.

**Similarities between Sites**

The sites had several things in common with one another. The principals of both sites stated that they had to have a conversation with the teachers of their building to change their mindset to one in which the teachers took responsibility for students’ learning instead of blaming the students and/or their families. Both principals worked to create a caring environment for both the teachers and the students in their buildings. However, the extent to which this caring environment was actually established in site 2 appears to have mixed results based on the differences between how teachers spoke about the school’s environment in the interview.

The teachers of both sites spoke about the importance of the collaborative culture within their buildings. Teachers can go to fellow teachers and the school leaders to test ideas or to get help in solving instructional issues. In addition, the district and school provide professional development for teachers to learn new strategies for their classroom. Teachers want to see what changes look like and get examples for their own grade level before being asked to implement something in their classrooms. In addition, the teachers have the flexibility to try new practices within their classroom. In both sites, teachers with higher skill level undertook more complex changes within their classrooms.

Teachers used assessment data in both sites for various purposes. Teachers used data to group students in order to instruct them at the appropriate level. Teachers used formative assessment data to determine if students understood the concept they taught
and or if they needed to find a different way to re-teach the concept. Teachers also compared their students’ data against their colleagues’ students’ data to determine whether their colleagues had a more effective way of working with students. There was a healthy sense of competition in which teachers wanted to be successful and show great results, but helped one another in the process. School leaders also held teachers accountable to ensure students showed academic growth.

Differences between Sites

The biggest difference between the two sites was in the type of support the teachers received from their principals. In site 1, almost all the teacher acknowledged the support of their principal as being a major factor in helping them to improve student achievement. They saw their principal as being an approachable person. The principal supervised the teachers through active observation of their classrooms and interacted with them about the results and ways she could support them to improve. She did not always force people to change, but allowed them to see success and allow them to change for themselves. She did not require teachers to complete lesson plans, but used observations to make sure teachers had objectives and had assessments for students to ensure the students mastered the objectives.

In site 2, only one teacher spoke about the support of the principal as being key to the success of the school and one other teacher spoke about the principal bringing in professional development to support improvement efforts. According to the teachers interviewed, the principal only observed teachers for their evaluation—once every two years for tenured teachers. Two teachers mentioned that the feedback from their co-
teachers is the most helpful. The principal supervised teachers through a mandatory lesson plan template she collected every week. The teachers discussed being nervous to discuss their evaluation with her and some teachers said she was not always supportive in how to change.

**Coding of the Data**

The researcher coded these data starting with a list of codes that came from the main components of the conceptual framework of deliberate practice: (1) appropriate level, (2) feedback on performance, (3) opportunities for repetition, and (4) correction of errors. The researcher remained open to developing new codes that may have emerged during the research study. Data was triangulated between sources of data and the methods used to collect the data, including the principal interviews, observations of professional development, survey of all of the teachers, the professional development interview of the subsample of teachers, and the lesson plan think aloud with the subsample of teachers. The researcher compared data from the first case to the original framework of deliberate practice. The researcher then compared the results to the second case in the study. The researcher completed a between case comparison to identify similarities and differences between the two sites. Then, the researcher identified subthemes within each of the components of deliberate practice.

The following narrative illustrates themes and subthemes are derived from the data and provide non-exhaustive examples of how that theme or subtheme was shown in the corresponding tables. In the first column, the table lists the participant who gave the response and the question number or the other data source from which the researcher took
the information. The principal is identified by the site number (1 or 2) and the letter “P.” The teachers are identified by their skill level and number. The question number is listed in parentheses. For teachers, questions from the professional development interview are denoted with the letter “P” and questions from the lesson plan interview are denoted with the letter “L.”

**Appropriate Level**

“Appropriate level” means that people are trying to continually improve their performance up to the next appropriate step (Ericsson 2002). In order to do this, teachers must identify the area in which they need help, how to move up to that level, and then receive the training and materials to do so. Teachers often need help from other people to do these things. Within the area of appropriate level, the following subthemes emerged: (1) Continual Refining of Teachers’ Instructional Practices to Meet Students’ Needs; (2) Flexibility to Try New Things; (3) Foundational Expectations by Leaders of Teachers; (4) Training and Materials; and, (5) Collaborative Culture.

**Continual Refining of Teachers’ Instructional Practices to Meet Students’ Needs.** Teachers reflected that the needs of the students changed regularly, sometimes on a daily basis. These differences can be based on such things as their skill level, preferred learning modality, and special needs. Thus, teachers not only had different needs based on their level of expertise, but they also had to continually adapt their instruction to meet the needs of their students.
Table 7

Continual Refining of Teachers’ Instructional Practices to Meet Students’ Needs

<table>
<thead>
<tr>
<th>Participant and/or Source</th>
<th>Response or Information</th>
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<tr>
<td>2-P (5)</td>
<td>I had teachers telling me that “I have kids in my room, and I am a 2nd grade teacher, and they don't read at a 2nd grade level.” &quot;What grade do they read on?” &quot;They read on a 1st grade level.” &quot;Well, then guess what, you have to get 1st grade books and you have to differentiate instruction because you cannot give them 2nd grade materials. They don't understand it. So you give them 1st grade material.&quot; &quot;I am not a 1st grade teacher.&quot; &quot;Well guess what, if you want this job, you are going to meet the children where they are.”</td>
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<tr>
<td>Intermediate 1-4 (P11)</td>
<td>Each year the group is completely different, so you can't guarantee that what you used the year before will work the next year.</td>
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<tr>
<td>Beginner 2-4 (P11)</td>
<td>Because kids are different every year, every year and even on a daily basis. One day I can have a kid who is perfectly happy and wanting to do everything. The next day they may not want to do anything. It is based on their learning styles as well. I can have kids who can all learn from seeing, but then the next year I can have kids that learn by doing.</td>
</tr>
<tr>
<td>Expert 1-7 (P6)</td>
<td>Trying new things, depending on who is sitting your classroom that year, even sometimes that day, may look the same, but they are different kids completely.</td>
</tr>
<tr>
<td>Expert 2-3 (P12)</td>
<td>I had a little bit more discipline problems. I work with the social worker this year- don't have to do that very often, but I work with the social worker and we set up plans together. That really helps to make the environment a little bit conducive to learning when you have some behavior problems.</td>
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Flexibility to Try New Things. Teachers expressed having the flexibility to try new things within their classrooms to meet the different needs of their students as long as they are showing increased student achievement. This flexibility includes the way that site 1 teachers were able to lesson plan. Site 2 teachers were required to do a standardized lesson plan, but some teachers chose to do their own in addition to the required one. The new things that the teachers tried were often dependent on their skill level. Beginner teachers implemented more simple ideas such as adding a picture schedule in her classroom, intermediate teachers implemented slightly more complex
ideas such as adding brain breaks for students, and expert teachers often changed their entire approach to a subject such as adapting the science curriculum to be more hands-on. Consequently, the flexibility to try new things appears to allow teachers to adjust their professional practice to meet the needs of their students (see Table 8).

**Foundational Expectations of Leaders.** While the principals allowed flexibility, they did have some foundational levels of performance that they expected all teachers to meet. The principal of site 2 recognized that teachers needed good classroom management before she could work with the teacher on instruction. While helping with beginner teachers, she would focus on this skill with teachers first. In addition, the principals of both sites wanted to ensure that there were clear objectives for the students and that the teacher used formative assessments to ensure all students mastered those objectives. If teachers did not have this level of foundational performance in place, they helped teachers to implement it (see Table 9).
### Table 8

**Flexibility to Try New Things**

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<th>Participant and/or Source</th>
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<tr>
<td>1P (8)</td>
<td>Because of that, we have a lot of teachers that will come and say, &quot;I found this great interactive website or I found this great word work component that I want to bring in to the benchmark series we are working on- what do you think?&quot; As long as they can give me some data behind it or some statistics stating that someone has used this and has found success with it, then I am fine to put the time and money in to it.</td>
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<tr>
<td>Expert 1-7 (P26)</td>
<td>Having the opportunity, the freedom- that part I like- the freedom to try something new. If it is something that either she is not sure about, she will talk with me and ask me about it. If it is something that they think is a really good idea, something that will be passed along as well- &quot;how do you do this? How did you decide who is going to do this? What standards are you moving on to? Where that information comes from is helpful. That is the main reason. In my old school, I had two different administrators for a couple of different years. When I came here, it was such a big change and I did not realize why until I started working with these and I was like, &quot;that is why it was so much harder.&quot; It was not because I was a new teacher, it was because I was rather boxed in. I like the freedom that we have here in many things to do things how we want to do them, to change them if we want to change them, to talk to people to get good ideas from teammates and others- that is why I want to work here for ever... with the same people, though.</td>
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<tr>
<td>Intermediate 1-36 (P6)</td>
<td>As long as you are showing great results and have positive interactions with students and families and other teachers, they actually are pretty flexible with how you meet those goals... I think that the fact that they let you... as long as you are yielding great results, they will let you use and manipulate different activities and lessons and everything in the way in which you see best fits your style- the style of your particular kids for that year and your own personal style and I love that.</td>
</tr>
<tr>
<td>Expert 2-3 (L1)</td>
<td>I do a double lesson plan actually. I have a lesson plan that I keep on my desk and that is a very detailed lesson plan of what I am going to do every day in every subject. I have always done that as a teacher. It helps keep me on pace. We also do another lesson plan for the principal.</td>
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<tr>
<td>Beginner 2-4 (P12)</td>
<td>I have recently added a picture schedule to my classroom to help out with those kids who have the behavioral needs, just showing them where we are at in our daily schedule and helping them follow that.</td>
</tr>
<tr>
<td>Intermediate 2-6 (P12)</td>
<td>I have included what is called &quot;brain breaks.&quot; When I notice the children being a little lethargic, we will take a thirty second brain break and I will play music or we will get up and move around and that seems to really snap them back in to the learning.</td>
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<tr>
<td>Expert 2-3 (P12)</td>
<td>I try to get them a little more hands-on in science because I know we have all of the science standards are coming and different things.</td>
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## Foundational Expectations of Leaders

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<tr>
<td>1P (6)</td>
<td>We can't just say that at the end of the year you need to know your math facts. We need to demonstrate what steps we are going to take to get them there so that they have that vision. They need to understand once they reach that, what we are going to do to assess that they have actually gotten there and mastered that material. They need to be a part of all of that journey. They need to own their learning. It should not be driven by the adults in the building. They need to be driving that. That is a mind shift that we are working on still.</td>
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<tr>
<td>Expert 1-7 (P18)</td>
<td>As the administrators are walking through, especially this year, they are looking for specific things and they let us know now, &quot;Well, this is what we are going to be looking for.&quot; They might stop and ask a student, especially early on in the year, &quot;What are you supposed to be learning right now? What are you supposed to be doing?&quot; to make sure that the kids know what the objective is. The learning targets are there. You are asking an eight year-old, &quot;Where are your learning targets?&quot; They come through and I get feedback when they came through and asked these questions.</td>
</tr>
<tr>
<td>Intermediate 1-36 (P18)</td>
<td>They have definitely changed our expectations on the evidence that is kept on how your lesson went. I generally would keep that information in my head, but they have encouraged us to really keep it in a place that is visual, where I can see it and look back on it. They haven't really given me strict guidelines on or told me what their expectations are or how they need to be. But, they encourage me to show evidence of how things are going and they like to see that, too.</td>
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<tr>
<td>2P (14)</td>
<td>The first year is a growing year and we try to get over all of your hurdles the best that we can, especially any that impact instruction. If you are in a classroom and you can't get a child to sit down, that is going to be an instructional problem. That is what we tackle first. And then we can get in to the, &quot;When you gave this skill to the child, did you come back to check to see if children understood what you were saying? Did you ask them to repeat the information to you? Did you do a quick thumbs up? How many think this answer is 'yes'?&quot; There are so many quick ways that you can gauge understanding and you just go through the lesson and you get to the end and all at once kids are sitting there like deer in headlights. It can't be a long procession. It has to be introduction, checking, modeling, asking other students, coming back, introduction. It is a process. They've got to master the process of knowing what children know.</td>
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<tr>
<td>2P (5)</td>
<td>We did something called teach to mastery. If a child was doing math and didn't pass with 70 percent, I set it at 70, then the teacher was to give that child a manila folder and have it in the center with that child's name on it. When the child had time that they were sitting with nothing to do, then they could go and get their folder and they would have worksheets- this was a</td>
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worksheet activity, or something they could do to build on the skill that they were missing. The teacher would come back, working with them in small groups and then she would come back in two weeks and do an assessment and they had to have 80 percent.

Intermediate 2-8 (P6) I also think that we do a lot more testing to see where our students are than other schools may do. I don't know because I have never worked in another school. I have been in this one for eight years. I think we do a lot of assessing in terms of our students' current performance. (What do you do with that information?) Then, we can group them and meet them where they are at, see what they are missing, and get them to where they need to be.

Intermediate 2-6 (P6) She has always tried to teach us to identify students who need the additional support. Our principal has always promoted the RTI process and at one point our RTI process was extremely strong and it helped us identify students and give us strategies and tools in the classroom.

**Training and Material.** In order for teachers to successfully make a change, the principal needed to give teachers the necessary training, data, and materials. It is most helpful for teachers when those items are at the proper level (e.g., correspond to what they want to change and their grade level). When it was a larger change, teachers also wanted to visually see what it would look like in the classroom.

Table 10

**Training and Materials**

<table>
<thead>
<tr>
<th>Participant and/or Source</th>
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<tr>
<td>1P (17)</td>
<td>Sometimes they ask if they can go to trainings. If I have the funding for that, I will certainly support...If they are seeking out some professional development in any way, I am very rarely going to say no to that. If I can financially fund that, I am going to do that.</td>
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| Beginner 1-1 (P7)        | I feel like they are very open. If you have a questions, you can go in there and they will definitely help you with it. They are there for you as a person, too, not just as a boss. I know I had rough days when I began, just stressed out. They were there to say, "How can we help you? Calm down. You need data? Who can we pull in to get this data for you last minute?" I recently asked for a book this summer to improve on my reading and, right away, my principal said, "Oh yeah, I will get that for you." And she got me a book. I used it and I loved it. They never look at you like you were stupid- there is no stupid
question. I feel like they really appreciate any questions that we bring to them. They are willing to support us that way.

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<tr>
<th>Beginner 1-2 (P7)</th>
<th>We had a math consultant in our district that really helped us with our math curriculum. I know, me personally, I feel way more confident teaching math now. So, it has been helpful. (What did that consultant do to help you?) There was a lot of hands-on training like different games you could play. It totally stepped away from lecture-based. Obviously, in kindergarten, we don't do that anyway, just using the math book or math worksheets- more hands-on application learning. The trainings were great, too, because we would actually do those things. We were not just taking notes. We would actually play those games and see different ways to approach something. So, it was good.</th>
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<tr>
<td>Beginner 1-2 (P23)</td>
<td>When we want to make changes it is really hard or if the district wants us to make changes, they show us a lot of examples at the upper grades and a lot of times the lower grades are thinking, &quot;How does this look in a kindergarten room or a first grade room?&quot; I know the district was really pushing for student-led and that is another reason why I made the changes with the questioning. At the beginning, a couple of years ago, everyone was like, &quot;Five year-olds asking 'how do you know?'&quot; It was just really hard to wrap your head around how it is going to look in kindergarten. I think every time there is a major change it is always like, &quot;Can we see an example in kindergarten of what this looks like, of a teacher actually doing this?&quot; That has always been really hard, so I think that would be helpful for our administrators to like show us a video of it going on in somebody else's room.</td>
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<tr>
<td>2P (5)</td>
<td>When I went in, I wanted to be of help, so if it was classroom management, I found things at the regional office and would tell the teacher, &quot;You have an issue with classroom management and you need to go to this workshop…” I go in and work with you. I will model for you. I will give you support. I will have you go to other classroom teachers that are strong.</td>
</tr>
<tr>
<td>Expert 2-3 (P16)</td>
<td>I would say that this district is very good at giving you every little piece of the equipment that you need. When they get a textbook, they give you every piece. They are very good at buying every piece that goes along with that curriculum. There is no roadblock there. You have all of the materials. If you read them and take care of them and go through them, you will be able to do it.</td>
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<tr>
<td>Intermediate 2-6 (L23)</td>
<td>Give me specific ways because I have heard school leaders say, &quot;We need to pay more attention to our higher achievers, our higher learners.&quot; And that is great to say it, but where is the plan? Give me a specific to-do. So, if you would like for me… if I am teaching third grade and move them to fourth grade for math or… point me in the direction. Don't just present the problem, but help me with the solution.</td>
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</table>
Collaborative Culture. Teachers at both schools spoke about having a collaborative culture. This culture allows them to seek input from other teachers and administrators in the building about an issue they have. Thus, the help they receive is at their appropriate level at which they need support.

Table 11

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<tr>
<th>Participant and/or Source</th>
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<tr>
<td>Expert 1-7 (P6)</td>
<td>Having other people giving some ideas, we do a lot of sharing things. Here are some other ideas for some of the independent activities. We are able to set an example of &quot;what would you do next?&quot; We sit in the lunchroom and are like &quot;these kids have got this, now what?&quot; We talk about how to go deeper in the standards or how to go to a higher level standard.</td>
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<tr>
<td>Intermediate 1-36 (P7)</td>
<td>And again, the administration has a door open policy. They encourage you to come see them if you need help, not only with a parent or a behavior issue, but also if you have concerns or questions regarding the curriculum or the best ways in which to show the kids how to do something or how to understand something. They are willing to talk shop about curriculum and academics as much as they are about procedures and logistics and kind of the outer workings of how a school functions. So, I like that. They are knowledgeable with the academics and curriculum as much as they are policies and procedures.</td>
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<tr>
<td>Beginner 1-2 (L7)</td>
<td>I seek out help from my teammates. There have been times where I said, &quot;Are your kids getting this?&quot; or &quot;Have you struggled with this?&quot; If, &quot;Yes,&quot; then me and my teammates brainstorm together what are some other ways we can come at this or if something else works for them. They'll say, &quot;Oh, I have tried this. Why don't you try it?&quot; So, really relying on other kindergarten teachers is helpful.</td>
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<tr>
<td>2P (2)</td>
<td>I always encourage my teachers to use me as a sounding board. There is a level of confidentiality that I will have regardless of what they share with me.</td>
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<tr>
<td>Expert 2-3 (P17)</td>
<td>I do talk a lot with my colleagues. I think that is a big part of why we work so well together is we talk to each other. I mean I hear people tell me that are friends of mine that are teachers, &quot;Oh. We don't do that. We don't talk. We kind of go in our room and do what we do.&quot; We are not like that here. If I have any type of problem, I can go to anyone in here and say, &quot;What do you think about this?&quot; or &quot;I am hitting my head against the wall right now. What should I do? Do you have any ideas?&quot; I think that is one of the big things that helps us here is there are so many places I can go to find out an answer- be it go to the office, be it go to another colleague.</td>
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<tr>
<td>Intermediate 2-8 (P17)</td>
<td>(E) I do communicate with my teaching partner as far as are they having a hard time with this or is it just my kids and maybe we can do this instead. (I) I talk to an upper grade teacher</td>
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Feedback

“Feedback on performance” means that either people or a supervisor evaluates performance based on its effectiveness or some high standard and gives ideas on how to improve (Ericsson, Roring, & Nandagopal, 2007). Teachers desire feedback, often quantitative, on their performance along with how to move up incrementally to the next level. This feedback can come from administrators, colleagues, assessment data, or other materials. Leaders need to have difficult conversations with people, when necessary, to have them improve their performance. Within the area of feedback, the following subthemes emerged: (1) Teachers Want Regular Observations and Feedback; (2) Leaders Give Targeted Feedback and Expect Small, Continuous Changes; (3) Teachers Find Quantitative Feedback Helpful in Observations; (4) Use of Student Data for Feedback; (5) Use of Discussions and Observations of Other Teachers as Feedback; (6) Use of Other Resources as Feedback; (7) Teachers Want Practical Feedback for Changes; and, (8) Willingness to Have Difficult Conversations.

Teachers Want Regular Observations and Feedback. Teachers in site 1 stated that they appreciated getting regular observations and some feedback from their principals. Teachers admitted not being able to see everything that is happening in their classrooms, so having someone observe helps them identify something they may not have noticed. Although the administrator in site 2 stated that she provides a presence in the building, all of the teachers except the beginner teacher stated that she only observes them every other year for their evaluation. However, they expressed the desire to have observations. Teachers also stated that the observations and feedback do not necessarily
have to come from an administrator, but co-teachers and colleagues can provide valuable feedback as well.

Table 12

*Teachers Want Regular Observations and Feedback*

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<tr>
<th>Participant and/or Source</th>
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<tr>
<td>1P (14)</td>
<td>My assistant principal and I are in every classroom every day. There are 36 sections of K-5 here and my 5th grade is actually housed at a school next door because we are so big. So, they are my kiddos, but we are out of room. We have 6 rooms over there. It is a half mile there and back. It is effort to get there and remembering to get there. It is not just this building. I have to go next door, too. Some days, my assistant principal and I are about making sure we are just in classrooms so our teachers feel supported and students stay in line and they know that I and my assistant principal are around all the time.</td>
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<tr>
<td>Expert 1-7 (P17)</td>
<td>I will go down to the office and talk to the principal and just tell her, &quot;This is what I want to do. This is what I am trying to do. What do you think?&quot; I will ask her to come and see this because I miss things. Having someone else looking at it because that is something I can't do- I can't get my teammate to look and see what is going on when I am teaching because she is doing the same thing.</td>
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<tr>
<td>Expert 1-27 (P18)</td>
<td>They have put more informal evaluations in to place, which is kind of nice. As we do stuff for quite a while, we sometimes forget the little things- &quot;Oh yeah, I should have done that. That would have been better.&quot; It is nice to have someone come through and say, &quot;Could you have done this?&quot; It is not like you are ever doing anything wrong, but they are just, &quot;Have you thought of this other idea.&quot; There are a lot of ideas bouncing around. That is more the atmosphere.</td>
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<tr>
<td>Expert 2-3 (P18)</td>
<td>The principal does observe us every other year and she tells it like it is</td>
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| Expert 2-1/Intermediate 2-8 (P19) | (So, ideally, though, how would you want to be observed or evaluated as a teacher?) (I) Constructive criticism would be nice every once in awhile. Pop in when you are obviously not expecting it. There are times when I am at the board doing stuff with the kids and it would be a great time for someone to walk in- just an "aha" moment. It doesn't happen very often. (E) I don't know that it always needs to be our principal. I think that sometimes people look for different things. Whether you want to admit it or not, your relationship or how you feel towards somebody is going to impact what you look at. When I did my student teaching, the school I was
in had a team and once a week they would do informal observations. They would have just little checklists. As a group, they would go in to classrooms, without an administrator, and just give constructive criticism when it comes to that. Just being able to... there is no way that everything is perfect all the time. When we look at our observations, it makes it seem like everything is perfect all the time. It would be nice to have somebody say, "The whole time you were doing this, this kid was building towers out of crayons." Because they do.

Beginner 2-4 (P18) Through observations. I, myself, take notes. My mentor comes in to see how I am doing. I go to him and ask him for assistance on things and just through observations. I have my co-teachers in the room with me as well. I constantly ask them for their feedback. I am like, "What did you guys think of this? Did this work? What are your thoughts on this?" I will do that before and after activities to say, "This sounds like a great activity" and then, "No. It did not work well." It is nice to have my co-teachers help me with that. We are team. It is nice to have their feedback as well.

**Leaders Give Targeted Feedback and Expect Small, Continuous Changes.**

The leaders of the two sites try to give targeted feedback to the teachers, asking them to make small, but continual changes. This allows teachers to focus their improvement efforts and not become overwhelmed. Teachers in site 1 also stated that it helps to know what the leaders will look for when they do their observations as a follow-up to requested changes (see Table 13).

**Teachers Find Quantitative Feedback Helpful in Observations.** The leader of site 1 gives quantitative feedback to the teachers. The teachers stated that this helps them reflect on their practice and make changes in their classroom. It also depersonalizes the information and makes it less threatening to the teacher. The principal from site 2 gives the teachers a transcript of what they said and did during the observation, which provides similar feedback (see Table 14).
Table 13

*Leaders Give Targeted Feedback and Expect Small, Continuous Changes*

<table>
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<tr>
<th>Participant and/or Source</th>
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<tr>
<td>1P (14)</td>
<td>They know that I and my assistant principal are around all the time. Sometimes we will have a specific purpose to go in to classrooms. The month of September, we might be looking at learning targets. The staff knows this is learning target month and when I go in I will specifically be looking for that. If I am going in to specifically look for something, I will give them feedback. Each classroom teacher receives feedback from me weekly as my walkthroughs are targeted. As I complete that targeted walkthrough for a grade level, I send them an email with my findings/data. So, they are hearing from me at least once a week about some sort of instructional component of their day. I wish it were more, but, between my assistant principal and I each doing that, we have two teachers a day getting some sort of instructional feedback.</td>
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<tr>
<td>1P (11)</td>
<td>It was just a gradual approach of &quot;this worked, let's keep it going.&quot; We really have not taken anything off the table. We have kept adding and it is exhausting my staff, but we are seeing progress so let's keep doing what we know works and add to it or tweak it if we can if we find something better or different. But, I think from what I have seen with other administrators who I have worked for and with that if you move too fast, it scares some people. I don't think that you make the ground that you need to make when you do it. I think slow and steadily, definitely.</td>
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<tr>
<td>Expert 1-7 (P18)</td>
<td>As the administrators are walking through, especially this year, they are looking for specific things and they let us know now, &quot;Well, this is what we are going to be looking for.&quot; They might stop and ask a student, especially early on in the year, &quot;What are you supposed to be learning right now? What are you supposed to be doing?&quot; to make sure that the kids know what the objective is. The learning targets are there. You are asking an eight year-old, &quot;Where are your learning targets?&quot; They come through and I get feedback when they came through and asked these questions… When I saw that nobody knew what comes next, it was not surprising. I was like, &quot;I never tell them.&quot; That did make a change as far as letting them know. For many of them, they really are going somewhere else. I have it in my head. I know where you are going and letting that out there was very helpful. That was from a quick walkthrough and a quick email that was able to give me that feedback and make a change that I needed- keep doing this. This is a) really easy to implement- I can start this in twenty minutes when the next lesson starts. That feedback is helpful and I really enjoy it.</td>
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<tr>
<td>Beginner 1-2</td>
<td>Also, my principal was trying a new rubric- not a rubric, but a way of</td>
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<tr>
<td>(P18)</td>
<td>collecting data. So, she would tally how many questions I asked them and then how many of those questions were high order thinking questions and how many were just simple response questions. She tallies how many kids are on task and she would be able to say, &quot;100% of your students were on task.&quot; I think I asked ten higher ordered thinking questions. That was really good feedback.</td>
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<tr>
<td>2P (14)</td>
<td>But, one of the things I do is I critique you and I tell you where I see concerns. I do not hit people with every concern I see because that is like you are trying to reach the mountaintop and you've got ten different things to do before you get there. I may choose one or two things to work on. I may have a total of seven, but I may choose one or two for us to work on specifically and I work with you on that.</td>
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<tr>
<td>Expert 2-3 (P19)</td>
<td>She will tell you exactly every word that you said. She is good at typing every word you say through the whole entire lesson. She will pull it out and say, &quot;This is what you said and this is what you should have said.&quot;</td>
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<tr>
<td>Beginner 2-4 (P18)</td>
<td>I have my co-teachers in the room with me as well. I constantly ask them for their feedback. I am like, &quot;What did you guys think of this? Did this work? What are your thoughts on this?&quot;</td>
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<tr>
<td>Beginner 1-1 (P23)</td>
<td>Knowing that we can only do so much at a time. I hate when administrators throw 20 things at you and are like, &quot;Do this now.&quot; Rolling it out in phases and then providing us help if we need it, which a lot of times they will say, &quot;Feel free to talk to the Lit. leaders and they can come in and show you and actually teach a lesson to show you what it should look like.&quot;</td>
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<td>Professional Development Observation from Site 1</td>
<td>The leaders connected the current topic of creating text-dependent questions with the previous topic of the new assessments students were taking and the common core. The principal and assistant principal focused only on that one topic and provided time to practice and gave feedback on the teachers’ responses.</td>
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<td>Participant and/or Source</td>
<td>Response or Information</td>
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<td>1P (14)</td>
<td>I find that if you can quantify it- that 8 out of 10 or I noticed that 15 out of 23 times- they are less defensive because it is a fact. That is what I observed. If you can bring me or offer me evidence or data that I did not see or that I may have missed that might alter the information that I gave you, then please do. I am not perfect. I am not going to catch or find everything. As long as it is written, I know that I can use it for evaluative purposes, if need-be.</td>
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<tr>
<td>Expert 1-7 (19)</td>
<td>I think that it is something that is the most effective- that it is objective- &quot;I saw that there were 17 kids all on task, but there were 3 kids talking about what somebody did at recess.&quot; It is very cut and dry. Whether it is positive feedback or &quot;This is something you might want to look at again,&quot; it is always something and they are striving more and more to make it more objective to give you some numbers that go with this. That I know is district-wide that they are looking for more and more types of feedback to be objective, which is, for me anyway, effective because now I can draw my own conclusions from that- &quot;Ok, none of them knew this.&quot; I can reflect on my practice- I know what I am in here doing every day and that is not it- I don't tell them this ever. That is something that I don't think was difficult for them to let me know because it wasn't just that &quot;You're not telling people this, you need to start doing this,&quot; it was &quot;The three people we asked were not able to tell us&quot; and that is all it was. It wasn't that somebody said, &quot;You're not doing this,&quot; it was this is what I saw, this is what I observed, and that was it... The objectivity of it makes it much easier to take when it is something that now I think, &quot;Now I can do something differently.&quot; That is something I like a lot. It is helpful to get that. It is not something I see a lot, especially when I think about my own teaching, I am not always as objective.</td>
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<td>Beginner 1-2 (21)</td>
<td>At the beginning of the year it was, &quot;Do your students know their learning target?&quot; They would come up to all of the kids, one at a time when they were in there and say, &quot;Where is your learning target?&quot; Then they would email us, &quot;Twenty-four out of twenty-five students knew where your learning target was.&quot;</td>
</tr>
<tr>
<td>Expert 2-3 (P19)</td>
<td>She will tell you exactly every word that you said. She is good at typing every word you say through the whole entire lesson. She will pull it out and say, &quot;This is what you said and this is what you should have said.&quot; She brings us in to a meeting and she sits down and she will tell it like it is. She will say, &quot;This is what I want to see. This is what I think you can do.&quot;</td>
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Use of Student Data for Feedback. In addition to using observations to get feedback on their performance, the administrators and teachers would use student data from in-class formative assessments and from more formal assessments to look at how to improve student performance in a non-threatening way. Some teachers in both sites discussed that they use student data to compare their practice with other teachers. If students in other teachers’ classrooms are performing better, they compare their performance to what those teachers are doing to see if they can improve anything. This created a healthy level of competition in that teachers are still willing to help each other improve (see Table 15).

Use of Discussions and Observations of Other Teachers as Feedback. Within the collaborative culture of the schools, the teachers in both sites expressed an openness to sharing ideas with one another and observing other teachers to get ideas for their own classrooms. Teachers dialogued about the fact that it is also helpful to have cross-grade discussions so people are aware of the needs and expectations of the teachers in grades surrounding the grade in which they teach. Furthermore, since the principal of site 2 did not provide teachers with regular feedback, it appears that the teachers relied more on colleagues to give them the feedback they desired (see Table 16).
### Table 15

**Use of Student Data for Feedback**

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<th>Participant and/or Source</th>
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<tr>
<td>Beginner 1-1 (L6)</td>
<td>By if the kids can do it. That is how I decide- if they can do the skill that I am working on. I also ask them to reflect and tell me if they get it or not, which I learned a lot where I think that they get it and they can't do it. I will say, &quot;OK. Tell me what you think.” And they will tell me that they have no clue about what is going on. So, that is what I do. I measure. I get them to be honest with me. I tell them how much I really value their opinion because I think that is most important above all. I do exit slips, like I said before. Sometimes I do that for math. I try to do that for reading also, but I usually use what they do in small groups and applying those skills. I do a lot more of those informal type of assessments than formal ones because they don't perform as well on those.</td>
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<tr>
<td>Expert 1-7 (L6)</td>
<td>Usually, right there in the middle of a lesson, as I am teaching and watching the kids doing their work, talking with them, listening to the types of questions they are asking. If they are asking me questions that are going above and beyond what that learning target was, then I know they are ready to move on. If they are asking questions or if they are getting stuck on pieces within that lesson, that learning target, what it is they are supposed to learn, then I know that either some- it depends on how many times it happens, most, just a few still need more work and we need to try it again and usually differently. We need to come at something differently. For certain lessons, I use exit slips, but very often it is listening to the kids talk to each other about what it is they are doing. I have them lots of times to turn and talk in place and I do lots of eavesdropping.</td>
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<tr>
<td>Expert 2-1 (P11)</td>
<td>Five years ago, I probably would have just kept chugging along, but now you can see it, you recognize things are not clear. I base it upon when I look at my population of kids, I've got four kids that really could be my co-teachers and kind of do their own thing and go off to the side. When I look at my approaching group, as we call it, they are always going to be the ones that have difficulty with certain skills. So, I base it upon what I consider my 80% in the RTI model and where they are at. Like the other interviewee said, if half of those guys or even 20% of those guys are doing it, that is a pretty big sign that there needs to be some re-teaching.</td>
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<tr>
<td>Beginner 2-4 (L6)</td>
<td>Based on my assessments I do on the kids. If I can go back and assess them and I can see, like right now, if I were to do an assessment tomorrow and my kids know &quot;A&quot; through &quot;F&quot;, then I feel my activities have been successful.</td>
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<td>1P (10)</td>
<td>I am a very competitive person. I want the school to be at the top always, not for accolades for me, but for our students and for our families- they deserve that. At the beginning when I started, data really was not shared much with the staff before I was able to become principal. Once I started sharing with</td>
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them, slowly, but surely- it took a couple of years, it was not done in a year-they started asking me for the data. If I was not able to get it out to them fast enough after a summative assessment time of the year, they were asking me for it. Not everyone, but just a few. I would share individual data with staff and they would tell their colleague in their grade level and then that teacher would want their individual data. It has become very contagious. We are all competitive- not all, but a lot of us are competitive now because we are used to seeing great things and we want to stay there. I think sharing that information. Who does not like that? Who does not like a pat on the back?

### Intermediate 1-36 (P20)

The other teachers in my grade level, in my district. Yeah, definitely. I am eager to know how everybody else did. I definitely care about having great scores and seeing great results and looking at my student growth and seeing how it compares. I always think about what I am doing versus what they are doing. Then I reflect on whether I think that something that I was or was not doing played a part.

### Expert 2-3 (P20)

Is the politically accurate response to say my colleague's kids, too? Because, when we sit down at data days, we get our data for our classroom and the data for the other classroom. It just gives me a chance to say, "OK." I am just saying, as an example, as a whole, all of second grade is weak in this area- why? What happened with that? Or, my kids did really well on informational texts. It must be those nine weeks we spend reading that. Or, her kids always score better in phonics than my kids. So, that is a question, too. What instructionally can I do there, too? She deals with them all day. I deal with them all day.

### Site 1 Description of Data Days

We look at both individual data and that of the group. So for example, in our grade 4 data meeting we showed them their growth as a team for the year and then as a 3 year trend. We also look individually to see who is making the most growth on our achievement data (ISAT) and growth data (MAP). The reason we do this is so that we can capitalize on what that teacher is doing in her/his classroom that appears to be working.

### Site 2 Description of Data Days

The school has data meetings with each grade level team of teachers in which they examine student assessment data to develop goals and plans to improve student achievement during the year after identifying areas of success and areas of concern in reading and math. The principal takes notes at the meeting and she tries to let the teachers run the meetings and come up with ideas on how to improve. She does not try to point any fingers at the meeting, but rather looks at how the teachers can improve to keep moving forward. After the meeting, the principal has check-up meetings with the teams to look at their progress on their goals and plans.
Table 16

*Use of Discussions and Observations of Other Teachers as Feedback*

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<tr>
<td>1P (16)</td>
<td>If I have a teacher who is excelling in the math component, but not the literacy component, I will send my literacy leaders in there to say- again, I am not an expert any longer in the area of literacy, but my literacy leaders certainly are, so I will sometimes send literacy leaders in to classrooms and say, &quot;Just spend some time observing. Give me some feedback. Give me your ideas as well...&quot; If you are struggling in the area of classroom management, I am going to get you a sub and I am going to send you in to a classroom that has stellar classroom management just to get some more ideas. Just to get some tricks in your hat in case you need to pull something out.</td>
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<tr>
<td>Expert 1-7 (P7)</td>
<td>One of the things that we have tried a lot is being able to look in others classrooms. It is very isolated in here. We have had a couple of times during staff meetings where there is scheduled times to do a walk-through-go in and look at what someone else's classroom look like, seeing how even someone takes attendance on the wall just to get ideas. Stopping and having lunch with teammates, you have a chance to talk and get ideas, sharing that information.</td>
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<tr>
<td>Intermediate 2-6 (P20)</td>
<td>Talking to other colleagues about how they have approached different areas of concern and then I might say, &quot;OK. I probably need to change this up a little bit and make small groups fifteen minutes versus twenty-five minutes and make centers a little more engaging.&quot; So, I guess it would be other colleagues.</td>
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<tr>
<td>Expert 2-3 (P6)</td>
<td>I think the teachers really joining together, talking with each other, trying to say, &quot;Next year, I would like to see this from the students.&quot; That helped a lot because then I knew what they were expecting the following grades. So, the primary talked, then the 2nd graders talked to the 3rd graders, and the 3rd graders to the 4th. I think that helps a lot because sometimes you are in your own grade and you don't actually think, &quot;Oh. I should be laying that basis for that next grade.&quot; Sometimes you are just stuck in your own curriculum. So, it kind of helps to get across the board curriculum, not just your own grade level. And just sometimes teachers just get to talk to their own grade level teachers, not the grade above them or the next grade above them, so that helped.</td>
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<tr>
<td>Beginner 2-4 (P18)</td>
<td>I have my co-teachers in the room with me as well. I constantly ask them for their feedback. I am like, &quot;What did you guys think of this? Did this work? What are your thoughts on this?&quot; I will do that before and after activities to say, &quot;This sounds like a great activity&quot; and then, &quot;No. It did not work well.&quot; It is nice to have my co-teachers help me with that. We are team. It is nice to have their feedback as well.</td>
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</table>
Use of Other Resources as Feedback. Throughout the interview, teachers discussed other resources that they use for ideas or feedback on their lessons. These resources include books, magazines, internet websites, professional development, and researchers. Teachers used these resources to get ideas on how to implement changes in their classroom.

Table 17

Use of Other Resources as Feedback

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<thead>
<tr>
<th>Participant and/or Source</th>
<th>Response or Information</th>
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<tbody>
<tr>
<td>Expert 1-27 (P14)</td>
<td>I went on the web and I went through the What Works Clearinghouse, the Best Evidence encyclopedia, and Google searched a lot of different things-my own personal research, ERIC, whatever I needed.</td>
</tr>
<tr>
<td>Intermediate 1-36 (P14)</td>
<td>Even though I read the book this summer and I marked it up and I posted it. I felt like I was really having to go back and re-read even before I did my lessons every day, I would have to go over it in my mind before I did it again. The kids know- they can sense when you are not confident or secure in what you are presenting to them and I definitely wanted them to see that I really felt great about what we were doing. It was a roadblock in that every day before Daily 5 I had to open up my book and go over it again in my mind. That was a little bit stressful that first year.</td>
</tr>
<tr>
<td>Beginner 1-2 (P14)</td>
<td>A lot of it came from that math consultant. She did a lot of that stuff with math.</td>
</tr>
<tr>
<td>Intermediate 2-6 (P14)</td>
<td>Reading. I read all of the time. Talking to other colleagues. Getting ideas from other people. I love Instructor magazine. Some of it is just reading and talking to other colleagues.</td>
</tr>
<tr>
<td>Beginner 2-4 (L12)</td>
<td>I am a Pinterest fanatic and my co-teachers will vouch for that because I come in everyday and am like, &quot;I saw this on Pinterest and I think it is going to be a great idea&quot; and sometimes it is and sometimes it is not. So Pinterest and I also use Teachers Pay Teachers. I also use a lot of the curriculum books that we have. Mailbox.</td>
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</table>
Teachers Want Practical Feedback for Changes. Teachers expressed the need to get very specific feedback on how to make changes within their classroom and not just have leaders talk about theory. Several asked to see demonstrations of the changes for students at the grade level they taught. Teachers would then want the leader to observe the changes and ensure that the change was effectively implemented in the classroom.

Table 18

<table>
<thead>
<tr>
<th>Participant and/or Source</th>
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<tr>
<td>Expert 1-7 (P23)</td>
<td>By providing support by either some type of demonstration, somebody that I can watch, even a video would be helpful. Also, support in the materials that are being used and some feedback. Now watch. If this is the type of change you want, how is it working? Come look at it. If there is a change, not even just instructional practices, if there is a change just in management providing support, &quot;This is not working very well. Here is an idea. How about you try this?&quot; By asking, &quot;What should this look like?&quot; and then maybe &quot;She is doing that down the hall. Why don't you go see how it looks in her classroom?&quot; Then, coming back a few days later and watching. Giving the feedback then. &quot;I see this now in here that this is working very well. This part may need some more feedback.&quot;</td>
</tr>
<tr>
<td>Expert 1-27 (P23)</td>
<td>They give us the time for training. They support us. They are wonderful. &quot;So you need resources? We will find the money somewhere.&quot; They are very accommodating with the physical materials, with the information, and allowing us to get the training. I think that is one of the best ways.</td>
</tr>
<tr>
<td>Beginner 1-2 (P23)</td>
<td>The best way, especially in kindergarten... when we want to make changes it is really hard or if the district wants us to make changes, they show us a lot of examples at the upper grades and a lot of times the lower grades are thinking, &quot;How does this look in a kindergarten room or a first grade room?&quot; I know the district was really pushing for student-led and that is another reason why I made the changes with the questioning. At the beginning, a couple of years ago, everyone was like, &quot;Five year-olds asking 'how do you know?'&quot; It was just really hard to wrap your head around how it is going to look in kindergarten. I think every time there is a major change it is always like, &quot;Can we see an example in kindergarten of what this looks like, of a teacher actually doing this?&quot; That has always been really hard, so I think that would be helpful for our administrators to like show us a video of it going on in somebody else's room.</td>
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</table>
**Willingness to Have Difficult Conversations.** The principals of both sites spoke about the need to have difficult conversations with people when they needed to improve. This theme highlighted one of the major differences between the two sites. The teachers spoke of the site 1 leaders as being very approachable and supporting teachers through the change. In addition, the principal of site 1 stated that she does not push people to make changes, but allows them to see the success of others to make them want to change. Although the principal of site 2 said that she also provides teachers with support, teachers reported that they were nervous to speak with her and that there was not always the support there for them. The principal of site 2 also recognizes that not all people can be teachers (see Table 19).

Part of this difference between principals may stem from the principals’ prior experiences. The principal of site 1 said she had administrators help her through some tough times. The principal of site 2 highlighted conversations with her grandmother in...
which her grandmother told her to quit whining and do the work even if it is hard. It is interesting to note that although there were two different styles, both appeared to aid in the improvement of student achievement.

Table 19

Willingness to Have Difficult Conversations

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<tr>
<th>Participant and/or Source</th>
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<tr>
<td>1P (9)</td>
<td>I think it is important that you have a fine line between task and relationship. I am here to support these people. I have gone through difficult times in my life where my administrators have helped me get through things. I always said that if I were to become an administrator, I would do that for my staff as well. At the same time, I still expect that task to get completed because that is ultimately what we are here for. My staff understands that. They do not take advantage of that. There can be a day where I allow them goodness to leave because their child is sick or something. At the same time, if I pull up data and it does not look where it should be, I am going to pull in that same teacher, I will pull them in the next day, and we are going to have a very difficult conversation about this is where I am seeing your data is, this is where the data of your peers is, explain to me why it is not at that level. I always bring it back to what can I do to support you. I am ultimately responsible. So I never want them to leave defensive from my office or with not knowing where their plan is or where their next step is going to be. When we have those difficult conversations, I do put it back on me and what I can do to support them.</td>
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</table>
| 1P (18)                  | Not everybody is ready for change. Not everybody is ready to take the responsibility off of the children and put it back on to them. So, definitely some roadblocks. I find that if I push we get resentful, we get defensive and students are not going to benefit from any of those traits. An example is that one of my teams, a couple of years ago, really wanted to do flexible grouping for math. They would look at their data. This teacher is going to take the lower darlings. This one is going to take the high. The two other teachers will take the middle kids. How are we going to break up those kids? Well, one of the teachers said, "I am not comfortable doing that. I don't want to do that. I am releasing my students to you, but yet I am still responsible for their growth. What if you are not getting them to grow? I don't want be responsible for making your kids grow. So, this one particular teacher was just not in to that. I did not make her because that was not going to best for anyone and it was not something per their contract that I could mandate. I said to the three remaining team members, "You go ahead and flexibly group just with the
three of you and this teacher will follow. Trust me, she will follow. Flexible grouping is fabulous because it remains flexible. They can move in and out per exit slips, formative assessment in what areas they need help with. When your scores start to improve, this teacher is going to want to be a part of that. That is exactly what happened and now all four of them are doing that.

Intermediate 1-36 (P19)

They would say, "If you could stop by my office at some point." Generally, it is a, "I am noticing this. What can we do to help you?" which is great. Fortunately, I haven't had anybody really question my instructional practices. If I am late getting my kids to dismissal or.. that is the mode of operation is to have you stop by, but they will initially start out by saying, "What can I do? Personally, what can we do as your leaders to help you?" before they say, "You need to be doing this, that, or the other. How can we help you?" That is a great way to be. I think it is a great way, especially for step one of solving a problem- feeling like you are supported.

Beginner 1-2 (P19)

One time I guess I did have something happen. It was not with my instruction, but there was a parent that called and said something. She just sat me down and said, "Listen- this happened." I sent an email and she didn't want it sent. She said, "Just don't do it again." She said, "You are a new teacher. We all learn from our mistakes." She is nice and so approachable. You don't feel threatened or anything like that.

2P (5)

At two years, you can say you are not going to take a teacher back and you will not have repercussions. The first year I give you. I go in and work with you. I will model for you. I will give you support. I will have you go to other classroom teachers that are strong. I am hands-on. The second year, I am still hands-on, but everyone is not a teacher even if you go in to it. We have to tell the real truth. If you are not able to do good for children, then you have to find another career. I am a firm believer in that. I do believe that everybody that is in teaching probably has a gift that made them think "I have a passion" because you are not coming in to this career making engineer salaries. You have to have something.

2P (7)

I remember when I was a young teacher. I do what young teachers do. I came home complaining about my students and bemoaning, "All of the parents don't come to school. Students don't come to school to learn. They don't do their homework. I call parents. They seem disinterested. Yadda yadda yadda. Poor me. Poor me. Why did I go in to teaching? It is so hard. Don't get paid. Don't make enough money. All of these problems. I have to raise these kids." My grandmother listened to me so nicely and so carefully. And she said, "You think this is hard?" Of course, I said, "Yes." My grandmother said, "Well, I knew my grandmother. I want to tell you. Try slavery and then come back and tell me if this is hard. You are getting paid more money than I ever believed people would make. You have a great job and I know that you love it. You have the opportunity and chance to change the mind of the child and all you can do and sit up here." My grandmother did not curse and she said to me, "bitch and moan." She said, "Who is the problem?" Every time I think of it, I really got nothing to complain about.
**Expert 2-3 (P18)**  | The principal does observe us every other year and she tells it like it is. She is very straightforward. She will tell you what she thought she should have seen or what she needed to see. She has us help each other sometimes, like, "Can you go tell her that needs to be done?" or "Can you go tell them that needs to be done?" I do get a lot of feedback that way… But, we do get evaluated every other year and she is very strict with the evaluation so we all get a little nervous.

**Intermediate 2-8 (P19)**  | I have sat in the seat where I have known people that have not received the best evaluation and there is not much, "You should do this." It is just "Fix it and figure out a way to fix it."

**Intermediate 2-6 (P19)**  | Through our post conference after an observation, she will sit down and say, "This is what I saw, but I think this was a little weak and you can probably improve in this area." She just gives it. It is typed inside of the post conference summary.

**Repetition**

“Opportunities for repetition” refers to people having the time to practice their new skill so they can master it (Ericsson, Prietula, & Cokely, 2007). A possible negative consequence of repetition is that people can stop trying to improve because they become complacent (Bereiter & Scardamalia, 1993). The principals of both sites walked in to this phenomenon when they assumed the leadership position and had to change people’s mindsets. They also had to establish an environment that was conducive to teaching and learning so teachers could focus on instruction rather than other issues in the school (e.g., behavior issues). Then, the leader had to give teachers time to develop their skills that they could add to their repertoire of strategies to use with students. Within the area of repetition, the following subthemes emerged: (1) Leaders Had to Shift the Teachers’ Mindset; (2) Environment for Practice; (3) Teachers Need Time for Change; and, (4) Repetition Allows for Teachers to Develop a Repertoire of Strategies.

**Leaders Had to Shift the Teachers’ Mindset.** One of the potential negative consequences of repetition of performance is that people get in to a rut and do not try to...
improve since they become complacent. It is interesting to note that there was a transition of leaders in both schools before the schools won the award. In addition, both principals stated that they had to have conversations that shifted the mindsets of the teachers before they started seeing improvement. The leaders changed the focus on what the teachers could do to improve performance instead of focusing on what the students and families were not doing. Teachers expressed an ownership of student learning and a need to keep moving forward with their own professional development.

Table 20

*Leaders Had to Shift the Teachers’ Mindset*

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<tr>
<th>Participant and/or Source</th>
<th>Response or Information</th>
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<tr>
<td>1P (11)</td>
<td>I remember my first meeting with my staff on institute day as the principal. They knew me for two years as the A.P. And I was very honest with them. I remember saying to them, &quot;Our backs are against the wall and we are in a hole. We have got to get out of this hole. I came from another school in the district. I taught 1st grade there for 15 years. Their population was a lot more in need than this population and they were out-achieving us and I said that there was no excuse for that. There is no reason for that. I don't want to hear anymore that our kids don't have this, that our kids don't have that, that their moms are here, that their moms don't do that. We have to completely remove all excuses and focus on why we are here. Like the superintendent says, ‘Can you teach our kids? Can you teach these kids?’ And if you can't, maybe this is not the place for you.” So, once I said that and I saw some true emotion coming from people, it was gradual.</td>
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| 2P (18)                   | People want to tell you about past history. They want to tell you about someone that has been in the building that was not a person that they had any success with, but here is the deal- it was easier to work with them because they set no expectations. One of the things you hear, just like you hear with the kids, "You are always asking us to do more. We didn't have to do that with the past principal, Mr. so-and-so, why do we have to do it with you?" My thing is, "When I came here, 29% of our children were meeting and exceeding standards, and 32% or our children were meeting and exceeding standards in math and that wasn't working and we don't change what we do, how will that work?" And I asked them, "How will that work? If we do the same thing, expecting the same thing, and the
results were poor, are we willing to continue down that road?" I am very sincere when I say, "You ought to earn your check." When you come in to a building, nobody is just saying, "You know what, you teacher, you poor thing, I am just going to pay you every two weeks to come in here and be a poor thing." You ought to earn your check. If you are not willing to earn your check and you knew long hours, difficult parents, difficult children, poor people, low achievers, everything that you can hear about you knew that when you came in this field. You should not expect to walk in the room, click your heels three times, and something changes. But, when you learn the mastery of teaching, which is the same no matter what you do- commitment, hard work, perseverance, going above and beyond what is needed, engaging that child, caring about that child, loving that child, making that child get rid of the records that they heard, "You are a loser. You are no good.

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<tr>
<th>Beginner 2-4 (P6)</th>
<th>I feel that it starts with the district. At the higher level, getting the people to recognize that in order for these students to achieve, they need to get their teachers on board with it. Once they start sending their teachers to these professional development, doing their research, and coming together as a team- once you start working as a team, that is when you can start seeing the improvement in the kids and getting them to push forward.</th>
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<tbody>
<tr>
<td>Expert 2-3 (P6)</td>
<td>I think that all of the teachers bought in to it is one of the things. We knew we needed to improve.</td>
</tr>
<tr>
<td>Beginner 1-2 (P11)</td>
<td>If something is not working, I think it is really easy for teachers to be like, &quot;Oh, my kids are so bad today.&quot; It is usually because of something you are doing or something you need to change.</td>
</tr>
<tr>
<td>Expert 1-27 (P11)</td>
<td>I am always looking for something more effective. I grow as an educator.</td>
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<tr>
<td>Intermediate 1-36 (P11)</td>
<td>I try to do something new every year that is inspiring to me and I hope will be inspiring to them.</td>
</tr>
<tr>
<td>Intermediate 1-36 (L5)</td>
<td>I am so excited to grade tests and to grade exit slips because I am dying to know who is listening. I will even peak out my head in the hall after math and be like, &quot;Angela got a two out of four on her exit slip. I don't know what I am going to do.&quot; It is a direct reflection on me and it is exciting for me to see how they do and I want to know exactly who is getting what. So, yes.</td>
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<tr>
<td>Expert 2-1 (P11)</td>
<td>Five years ago, I probably would have just kept chugging along, but now you can see it, you recognize things are not clear.</td>
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<tr>
<td>Expert 2-3 (P11)</td>
<td>The reason I make changes is every classroom is different… It keeps it new and fresh. I need to find new ideas to keep it fresh for me to teach. If I am not enthused about teaching, they are not going to be enthused about learning. So, I want to keep up-to-date. I want to change my themes, my ideas, keep it constantly changing. If I did the same thing for twenty-eight years, I would be bored, they would be bored. So, every year, I try to do some different things even if it is just discipline.</td>
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I believe that there is always room for improvement. I do it for a lot of reasons because I just don't believe in rehashing old lesson plans. Everything is new for me every year and it is kind of psycho of me because I could just, you know… but, I reinvent the wheel every time because it builds curiosity for me, it keeps me motivated, it helps me stretch and grow to find out what else is new out there. Every lesson plan this year has been brand new. Nothing is the same.

**Table 21**

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<thead>
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<th>Participant and/or Source</th>
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<tr>
<td>2P (5)</td>
<td>When I walked in, I had all of the special education population for the whole district. I did not know I had the special ed. population for the whole district until I went to an Administrative Team Meeting (an ATM). When I was there, principals were going to lunch and I was trying to rush back to my building, hoping that nothing was torn up. I said to them, &quot;How do you go to lunch when everything is jumping off?&quot; They said, &quot;Well, there is nothing jumping off in our buildings.&quot; I said, &quot;Well, what about your special ed. kids?&quot; I had BD, which is behavioral disorder- and I have a special ed. background. I had LD, learning disabled. I had EH, educationally handicapped. I had socially maladjusted. I had autistic. I had special needs in terms of down's syndrome. I had four or five classrooms of special ed. When they told me that they did not have any of these children, I went to the superintendent and said, &quot;it is unfair for this school to house all of the problem children. We need to share the wealth.&quot;</td>
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I don't mind taking a population of children, but why do the other principals have no responsibility?" What came out of it, I have the 2nd and 3rd grade cross-cat classroom and I have a 4th and 5th grade cross-cat classroom, but two of the other building house special needs children as well. Now we have a middle school that we did not have before and they have the 6th, 7th, and 8th graders over there. That was one thing that happened that made a difference in my building. I also stopped when principals got students that became unruly, I cannot tell you why- I do not know, they put them on a bus and sent them to this school. I stopped that policy. If they were in my building, they were my students. If they were not in my building, they went to their own home school. I did something that was kind of Joe Clark. I got a desk. We did not have the camera that we do now. My biggest problem was occurring back in what is my 5th/6th grade wing. So I had them set me up a desk and give me a computer and a telephone and my office was down there. When the kids came out- I had junior high at the time, they would come out and I would be standing in the hallway. So when they went from classroom to classroom, I was there. I was bringing order.

1P (14) Some days, my assistant principal and I are about making sure we are just in classrooms so our teachers feel supported and students stay in line and they know that I and my assistant principal are around all the time.

1P (2) Student success, supporting my teachers, curricular needs, and safety are my biggest. I work very closely and well with our maintenance department making sure we have hot water and clean water and that our staff has what they need structurally so their students are in the best learning environment they can be.

2P (2) One of the responsibilities is that I am the educational leader and I am responsible for curriculum and instruction and teacher management. I also manage the fiscal concerns of the school as they give me a budget. I have to make sure that certain line items stay within the parameters that I have been given, but in the same instance buy materials for the teachers or get materials for various needs. I am also a building manager because I have to make sure that the building is running very smoothly. It would appear that it is not really a big deal, but when teacher's room is too hot or things are too cold, or when kids are going outside to play and we realized we had a bees nest under the playground equipment... I police the building and make sure it is a safe and clean environment that is receptive and warm and caring for our parents, our students and our teacher.

**Teachers Need Time for Change.** Teachers spoke about the need for time to both learn about a change and to enact it in their classrooms. This concept was especially true for changes that involved a change in the teachers’ schema. Teachers wanted to
make sure that they were comfortable with the change before they used the new strategy with students. Teachers at both sites spoke about sustained professional development they had (site 1 worked extensively with a math consultant and site 2 worked on guided reading) that was effective.

Table 22

*Teachers Need Time for Change*

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<tr>
<th>Participant and/or Source</th>
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<tr>
<td>1P (12)</td>
<td>It's time that is needed. That was one thing that when we were renegotiating their contract, we kept hearing teachers wanting time to talk- more time less directed by the ad. Center, by me, and more time for them to collaborate with one another and learn from one another and share from one another. Most of my grade levels are very fortunate in that they have some veteran teachers and they have some teachers just out of college who have the latest and greatest in best practice and can share. And we have our veteran teachers that can say, &quot;Tried and true, this has worked every time for me. Let's try rolling it out and bringing it back in, too.&quot; So, it is really the time to collaborate with one another. It helps them to build the good relationships so they can trust one another.</td>
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<tr>
<td>Beginner 1-2 (P7)</td>
<td>We do a lot of trainings. We have three meetings a month. Typically, once a week, on some type of professional development. We have time to work with our grade level team and plan…. We had a math consultant in our district that really helped us with our math curriculum. I know, me personally, I feel way more confident teaching math now. So, it has been helpful. (What did that consultant do to help you?). There was a lot of hands-on training like different games you could play. It totally stepped away from lecture-based. Obviously, in kindergarten, we don't do that anyway, just using the math book or math worksheets- more hands-on application learning. The trainings were great, too, because we would actually do those things. We were not just taking notes. We would actually play those games and see different ways to approach something.</td>
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<td>Expert 1-7 (P15)</td>
<td>I did the pre-planning and set-up before the school year started. I made the schedule so I would have time for what I needed- the whole group for everybody and the small group. I spent a lot of time over the summer back and forth with my colleagues all over the internet finding independent activities for all different levels</td>
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<tr>
<td>Intermediate 1-36 (P22)</td>
<td>I also like to make sure, if they are asking me to make a change, that I have enough time. The same with professional development. If they are telling us that we need to be doing something, I do think it is critical that they give us the amount of time to feel like we really understand it before we have to</td>
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present it to the kids because if the kids know, like I said, if you are not feeling comfortable or confident, it does not go well.

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<tr>
<th>Beginner 1-1 (L8)</th>
<th>Whenever I learn something in professional development, I try to use it right away which is extremely stressful because I get these great ideas and I see that they are great, people have proven that they are great, but it's stressful because you can't do it all at once. So, I am trying to learn how to balance that. We actually had a great PD on Monday about implementing social studies in the reading curriculum, which sounds great and I took notes and had plans in my head, but now I need the time to sit down and actually do it. I love the ideas I get, but it is almost like I feel like I compile them until I have a long break or I have the summer or something where I can actually take the time to look through and review it. Too often, I try to implement something and I only understand it halfway myself and then it just fails because the kids don't understand it.</th>
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<tr>
<td>Intermediate 2-6 (P6)</td>
<td>When guided reading came out, she was very adamant about making sure we were well equipped. She set up a professional development in the summer time and teachers came in. I remember that dearly because we learned so much about small groups and centers. I think that had a major effect.</td>
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<tr>
<td>Expert 2-3 (P7)</td>
<td>Well, way back when, when it was guided reading, for example, when all of this was happening, they helped us set up everything and then we had these workshops that we went off to the intermediate service center and different things like that. That just helps so much because we were just in to it and everybody was in to it and we all met together. It was not just, &quot;OK. The first grade teachers, you go now.&quot; Or &quot;Second grade teachers...&quot; We all were there together and we bounced off of each other and helped each other.</td>
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<tr>
<td>Expert 2-1 (P7)</td>
<td>We have planning meetings across the district after school as far as math and reading curriculums. We have team meetings.</td>
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<tr>
<td>Professional Development Observation</td>
<td>The leaders gave the teachers time to practice text-based questions during their professional development session.</td>
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**Repetition Allows for Teachers to Develop A Repertoire of Strategies.** As teachers teach their classes in a stable environment, it allows them to develop a repertoire of strategies. Having a variety of strategies from which teachers can draw allows the teachers to have various methods they can use to meet the students’ changing needs.
## Table 23

*Repetition Allows for Teachers to Develop A Repertoire of Strategies*

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<thead>
<tr>
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<tr>
<td><strong>Expert 1-7 (P11)</strong></td>
<td>I am always doing something - finding something new. Usually, it is whatever I am the least comfortable with. I may get a good idea from a colleague, a conference that I went to, from somewhere. I am like, “Ok, I am going to try this.” If this works better than what I was doing, that is my new thing. Other times, “no. I am going to keep doing it how I am doing it, but seven kids did not get that and so I will say I do have another way. Let's try it this way. Sometimes it really depends on who is in the class and where the kids are starting- I know where they are supposed to end up. It may be the majority of the class in one spot or a pocket of kids in one spot, but the changes I make are because I hear something, read about something, or train in something that I think is better than I already am doing or when I see that what I am doing is not working. That is when I want to change. For a lot of the time, when it is something that I would not have done normally and I changed it and it worked for the kids now, maybe when I teach it again, I am going back to the way that I like, but I still have a different way I can do this because the kids change, really, day-to-day.</td>
</tr>
<tr>
<td><strong>Beginner 1-2 (P7)</strong></td>
<td>I think I told you last time we talked- last year we had a math consultant in our district and she had a lot of great ideas and new strategies for teaching math. When we would go to those trainings it would almost be like instantly I would want to incorporate those new ideas. I find a lot of stuff online and then download it, laminate it, and try to use it as quickly as I can. I feel like the more different ways that they can see something or use something the better.</td>
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<tr>
<td><strong>Intermediate 2-6 (P7)</strong></td>
<td>My principal, during her building meetings, is always trying to keep us updated with the latest information and education, whether it is technology or new resources or ways to approach teaching and learning. She is excellent at that. So, she has building meetings for that. We have grade level meetings that when implemented full time and paid attention to can be very effective because we get to share; we get to collaborate, share resources and ideas and bounce issues and concerns off one another and problem. That can be very effective- it has been very effective. I love the fact that our district has literacy coaches that are there for support in all grade levels. Our institute days can be very value added to improve teaching and learning.</td>
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<tr>
<td><strong>Beginner 2-4 (L3)</strong></td>
<td>I have a morning class and I have an afternoon class. My morning class, we did the book, the letter H book, and the kids had a hard time grasping the letter &quot;H&quot; sound and how to make it. For my afternoon class, I shortened the book and we talked more about what sound H's make and what are some words that go along with that and the same with the numbers.</td>
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Correction of Errors

“Correction of Error” entails people looking at their performance and working at improving what they are doing, which is often difficult work and requires a safe environment where a person feels safe to do so (Gardner, 2002). The principals of both sites needed to build relationships with their teachers, which appears to have occurred more effectively in site 1. By establishing a safe environment, the teachers were able to utilize student data to identify areas in which the teachers needed to improve their instructional strategies. The teachers needed to see success to become and remain motivated to continue this work. Within the area of correction of errors, the following subthemes emerged: (1) Need to Build Relationships Over Time; (2) Teachers Re-Teach Concepts in Different Ways if Students Do Not Master Them; (3) Set Goals Based on Data; and, (4) Need to See Success.

Need to Build Relationships Over Time. Principals spoke about the need to build relationships with their teachers over time so they felt comfortable sharing with them and taking risks. It took the principals a few years to actually build these relationships, which speaks to the importance of sustainability of leadership in schools. The principals also tried to set-up a risk-free environment so teachers would try new things to improve student achievement. The principal of site 1 appeared to be more hands on and would ask teachers about the new practice, ensuring there was research to back it up. However, whereas five of the six teachers discussed the support of the principal and assistant principal in site 1 as being a reason their school was able to succeed when other schools could not, only one teacher mentioned it as a reason in site 2.
(one other teacher mentioned the principal setting up professional development as a reason). Possibly, since the principal of site 2 did not make regular observations, teachers might have the flexibility to try new things because she would not have knowledge of them. Overall, there appeared to be a more positive attitude with all of the teachers in site 1 as opposed to site 2.

Table 24

Need to Build Relationships Over Time

<table>
<thead>
<tr>
<th>Participant and/or Source</th>
<th>Response or Information</th>
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<tbody>
<tr>
<td>1P (5)</td>
<td>I knew the staff- I was here for two years. I was going to be their third principal so they needed to start trusting me that I wasn't going to go anywhere and that I was there to support them. So, we really started with relationship building. I needed to develop relationships with them and I needed them to understand the importance of developing relationships with their students and, not only their students, but their students' families as well. Once they started doing that, we started seeing some enormous success.</td>
</tr>
<tr>
<td>1P (8)</td>
<td>We are all very supportive of one another. We definitely have a risk free environment- a culture where error is acceptable. Because of that, we have a lot of teachers that will come and say, &quot;I found this great interactive website or I found this great word work component that I want to bring in to the benchmark series we are working on- what do you think?&quot; As long as they can give me some data behind it or some statistics stating that someone has used this and has found success with it, then I am fine to put the time and money in to it. That has taken a couple of years to follow up with that culture that they feel like they can come to me… That has taken a few years to cultivate so they feel comfortable and safe with one another.</td>
</tr>
<tr>
<td>Beginner 1-1 (P7)</td>
<td>I feel like they are very open. If you have a question, you can go in there and they will definitely help you with it. They are there for you as a person, too, not just as a boss. I know I had rough days when I began, just stressed out. They were there to say, &quot;How can we help you? Calm down. You need data? Who can we pull in to get this data for you last minute?&quot; I recently asked for a book this summer to improve on my reading and, right away, my principal said, &quot;Oh yeah, I will get that for you.&quot; And she got me a book. I used it and I loved it. They never look at you like you were stupid- there is no stupid question. I feel like they really appreciate any questions that we bring to them. They are willing to support us that way.</td>
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<tr>
<td>Intermediate 1-36 (P6)</td>
<td>I think that our administration is extremely supportive, helpful, and open to discussion on many different subjects. As long as you are showing great results and have positive interactions with students and families and other teachers, they actually are pretty flexible with how you meet those goals. They are just really down-to-earth people. They both have families and they are supportive of everything that is going on in our life and don't just zero in on what necessarily is going on here.</td>
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<tr>
<td>Beginner 1-1 (P6)</td>
<td>I really do think, I'm not trying to brown nose, but I think it is due to our administrators. That is what I have heard, too. They are just awesome in supporting us and understanding where we are coming from. They were classroom teachers in elementary buildings for quite a few years before they got their positions now. I think having that staff morale up makes us want to be here. So, probably in turn, makes our jobs better, which in turn makes the kids improve.</td>
</tr>
<tr>
<td>Expert 1-27 (P21)</td>
<td>They are in all of the time. They are very hands-on. They do a lot of observation. They are very data-driven and it is a non-threatening way. I have sat in meetings where, &quot;This is an issue. Let's brainstorm why this is an issue. We are not saying something is being done wrong, but there is a trend here.&quot; They are very much in to trying to figure out the pieces to the puzzle. It is very nice, positive atmosphere.</td>
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<tr>
<td>2P (10)</td>
<td>I started doing things for the teachers. They got there early in the morning, I always fed them. Just a nice little courtesy for saying, &quot;Coming to my meeting. I am glad you are here.&quot; The first one in the door, I gave special incentives via I laminated something for them or I had a small candy bar. I celebrated every opportunity that I got and I changed the tone of the team meetings… I think enough of my teachers and they are strong enough that they should be able to run a meeting. I take a risk that they will be able to do that and then I sit down with them later and tell them what a great job they did and how I made the right decision to have them lead the meeting and that I am so glad it was a really productive meeting. People begin to take risk and share information with you. &quot;I just wanted to let you know that I tried this in my classroom today. I was having a difficult time with it and, oh my God, I saw the light bulbs go off.&quot; Then, I say to them, &quot;Would you mind coming in to a meeting and sharing that with the other teachers?&quot; And then you sit back and let the teachers run the staff development.</td>
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<tr>
<td>2P (5)</td>
<td>If you have these kids and they are already where they need to be, then you can build on that. It took five years for teachers to see that. It was not until- you know it was when I first started telling teachers, &quot;I think we can get 85% on these tests.&quot; &quot;No- we can't get 85%. These kids aren't smart.&quot; We got 75 and all at once it was, you know what, the next year, when I said, &quot;What do you think our goal is going to be for our kids meeting ISAT.&quot; They said, &quot;I think we can get 85.&quot; &quot;I think we can get 85, too.&quot; Now, they are mad if they do not get 85. Their expectation is that our kids can do it.</td>
</tr>
<tr>
<td>Expert 2-3 (P6)</td>
<td>Well, I think, of course, the leader plays an important role in overall school improvement. I think our leader definitely makes us feel like we are qualified, we are capable, and she supports us. She has been</td>
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instrumental in pushing professional development.

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<thead>
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<tr>
<td>Expert 2-1/ Intermediate 2-8 (P23)</td>
<td>It is difficult to sit and watch all of these changes that are coming through when people have not... I mean she has probably been out of the classroom for twenty plus years. To have criticism based on something that you have not really had to experience... it is difficult to swallow. I would like somebody to come in to the trenches with us and see what it is like to teach this on a consistent basis. To see what it is like to have them not understand it or see what it is like to have them understand it and see where you go from there. I just think that there are pretty unrealistic expectations about what seven year-olds are supposed to be able to do or what nine year-olds are supposed to be able to do. (I) And to look at other components of our curriculum. I feel like everything that is ever looked at is reading. We have other things that we teach, but it is always just reading as far as the evaluation piece.</td>
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**Teachers Re-Teach Concepts in Different Ways If Students Do Not Master Them.**

There was an expectation in both sites that teachers should work with students until they achieved mastery and improve student outcomes. The principal of site 2 made teachers continually re-teach material until students passed the assessment at a minimum level of mastery. The principal of site 1 wants to see at least a year’s worth of growth for students. Teachers use formative assessments to determine whether their instructional strategies effectively helped students master the material. If not, they reflect and/or work with colleagues to find different strategies to use with the students. Expert teachers spoke about being able to do this while the lesson was taking place.

Table 25

**Teachers Re-Teach Concepts in Different Ways If Students Do Not Master Them**

<table>
<thead>
<tr>
<th>Participant and/or Source</th>
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<tr>
<td>1P (6)</td>
<td>My goal and vision is always for student success. We have students who come to us at low levels and high levels. To me, it does not matter. As long as they are with us, I expect to see a year's worth of growth if they are with us for a year. For a big majority of our students, a year's growth is not going to be enough-they need a year and a half or two years. That takes time as we need to build, we need to scaffold. That is my end goal. That is my driving force.</td>
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</table>
2P (5) We did something called teach to mastery. If a child was doing math and didn't pass with 70 percent, I set it at 70, then the teacher was to give that child a manila folder and have it in the center with that child's name on it. When the child had time that they were sitting with nothing to do, then they could go and get their folder and they would have worksheets - this was a worksheet activity, or something they could do to build on the skill that they were missing. The teacher would come back, working with them in small groups and then she would come back in two weeks and do an assessment and they had to have 80 percent. Now, teacher assessment is at 85 percent. If any kid does not get 85 percent, she is going to teach to mastery. She is going to go over that information.

Beginner 1-2 (L7) I got to keep doing that. Reflect and plan something different, something new. I seek out help from my teammates. There have been times where I said, "Are your kids getting this?" or "Have you struggled with this?" If, "Yes," then me and my teammates brainstorm together what are some other ways we can come at this or if something else works for them. They'll say, "Oh, I have tried this. Why don't you try it?" So, really relying on other kindergarten teachers is helpful.

Intermediate 1-4 (L7) I re-teach or go back. With math, I do the lesson in the beginning. It is the first thing that we do and then I will go and pull kids back in to a small group and do a re-teaching. Or, if I feel the whole class does not understand it, I will push the next day's lesson back and do another re-teaching and do a whole group lesson, not using the book, but I will use dry erase boards so I can get a quick assessment of how they are doing with each story problem.

Expert 2-3 (L7) I try to go at it at a different angle. I can see that if I am doing a lesson and I am losing everyone or I can see that they are not quite getting it. Sometimes you have to stop and go at it a different way or sometimes I ask the children, "What don't you understand here? What are you missing?" Sometimes they come up with things better than the teacher come up with things. Yeah. You have to get them very involved and you have to be like a little unit. When it is not going right, you've got to stop and start and go a different way. That is the only thing you can do. Or teach it a different way. You have to try.

Beginner 2-4 (L7) I first go back and see, "OK. Is there a way I can make this ok? Is there a way I can make it better? What didn't work with this? What did work with this?" I kind of weigh my options. If it was just a complete fail, I know not to use it again. I know not to do that again. But, if there are ways that I can change it and ways I can do better the next day... say it didn't work for the morning class, but it worked for my afternoon class, the next day I will re-teach it in a different way and see what happens then and see how that goes and how the kids respond to it then. Otherwise, it might just be a lesson that wasn't going to happen.

**Set Goals Based on Data.** The principals would set attainable goals with the teachers based on student achievement on assessments. The principals tried to make this a non-threatening exercise, but did check on the progress of the goals established. They also would hold teachers accountable if they did not meet those goals.
Table 26

Set Goals Based on Data

<table>
<thead>
<tr>
<th>Participant and/or Source</th>
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<tr>
<td>1P (9)</td>
<td>We start after we do the first MAP assessment. I bring the teachers in one by one and we set a professional goal and a personal goal. Not a personal goal like I want to start running a marathon, but personal reflective of their teaching practice. When we set those goals, hopefully they are attainable. Hopefully, they are quantitative so I can put a number to it either come mid-year or the end of the year to see if they met those goals. I don't meet my goals all the time. Sometimes they need to be continued on to the next year or tweaked a little as the year goes on. We meet individually, privately so they can be vulnerable if they need. Things of that nature - just touching base with them and supporting them to be the best they can.</td>
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Site 1 Principal Description of Data Days

We look at both individual data and that of the group. So for example, in our grade 4 data meeting we showed them their growth as a team for the year and then as a 3 year trend. We also look individually to see who is making the most growth on our achievement data (ISAT) and growth data (MAP). The reason we do this is so that we can capitalize on what that teacher is doing in her/his classroom that appears to be working. Once we have had an opportunity to meet with teams to review data, we begin putting a plan into place to address any deficits we see based off our data. The time we meet with staff is not a time to discuss individual students but rather a time to be reflective on our own practice. If we see common threads (comprehension, fluency, informational text, etc) we will begin to design PD around that. Data we use typically is ISAT and MAP but we also consider FnP and CBM’s.

Site 2 Principal Description of Data Days

The school has data meetings with each grade level team of teachers in which they examine student assessment data to develop goals and plans to improve student achievement during the year after identifying areas of success and areas of concern in reading and math. The principal takes notes at the meeting and she tries to let the teachers run the meetings and come up with ideas on how to improve. She does not try to point any fingers at the meeting, but rather looks at how the teachers can improve to keep moving forward. After the meeting, the principal has check-up meetings with the teams to look at their progress on their goals and plans. Principal 2 expects to see growth in the student assessment data throughout the year.

**Need to See Success.** Respondents expressed the need to see success in their efforts, especially if they are going to make a major change. Both principals said that
success motivated people to change. Teachers also wanted to know whether a program had been successful before they interrupted their routine to try something new.

Table 27

Need to See Success

<table>
<thead>
<tr>
<th>Participant and/or Source</th>
<th>Response or Information</th>
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<tr>
<td>1P (13)</td>
<td>(What caused or motivated teachers to change their practice?) Seeing success. We are still not 100% there. It is definitely contagious. I am a very competitive person. I want the school to be at the top always, not for accolades for me, but for our students and for our families- they deserve that.</td>
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<tr>
<td>1P (18)</td>
<td>I find that if I push we get resentful, we get defensive and students are not going to benefit from any of those traits. An example is that one of my teams, a couple of years ago, really wanted to do flexible grouping for math. They would look at their data. This teacher is going to take the lower darlings. This one is going to take the high. The two other teachers will take the middle kids. How are we going to break up those kids? Well, one of the teachers said, &quot;I am not comfortable doing that. I don't want to do that. I am releasing my students to you, but yet I am still responsible for their growth. What if you are not getting them to grow? I don't want be responsible for making your kids grow. So, this one particular teacher was just not in to that. I did not make her because that was not going to best for anyone and it was not something per their contract that I could mandate. I said to the three remaining team members, &quot;You go ahead and flexibly group just with the three of you and this teacher will follow. Trust me, she will follow. Flexible grouping is fabulous because it remains flexible. They can move in and out per exit slips, formative assessment in what areas they need help with. When your scores start to improve, this teacher is going to want to be a part of that. That is exactly what happened and now all four of them are doing that. If you force, it is just not going to be a great thing.</td>
</tr>
<tr>
<td>2P (5)</td>
<td>Once they see success, everybody jumps on the bandwagon. The first year, I might have had 50% of my teachers... If you have these kids and they are already where they need to be, then you can build on that. It took five years for teachers to see that. It was not until- you know it was when I first started telling teachers, &quot;I think we can get 85% on these tests.&quot; &quot;No- we can't get 85%. These kids aren't smart.&quot; We got 75 and all at once it was, you know what, the next year, when I said, &quot;What do you think our goal is going to be for our kids meeting ISAT.&quot; They said, &quot;I think we can get 85.&quot; &quot;I think we can get 85, too.&quot; Now, they are mad if they do not get 85.</td>
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</table>
**Intermediate 1-4 (P20)**

Everything is driven around testing now so I guess all of those assessments that are supposed to be given. When kids move up a reading level... I feel most comfortable in reading. When kids move up in their reading levels, I feel like I have accomplished something. If a child has finally accomplished some sort of math strategy or idea/concept that they did not get before, it gives me a better basis of where to drive my instruction. Do I need to go back or do I need to keep moving forward? Because everything is around assessments, I think that is what we are supposed to focus on most.

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**Expert 1-27 (P12)**

(Why weren't you happy with the other program?) I didn't think that the results were what I needed. I wanted better results than it was given me from the students. I wanted to see it working more. When I started this second program, one of my very low children, special ed. low children, turned to me and said, "I can read." Once I hit that stride, I'm going.

---

**Expert 2-3 (P22)**

Everybody would probably ask them, if she just came up and said, "This is what you are going to do now," we would probably say, "Well, can we have some training on it?" or "How successful has this been?" Not to badger her or anything, just because we want to know before we implement something. "Is this going to be a successful thing? Are we wasting our time here or is this very successful?" I think all of us as teachers would probably just say, "Can you tell us about the success rate of this program? What is this program? Give us training on this program. Tell us what this program is." We would just question the program probably.

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**Other Code-Working with Students**

In addition to deliberate practice being a framework for the professional growth of teachers, it appears that it also serves as a model for how school leaders have teachers work with students. The four components of deliberate practice described for teachers are also present within the school with the work that teachers do with students.

**Appropriate level.** Teachers use student data to group students so they are learning at the appropriate level. Teachers utilize various grouping strategies to differentiate their instruction including guided reading/math and flexible grouping. In addition, the teachers in site 1 set explicit learning targets for their students, including
how they would know they achieved the level of mastery desired and what the next step was.

Table 28

*Appropriate Level-Work with Students*

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<tr>
<th>Participant and/or Source</th>
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<tr>
<td>Intermediate 2-8 (P6)</td>
<td>I think we do a lot of assessing in terms of our students' current performance. (What do you do with that information?) Then, we can group them and meet them where they are at, see what they are missing, and get them to where they need to be.</td>
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<tr>
<td>Beginner 1-1 (L2)</td>
<td>I actually, because it is easier, I worked with the kids that needed extra help today. I think tomorrow I am going to work with the higher kids to try to enrich them a little bit by giving them larger numbers they can try to relate multiplication and division together.</td>
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<tr>
<td>Expert 1-7 (P12)</td>
<td>This school year is the first time that I have tried a guided math method of teaching math. Math has always been by the book. Let's teach it and here is the page to practice and we are going to review it. I decided to do guided math like I do my reading—looking at specific areas that students need specific help with. Right now we are learning how to do division, but I also have four of my kids who have not quite caught up to rounding yet. That unit is done for the whole class, but having a chance, having my class set up where now I have two fifteen minute slots where during my math time where it is scheduled for me to have some groups and I have activities for other students to work on independently, in small groups, or with partners usually to practice skills that we have already learned or like basic multiplication facts.</td>
</tr>
<tr>
<td>1P (18)</td>
<td>I said to the three remaining team members, &quot;You go ahead and flexibly group just with the three of you and this teacher will follow. Trust me, she will follow. Flexible grouping is fabulous because it remains flexible. They can move in and out per exit slips, formative assessment in what areas they need help with.</td>
</tr>
<tr>
<td>1P (6)</td>
<td>Once we start to have them understand that we care about them, we need to start explaining to them where they need to go academically—where they need to be, where their end goal is, and how we are going to help them get there. We can't just say that at the end of the year you need to know your math facts. We need to demonstrate what steps we are going to take to get them there so that they have that vision. They need to understand once they reach that, what we are going to do to assess that they have actually gotten there and mastered that material. They need to be a part of all of that journey. They need to own their learning. It should not be driven by the adults in the building. They need to be driving that. That is a mind shift that we are working on still.</td>
</tr>
<tr>
<td>Expert 1-7 (P18)</td>
<td>I started telling my kids and introducing this- how do you know once you've got there, you should be able to do this, this is what we are going to look for. You should have this in your writing. You should be able to read this and pull out this information from it. Once you have done this, what do you do next- just telling the kids that.</td>
</tr>
<tr>
<td>2P (5)</td>
<td>I had teachers telling me that &quot;I have kids in my room, and I am a 2nd grade teacher, and they don't read at a 2nd grade level.&quot; &quot;What grade do they read on?&quot; &quot;They read on a 1st grade level.&quot; &quot;Well, then guess what, you have to get 1st grade books and you have to differentiate instruction because you cannot give them 2nd grade materials. They don't understand it. So you give them 1st grade material.&quot; &quot;I am not a 1st grade teacher.&quot; &quot;Well guess what, if you want this job, you are going to meet the children where they are.&quot;</td>
</tr>
<tr>
<td>Intermediate 2-6 (P6)</td>
<td>Our principal has always promoted the RTI process and at one point our RTI process was extremely strong and it helped us identify students and give us strategies and tools in the classroom.</td>
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<tr>
<td>Expert 2-3 (P7)</td>
<td>If I need help from the reading specialist, I go to her, I talk to her, we talk, we set up a plan for the child. That helps me learn what they need and that helps me as a teacher. Plus, also, we try to target some of the middle students where I think we always targeted the low end students. So, we had this high group, the middle group, and the low group. We always targeted the low group and we got no progress, no progress. We started targeting that middle group, pushing them a little further. And when we targeted that middle group a little bit and they moved up, that gave our scores a little bump and gave us more time to work with the lower group because that middle group was already gone.</td>
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**Feedback and repetition.** Teachers use formative assessment data and the reactions of students to determine how to best help students. They provide students with extra help or enrichment based on the feedback they receive. Leaders expect teachers to have students master the material as shown on formative assessments and have overall growth on formative/summative assessments. As a result, teachers indicated that they will go back and re-teach the material, if necessary.
**Table 29**

*Feedback and Repetition – Students*

<table>
<thead>
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<td>1P (6)</td>
<td>My goal and vision is always for student success. We have students who come to us at low levels and high levels. To me, it does not matter. As long as they are with us, I expect to see a year's worth of growth if they are with us for a year. For a big majority of our students, a year's growth is not going to be enough- they need a year and a half or two years. That takes time as we need to build, we need to scaffold. That is my end goal. That is my driving force.</td>
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<td>2P (5)</td>
<td>We did something called teach to mastery. If a child was doing math and didn't pass with 70 percent, I set it at 70, then the teacher was to give that child a manila folder and have it in the center with that child's name on it. When the child had time that they were sitting with nothing to do, then they could go and get their folder and they would have worksheets- this was a worksheet activity, or something they could do to build on the skill that they were missing. The teacher would come back, working with them in small groups and then she would come back in two weeks and do an assessment and they had to have 80 percent. Now, teacher assessment is at 85 percent. If any kid does not get 85 percent, she is going to teach to mastery. She is going to go over that information.</td>
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<tr>
<td>Expert 1-7 (L6)</td>
<td>Usually, right there in the middle of a lesson, as I am teaching and watching the kids doing their work, talking with them, listening to the types of questions they are asking. If they are asking me questions that are going above and beyond what that learning target was, then I know they are ready to move on. If they are asking questions or if they are getting stuck on pieces within that lesson, that learning target, what it is they are supposed to learn, then I know that either some- it depends on how many times it happens, most, just a few still need more work and we need to try it again and usually differently. We need to come at something differently. For certain lessons, I use exit slips, but very often it is listening to the kids talk to each other about what it is they are doing. I have them lots of times to turn and talk in place and I do lots of eavesdropping.</td>
</tr>
<tr>
<td>Intermediate 1-36 (L6)</td>
<td>Definitely by immediately measuring what they were able to grasp quickly. There should have been something in every lesson that I teach that they should be able to grasp, even if it is very small, that either builds upon what we did in the past or it could be something new- even if it is being able to add four details instead of three. But, doing something to measure that at the end of the lesson and it is important for me to always, as I said, be watching their reactions and responses and their engagement level because, to me, it is not successful if I am just getting great scores. I need to see that they are enjoying it and that it is meaningful to them.</td>
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</table>
**Intermediate 1-36 (L6)**

Spend at least another day if not two more, asking the kids outright, "What was confusing to you?" Where did you feel that you were struggling?"

Telling them that there was either in the way I was presenting it or the way they were processing it- I will outright tell them, "We had a problem. We are going back." I can't save them all and there are always a few that I cannot save, then we have to move on. And usually when it gets to that point, I send a note home. I type out, "So-and-so is still having trouble counting by two's or finding the patterns in numbers. Please, in the car or at home, if you have any extra time..." And then I cross my fingers that they work on it at home. Yeah. We go back. I feel like a failure. I dislike it. I can handle when three or four, but after six or seven, there was a big problem.

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**Beginner 2-4 (L6)**

Based on my assessments I do on the kids. If I can go back and assess them and I can see, like right now, if I were to do an assessment tomorrow and my kids know "A" through "F", then I feel my activities have been successful. If there is a couple where they may not know, then I will go back and I will retest or I will go back and I will re-teach the lesson just so they can grasp that concept.

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**Intermediate 2-6 (L6)**

I base it on engagement of the kids and how we are interacting as the lesson is progressing. If there is a roadblock and they are stuck here, that means I can't move on to the next thing. We have to stay here and I have to re-teach it the next day or find another way to present the material.

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**Correction of errors.** The principal and teachers needed to build relationships with the students and their families. After the staff members built this trust, they were able to change the mindset of the children. Consequently, the students feel comfortable taking academic risks and sharing where they are having issues so the teachers can help them correct their errors in order to master the concept being taught. Students also need to feel success in order to stay motivated to succeed.
Table 30

**Correction of Errors – Students**

<table>
<thead>
<tr>
<th>Participant and/or Source</th>
<th>Response or Information</th>
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</thead>
<tbody>
<tr>
<td>1P (5)</td>
<td>I needed to develop relationships with them and I needed them to understand the importance of developing relationships with their students and, not only their students, but their students' families as well. Once they started doing that, we started seeing some enormous success. I feel and the district feels that unless you can get to a child's heart, you are not going to get to a child's mind. Once we were able to do that, we are not 100% successful- we have some bumps along that road, but we can contribute our gains to having a really great foundation in relationship building.</td>
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<tr>
<td>2P (18)</td>
<td>But, when you learn the mastery of teaching, which is the same no matter what you do- commitment, hard work, perseverance, going above and beyond what is needed, engaging that child, caring about that child, loving that child, making that child get rid of the records that they heard, &quot;You are a loser. You are no good. Your daddy went to jail- you're going to jail. Your momma is a crack head. You're not going to be anybody.&quot; If you can erase those records and children get small successes and you can say, &quot;You know what, you are really great in math. When you first came in here, you could not add or divide, and I have given you multiplication problems. My God!&quot; Children begin to believe what you believe for them… When I was in East St. Louis, I had second graders and I had thirty-six kids in the classroom… When my kids were doing math, I tell you, I shook my head because the first time we were doing math and so many kids did not understand simple, basic addition and the kid that did- during recess, they went on the playground and beat that kid up. The kid came in and they had jumped him. I am like, &quot;What are you doing?&quot; He said, &quot;Well, they beat you up if you act like you are smart...&quot; I went and I bought a huge fish bowl. I filled it with all of the most wonderful candy- the Skittles, the gummy bears, everything is pre-packaged… So, I put the big jar on a desk and I took a child that had very good math skills and I said, &quot;Ok. You are coming up here with me. You can't start from the front. We are going to start from the back and we are going to go from the right to the left and we are going to put in the commas and then we are going to read and write it out numerically… When we got to the end, instead of me rewarding that child, I said, &quot;Put your hand in this candy jar. Get as much candy as you can grab and then go sit down. Now, share it with all of your friends at your table.&quot; When we started sharing and celebrating people doing what was right and what was good and everybody earned, then they would change and it was, &quot;Come on-so-and-so. You can do it. You are good at math. You've got this. Show us that you can do it.&quot; But, no one got beat up outside. When my children left second grade, I had the highest grades coming out of second grade.</td>
</tr>
<tr>
<td>2P (5)</td>
<td>Everybody said, &quot;Well, what did you do?&quot; &quot;You know what, I loved and I encouraged. Every Friday, I don't know why the children did this- I can't explain it, but they would come over and bust out my windows. They would bust them out in my kindergarten hallway and out the back. Every Monday I would come here and have to replace two windows. I was talking with my husband about it- he is 6'3” and played basketball- you know like guys played basketball, and he was like, &quot;Why don't we do basketball night?&quot; I was like, &quot;My teachers won't do basketball nights. They don't want to come back to the building once they leave.&quot; He said, &quot;Well, I will do it.&quot; I said, &quot;Really?&quot; He said, &quot;Yeah.&quot; We came every Friday and we opened up the gym. Our custodians were here and my husband and I did basketball nights for all the children that went to this school. Then, I started activities. I will give you a list of what I do. I just began to think, &quot;What would make the community embrace this school? What would make the children embrace this school as well as the teachers and give them a different mindset?&quot;… I had a welcome back picnic- I do that every year right after Labor Day, the first Friday. It was very interesting that I had parents come over and they said, &quot;I don't go to this school, but they say you are serving hot dogs.&quot; I said, &quot;Yeah, we are serving hot dogs. How many do you need?&quot; People said, &quot;I have four kids.&quot; I said, &quot;OK, four hot dogs for the kids and how many do you need?&quot; They said, &quot;Yes.&quot; If it is a welcome back picnic and we have children that are not coming to this school, but may be coming to this school in the future, my thoughts are why shouldn't your school embrace you, welcome you. It is a hot dog. I am not giving away a steak.</td>
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<tr>
<td>Beginner 1-2 (P6)</td>
<td>I think we all really care about the building and care about the students here.</td>
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<tr>
<td>Intermediate 1-36 (L7)</td>
<td>Spend at least another day if not two more, asking the kids outright, &quot;What was confusing to you?&quot; Where did you feel that you were struggling?&quot; Telling them that there was either in the way I was presenting it or the way they were processing it- I will outright tell them, &quot;We had a problem. We are going back.&quot;</td>
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<tr>
<td>Expert 2-3 (P6)</td>
<td>I also think it helps that teachers are really caring about the children. So, they care about what happens to them and it is not only just education-wise, it is, &quot;Do they need a coat? Do they a hat? Do they need gloves? Do they need a snack today?&quot; I think that helps the children start buying-in to the classroom itself, like, &quot;Oh. She cares about me. This is a nice place to be.&quot; I think you have to get the children to think that way, too, not just, &quot;I go there. I hate that school. I hate my teachers.&quot; You want them to go there and say, &quot;I love my teacher. I love my school.&quot;</td>
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<tr>
<td>Intermediate 2-6 (P13)</td>
<td>I believe that we need to keep the students' needs first and I really wanted to find something that built motivation, that built a relationship with them on another level like, &quot;Oh. You listen to that music&quot; just to build a sense of community and a sense of caring about them. That helps them know, &quot;I care about you.&quot;</td>
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</table>
Expert 2-3 (L7) | Sometimes you have to stop and go at it a different way or sometimes I ask the children, "What don't you understand here? What are you missing?" Sometimes they come up with things better than the teacher come up with things.

Teacher Survey Results | Respondents identified the reason of showing care for students or developing relationships with students as one of the top reasons they chose a teacher for the expert level.

Summary

The researcher sought to better understand how leaders in schools with over 50% of students identified as minority and as low income had successfully raised student achievement. The researcher chose two schools that won the Illinois Academic Spotlight or Improvement Award and had the required student population. Then, he interviewed the principal of each of the schools with a semi-structured interview protocol. Part of the protocol asked the principal to identify teachers at various skill levels of expertise (beginner, intermediate, and expert). After that, the researcher sent a survey to all the teachers of both schools that asked them to identify teachers at those same skill levels. The researcher used both the principal interview and the teacher survey to identify two teachers at each skill level and invited their participation in the study. The researcher eventually secured two teachers at each level with the exception of only securing the participation of one beginner level teacher at site 2.

The researcher interviewed each of the eleven teachers in the subsample two times using semi-structured interview protocols. The first interview consisted of questions about how the teachers improve their instructional practice. The second interview asked the teachers to discuss how they approach lesson planning and asked them to think about a specific lesson they planned for the next day. The researcher also
observed a total of three professional development activities and used a protocol to document information from the sessions.

The researcher used the framework of deliberate practice to develop the interview questions and as a basis to code these data that resulted from the principal interviews, teacher interviews, and observations. The researcher used the four main components of deliberate practice, mainly that it is practice “(a) at an appropriate level, (b) provides informative feedback, (c) provides for opportunities for repetition, and (d) allows for correction of errors” (Sternberg, Grigorenko, & Ferrari, 2002, p. 71).

From the framework of deliberate practice, the researcher generated subthemes within each component. They were:

A. Appropriate Level
   1. Continual Refinement of Teachers’ Instructional Practices to Meet Students’ Needs
   2. Flexibility to Try New Things
   3. Foundational Expectations of Leaders
   4. Training and Material
   5. Collaborative Culture

B. Feedback
   1. Teachers Want Regular Observation and Feedback
   2. Leaders Give Targeted Feedback and Expect Small, Continuous Changes
   3. Teachers Find Quantitative Feedback Helpful in Observations
   4. Use of Student Data for Feedback
5. Use of Discussions and Observations of Other Teachers as Feedback
6. Use of Other Resources as Feedback
7. Teacher Want Practical Feedback for Changes
8. Willingness to Have Difficult Conversations

C. Repetition
1. Leader Had to Shift the Teachers’ Mindset
2. Environment for Practice
3. Teachers Need Time for Change
4. Repetition Allows for Teaches to Develop A Repertoire of Strategies

D. Correction of Errors
1. Need to Build Relationships Over Time
2. Teachers Re-Teach Concepts in a Different Way If Student Do Not Master Them
3. Set Goals Based on Data
4. Need to See Success

Additionally, a new code emerged, that of Working with Students. From the code, the following themes from deliberate practice emerged:

E. Other Code: Working with Students
1. Appropriate Level
2. Feedback and Repetition
3. Correction of Errors

The researcher will use these data from the principal interviews, observations of professional development sessions, the results of the survey with all teachers, the
professional development interviews with the subsample of teachers, and the lesson plan think alouds with the subsample of teachers to answer the research questions in Chapter V and make recommendations for further research.
CHAPTER V

ANALYSIS OF THE DATA

Introduction

This study examined whether the theory of deliberate practice could be applied and expanded to the field of education to explain how school leaders successfully work with teachers to improve student achievement in schools with a high percentage of students who are reported as low income and minority. For the purpose of this study, deliberate practice is defined as practice that is “(a) at an appropriate level, (b) provides informative feedback, (c) provides for opportunities for repetition, and (d) allows for correction of errors” (Sternberg, Grigorenko, & Ferrari, 2002, p. 71). The study sought to provide explicit details on how school leaders utilize the components of deliberate practice in their leadership.

The researcher utilized a qualitative case study, focusing on two public elementary schools in the state of Illinois with a high percentage of students identified as low income and minority that raised student achievement as evidenced by the schools being selected for the Illinois Spotlight Award or the Academic Improvement Award in 2011. The researcher also required schools to have at least 50% of students qualify for free and reduced lunch and to enroll more than 50% of students who belonged to categories designated as ethnic minorities. Additionally, the researcher required schools to have at least one national board certified teacher.
The researcher identified two schools that met these criteria and obtained permission from the superintendents to conduct the study. Site 1 is located in a large unit district in a western suburb of Chicago, Illinois and educates students in kindergarten through 5th grade with 57.8% of students identified as minority and 63% of the students identified as being low income. The school won the Academic Improvement Award in 2011. The principal has served at the school for six years and was the assistant principal of the school for two years before that. Site 2 is located in a large district in a south suburb of Chicago, Illinois and educates students in preschool through 5th grade with 92.6% of students identified as minority and 67% of the students identified as being low income. The school won the Academic Spotlight Award in 2011. The principal has served at the school for 11 years.

The researcher used various sources to triangulate the data within the study. The researcher interviewed the principals of both schools and also asked them to nominate teachers at various levels of expertise (beginner, intermediate, and expert) during the interview. The researcher sent a survey to all of the teachers at the two sites to ask them to nominate teachers at various levels of expertise. The researcher used these nominations to develop a subsample of teachers with two teachers from each school at each level of expertise with the exception of only having one beginner level teacher at site 2 as other teachers at the site declined participation. The researcher then interviewed the subsample of teachers, focusing on how they grow professionally. Additionally, the subsample of teachers participated in a second interview in which the researcher asked them to think aloud about a lesson plan and to discuss how they approach lesson planning.
in general. Finally, the researcher observed a total of three professional development sessions across the two sites. In total, the researcher spent approximately 12.5 hours within the sites gathering data.

The researcher coded these data using the main components from the conceptual framework of deliberate practice: (1) appropriate level, (2) feedback on performance, (3) opportunities for repetition, and (4) correction of errors. “Appropriate level” means that a person receives increasingly advanced training at a level they are capable of attaining (Ericsson, Prietula, & Cokely, 2007). “Feedback on performance” suggests that people receive evaluation about their performance from a coach, outside sources, or through their own reflection of their performance compared against an exemplar (Ericsson, Roring, & Nandagopal, 2007). “Opportunities for repetition” indicates that a person is able to practice their performance to the point that they master the new skill they are trying to learn (Ericsson, Prietula, & Cokely, 2007). One of the possibly negative aspects of repetition is that people can become complacent at their current level of performance and not seek to improve (Bereiter & Scardamalia, 1993). “Correction of errors” refers to the fact that people look at their performance and actively try to learn from their mistakes and get their performance to the exemplar (Gardner, 2002). The researcher identified subthemes within these main components and also identified a related new code for teachers in the sites using deliberate practice themselves while working with students. The researcher remained aware that his role as a regional director who supervises principals of elementary schools may influence his analysis of the data. In addition, the researcher was aware that he has a bias towards a collaborative approach versus a
bureaucratic approach of leadership. He used the research journal to monitor these biases and triangulation of data to support his findings.

**Conclusions**

**Research Question 1**

How have school leaders used deliberate practice as a framework in conversations about professional growth to enable teachers in high poverty schools with a high percentage of students identified as minorities to improve their instructional performance?

**Appropriate level.** Similar to other fields, teachers need to receive increasingly advanced training in order for them to become experts in their field. However, the principals and teachers also recognized that teaching is a complex field since not only are the teachers at different skill levels, but teachers also must continually refine their practice to meet the changing needs of their students. An intermediate teacher from site 1 explained that “each year the group is different, so you can’t guarantee that what you used the year before will work next year.” As a result, even though teachers learn new strategies, the teachers have to continually refine their instructional practices at the appropriate level as students have different needs and learning styles.

Nonetheless, the principals made explicit expectations that teachers determine how to work with the diverse needs of students. For example, the principal of site 2 who had a 2nd grade teacher whose students were below grade level demanded,

You have to get 1st grade books and you have to differentiate instruction because you cannot give them 2nd grade materials. They don't understand it. So you give them 1st grade mater
Recognizing that teachers are at different skill levels and have students with different needs, the principals gave teachers the flexibility to try new things with their classroom as evidenced by the fact that all of the teachers in the study were able to discuss a new strategy they were using. The principal of site 1 explained that "as long as they can give me some data behind it or some statistics stating that someone has used this and has found success with it, then I am fine to put the time and money in to it.” The flexibility allows teachers to improve at their own level of expertise.

Within the study, the level of complexity of the new strategy the teachers chose increased with the teachers’ identified level of expertise. Beginner teachers focused on simpler changes like instituting exit slips, intermediate teachers had slightly more complex changes like using reading response journals, and expert teachers often changed the way they approached a whole subject (e.g., implementing guided math) or brought about a change in the district’s materials (e.g., a new reading intervention program). An intermediate teacher from site 1 who came from a different school realized,

In my old school, I had two different administrators for a couple of different years. When I came here, it was such a big change and I did not realize why until I started working with these [administrators] and I was like, “that is why it was so much harder.” It was not because I was a new teacher, it was because I was rather boxed in. I like the freedom that we have here… to do things how we want to do them, to change them if we want to change them, to talk to people to get good ideas from teammates and others- that is why I want to work here for ever... with the same people, though.

While giving this flexibility to teachers to improve at their appropriate level of practice, the principals still set foundational expectations with their teachers. In site 2, the principal believes that a teacher must first have good classroom management because “if you are in a classroom and you can't get a child to sit down, that is going to be an
instructional problem.” In addition, both principals expected that teachers ensured there were clear objectives that students understood, that the teachers used formative assessments with the students to determine if they met those objectives, and that teachers continued to work with students until they achieved mastery. The principal of site 1 explained,

We can't just say that at the end of the year you need to know your math facts. We need to demonstrate what steps we are going to take to get them there so that they have that vision. They need to understand once they reach that, what we are going to do to assess that they have actually gotten there and mastered that material.

Once either the teachers or principals identified how teachers needed to improve, it was important that they built the capacity for the change by providing the training, support, and materials necessary for the teacher to be successful. The principal of site 1 said she always tried to financially support her teachers going to workshops they felt would help them be successful. The principals of both sites tried to give teachers the materials necessary for the change and very specific information on how to implement new programs in the district, whether it was through a math consultant in site 1 who taught teachers new strategies or professional development on guided reading in site 2. A beginner teacher from site 1 explained that the math trainings were “great, too, because we would actually do those things. We were not just taking notes. We would actually play those games and see different ways to approach something. “

Teachers also suggested that leaders ensure there were specific examples to show what the change would look like in their grade level. A beginner kindergarten teacher
from site 1 discussed questions she asked administrators about changes in questioning strategies the district asked teachers to make.

I think every time there is a major change it is always like, "Can we see an example in kindergarten of what this looks like, of a teacher actually doing this?" That has always been really hard, so I think that would be helpful for our administrators to like show us a video of it going on in somebody else's room.

In addition to the training and materials provided by the principals, the teachers also cited the fact that the leaders established a collaborative culture within the schools that allowed teachers to seek advice and help from the principals and other teachers. This collaboration allows teachers to obtain help at the appropriate level they need because teachers feel comfortable asking questions about issues they are currently facing. One expert teacher stated that “the administration has an open door policy. They encourage you to come see them if you need help, not only with a parent or a behavior issue, but also if you have concerns or questions regarding the curriculum.”

An expert teacher from site 2 described the difference she sees in her school as compared to her friends’ schools.

I do talk a lot with my colleagues. I think that is a big part of why we work so well together is we talk to each other. I mean I hear people tell me that are friends of mine that are teachers, “Oh. We don't do that. We don't talk. We kind of go in our room and do what we do.” We are not like that here. If I have any type of problem, I can go to anyone in here and say, “What do you think about this?” or “I am hitting my head against the wall right now. What should I do? Do you have any ideas?” I think that is one of the big things that helps us here is there are so many places I can go to find out an answer- be it go to the office, be it go to another colleague.

Similarly, Bereiter and Scardamalia (1993) speak of appropriate level as people finding ways to continuously work to expand their skill set at the next attainable level, while receiving help to do so. Within the field of education, Danielson (2007) spoke of
the need for school leaders to provide differentiated support for teachers at various skill levels to help them determine what steps they need to take in order to improve their instructional practice. Bambrick-Santoyo (2012) elaborated that school leaders should provide this help by giving teachers incremental steps to improve their instructional practice and providing them the support to make these changes. Within this study, the principals modeled these practices by expecting teachers to continually refine their instructional practices to improve student achievement while also identifying certain foundational expectations that the teachers were expected to meet. The collaborative culture within the sites allows teachers to receive help from both the principals and other teachers within the building. Thus, the sites become true “communities of support” (Palmer, 2007, p. 166) in which teachers can receive help about their true needs and find their inner truths.

**Feedback on performance.** Teachers in both sites discussed the desire for frequent observations and feedback about their performance. An expert teacher in site 1 said that the observations are beneficial because “as we do stuff for quite a while, we sometimes forget the little things- ‘Oh yeah, I should have done that. That would have been better.’” It is nice to have someone come through and say, ‘Could you have done this?’” An intermediate teacher from site 2 also spoke about how observations would allow administrators to acknowledge good instruction happening in classrooms. “There are times when I am at the board doing stuff with the kids and it would be a great time for someone to walk in- just an ‘aha’ moment.”
The leaders give targeted feedback to teachers and ask them to make small, gradual changes in general and then find ways to ensure that teachers made the changes. The principal of site 1 shared with teachers the specific things she and her assistant principal would look for in classrooms. “The staff knows this is learning target month and when I go in I will specifically be looking for that.” Furthermore, the professional development for site 1 focused on very specific topics (i.e., text-dependent questions) and the principal lets teachers know what she would look for in classrooms as a result of the professional development. The principal of site 2 concurred with giving targeted feedback. “I do not hit people with every concern I see because that is like you are trying to reach the mountaintop and you've got ten different things to do before you get there. I may choose one or two things to work on.”

When an expert teacher in site 1 was given targeted feedback, she described it as “this is a) really easy to implement- I can start this in twenty minutes when the next lesson starts. That feedback is helpful and I really enjoy it.” A beginner teacher from site 1 had similar feelings for gradual changes. She stated that when administrators are asking teachers to change something they should try rolling it out in phases and then providing us help if we need it, which a lot of times they will say, “Feel free to talk to the Lit. leaders and they can come in and show you and actually teach a lesson to show you what it should look like.”

With the targeted feedback, the principals at both sites also tried to depersonalize the data. The principal in site 2 uses transcripts of the lesson to speak with teachers about their lessons. An expert teacher in site 2 says that the principal will tell you exactly every word that you said. She is good at typing every word you say through the whole entire lesson. She will pull it out and say, “This is
what you said and this is what you should have said.” She brings us in to a meeting and she sits down and she will tell it like it is. She will say, “This is what I want to see. This is what I think you can do.”

The principal of site 1 finds it beneficial to quantify the data.

I find that if you can quantify it- that 8 out of 10 or I noticed that 15 out of 23 times- they are less defensive because it is a fact. That is what I observed. If you can bring me or offer me evidence or data that I did not see or that I may have missed that might alter the information that I gave you, then please do.

An expert teacher from site 1 found this to be effective because

now I can draw my own conclusions from that- “Ok, none of them knew this.” I can reflect on my practice… I don't think it was difficult for them to let me know because it wasn't just that “You're not telling people this, you need to start doing this,” it was “The three people we asked were not able to tell us” and that is all it was … The objectivity of it makes it much easier to take when it is something that now I think, “Now I can do something differently.”

These results are similar to the concept of feedback in deliberate practice as people need to receive feedback to make changes and improve their performance (Ericsson, Krampe, & Tesch-Romer, 1993). In relating this concept to how school leaders work with teachers, current research shows that teacher evaluation systems are most effective if there are “multiple sources of data…and they provide timely and meaningful feedback to the teacher” (Darling-Hammond, 2012, p. 16). Zepeda (2007) believes that “the primary objective of collecting data is to promote teacher analysis, reflection, and ongoing planning” (p. 95). The feedback that is given to teachers within the study, especially the multiple observations in site 1 with quantitative feedback, allows teachers to reflect on their instructional practice and helps the teachers identify areas in which teachers need to change. The description from one of the expert teachers from site 1 that she enjoyed feedback about a needed change because it was something she could
implement immediately corresponds to Bambrick-Santoyo’s (2012) finding that school leaders should give teachers “small quick changes in quick succession” instead of asking them to make large changes all at once (p. 75).

Besides feedback from their principals, the teachers also discussed how they use student data for feedback, a practice required by both principals. Teachers use formative assessments and student engagement during lessons to gauge the effectiveness of their instructional strategies. An expert teacher stated,

If they are asking me questions that are going above and beyond what that learning target was, then I know they are ready to move on. If they are asking questions or if they are getting stuck on pieces within that lesson, that learning target, what it is they are supposed to learn, then I know that…a few still need more work and we need to try it again and usually differently. We need to come at something differently.

During the schools’ data days, the teachers often compare their students’ assessment scores against that of their peers in their school and district and then compare what the more successful teachers are doing relative to what they are doing in their classroom. An intermediate teacher in site 1 describes it as

I am eager to know how everybody else did. I definitely care about having great scores and seeing great results and looking at my student growth and seeing how it compares. I always think about what I am doing versus what they are doing. Then I reflect on whether I think that something that I was or was not doing played a part.

The principal of site 1 believes that this has led to a healthy sense of competition. “A lot of us are competitive now because we are used to seeing great things and we want to stay there.”

Participants also discussed how it was beneficial for school leaders to give teachers the ability to have discussions and observe other teachers to have other
experiences on which they would be able to reflect, compare, and thus get feedback on their practice. An expert teacher in site 2 gave an example of the importance of discussions when she described how the teachers of site 2 held meetings about the vertical articulation of the curriculum. She believes that having the teachers “talking with each other, trying to say, ‘Next year, I would like to see this from the students.’ That helped a lot because then I knew what they were expecting the following grades.” The principal of site 1 will have teachers observe in other teachers’ classrooms to get ideas.

If you are struggling in the area of classroom management, I am going to get you a sub and I am going to send you in to a classroom that has stellar classroom management just to get some more ideas. Just to get some tricks in your hat in case you need to pull something out.

Teachers also use other resources to get feedback on their practice including books, magazines, internet websites, professional development, and researchers. For example, an intermediate teacher in site 1 spoke about how she used a book to determine the best way to implement a reading strategy. Although she intensely studied the book over the summer, she said “I felt like I was really having to go back and re-read even before I did my lessons every day, I would have to go over it in my mind before I did it again.”

When a school leader asks a teacher to change something during their feedback or in general, the teachers expressed the need for school leaders to give practical advice for the change. An intermediate teacher in site 2 wants leaders to give her “specific ways because I have heard school leaders say, ‘We need to pay more attention to our higher achievers, our higher learners.’ And that is great to say it, but where is the plan? Give me a specific to-do.” Teachers also stated that it would be helpful to actually see the
change and then get feedback as they implement. An expert teacher from site 1 wants administrators to say,

“She is doing that down the hall. Why don't you go see how it looks in her classroom?” Then, coming back a few days later and watching, giving the feedback then. “I see this now in here that this is working very well. This part may need some more feedback.”

When teachers need to make changes in their classroom, the principals of both sites would have difficult conversations with those teachers. However, there was a difference in how the leaders approached these conversations. The principal of site I cited help she received from administrators and strives to do that for her staff as well.

I always bring it back to what can I do to support you. I am ultimately responsible. So I never want them to leave defensive from my office or with not knowing where their plan is or where their next step is going to be. When we have those difficult conversations, I do put it back on me and what I can do to support them.

However, she will often not push people to change right away. “I find that if I push we get resentful, we get defensive and students are not going to benefit from any of those traits.” She tries to allow teachers to see success to motivate them to make a change. For example, when a grade was moving to flexible grouping and one of the teachers did not want to make that change, she had the other three teachers make the change and said,

“You go ahead and flexibly group just with the three of you and this teacher will follow. Trust me, she will follow… When your scores start to improve, this teacher is going to want to be a part of that.” That is exactly what happened and now all four of them are doing that.

The feeling of success is necessary because as teachers are improving, they are continually working at the edge of their competence (Bereiter & Scardamalia, 1993).
This work often makes teachers feel vulnerable because they must deviate from routines they have automatized and with which they feel comfortable to learn something new that may or may not be successful (Ericsson, 2002). Allowing teachers to observe or discuss examples of the expected changes helps them conceptualize the new idea (Marzano 2010). Furthermore, by allowing teachers to see success as discussed by the principal in site 1, it helps the teachers to feel more comfortable to make the continuous improvement necessary to advance their professional practice.

The principal of site 2 received advice from her grandmother in her teaching career to quit whining and do the work. It appears the principal takes a similar approach with her teachers. An expert level teacher described how the principal “is very strict with the evaluation so we all get a little nervous.” An intermediate level teacher stated that “I have known people that have not received the best evaluation and there is not much, ’You should do this.’ It is just ‘Fix it and figure out a way to fix it.’” Even though there was a difference in the styles of the two principals, they both appear to have resulted in increased student performance, but it appears there is better morale and increased feelings of administrator support from teachers in site 1 since almost all of the teachers in site 1 recognized the support of their principal as being an important factor that resulted in improved student achievement as opposed to only one teacher from site 2.

**Repetition.** When people repeat their performance, there is a possible negative consequence that people will become complacent with their current level of achievement and stop seeking to improve (Bereiter & Scardamlia, 1993). While some practice is necessary to master an existing skill and automatize it so people can focus on the results
of their performance (i.e., student achievement) rather than just the execution of their performance (i.e., focusing on how the teacher is teaching the lesson), people must also find ways to continually refine their practice in order to keep growing professionally (Ericsson, Prietula, & Cokely, 2007). When faced with an issue such as students not learning, teachers must analyze the issue in depth rather than just find a surface level solution to the problem (DuFour et al., 2006). Danielson (2007) believes that teachers must critically reflect on their own practice to find ways to continuously grow and improve student achievement.

Similarly, both principals encountered teachers who were complacent with their school’s current low level of student achievement when they became the principals of their schools. The teachers of the school spoke about what the students and families could not do rather than what the teachers could do to improve student achievement. Both principals explicitly addressed this situation with their staff members. The principal of site 1 had a conversation with her staff at her first staff meeting.

I remember my first meeting with my staff on institute day as the principal. They knew me for two years as the A.P. And I was very honest with them. I remember saying to them, “Our backs are against the wall and we are in a hole. We have got to get out of this hole.” I came from another school in the district. I taught 1st grade there for 15 years. Their population was a lot more in need than this population and they were out-achieving us and I said that there was no excuse for that. There is no reason for that. I don't want to hear anymore that our kids don't have this, that our kids don't have that, that their moms are here, that their moms don't do that. We have to completely remove all excuses and focus on why we are here. Like the superintendent says, “Can you teach our kids? Can you teach these kids? And if you can't, maybe this is not the place for you.” So, once I said that and I saw some true emotion coming from people, it was gradual.

The principal of site 2 similarly had to help people break from the way they did things in the past.
People want to tell you about past history. They want to tell you about someone that has been in the building that was not a person that they had any success with, but here is the deal— it was easier to work with them because they set no expectations. One of the things you hear, just like you hear with the kids, “You are always asking us to do more. We didn't have to do that with the past principal, Mr. so-and-so, why do we have to do it with you?” My thing is, “When I came here, 29% of our children were meeting and exceeding standards, and 32% or our children were meeting and exceeding standards in math and that wasn't working and we don't change what we do, how will that work?” And I asked them, “How will that work? If we do the same thing, expecting the same thing, and the results were poor, are we willing to continue down that road?” I am very sincere when I say, “You ought to earn your check.”

An expert teacher in site 2 stated, “I think that all of the teachers bought in to it is one of the things [that helped the school improve]. We knew we needed to improve.”

Throughout the research study, teachers expressed accountability for student learning and a desire to keep improving to help them. For example, a beginner teacher in site 1 said, “If something is not working, I think it is really easy for teachers to be like, ‘Oh, my kids are so bad today.’ It is usually because of something you are doing or something you need to change.”

In order for teachers to improve their performance, they need to be able to practice instructional strategies within their classrooms. Consequently, the school leaders need to establish an environment that is conducive to learning so teachers can focus on instruction rather than other issues. The principals both expressed this need when they spoke about their job responsibilities. The principal of site 1 discussed her responsibilities as

student success, supporting my teachers, curricular needs, and safety are my biggest [responsibilities]. I work very closely and well with our maintenance department making sure we have hot water and clean water and that our staff has what they need structurally so their students are in the best learning environment they can be.
The principal of site 2 had to overcome some structural issues in the district. When she became principal, the district would send all of the students with learning disabilities and behavior problems to her building. She stopped that practice within the district. In addition, she still needed to manage student behavior. She describes her actions to fix this situation.

I did something that was kind of Joe Clark. I got a desk. We did not have the camera that we do now. My biggest problem was occurring back in what is my 5th/6th grade wing. So I had them set me up a desk and give me a computer and a telephone and my office was down there. When the kids came out- I had junior high at the time, they would come out and I would be standing in the hallway. So when they went from classroom to classroom, I was there. I was bringing order.

When learning something new, leaders also need to give teachers time to obtain training and to make changes to their instructional practice. In site 1, the district leadership actually added more time in to the contract to allow teachers to collaborate with one another. However, teachers still discussed the need to wait until long breaks to be able to implement larger changes in their classroom. A beginner teacher from site 1 observed,

Whenever I learn something in professional development, I try to use it right away which is extremely stressful because I get these great ideas and I see that they are great, people have proven that they are great, but it's stressful because you can't do it all at once. So, I am trying to learn how to balance that. We actually had a great PD on Monday about implementing social studies in the reading curriculum, which sounds great and I took notes and had plans in my head, but now I need the time to sit down and actually do it. I love the ideas I get, but it is almost like I feel like I compile them until I have a long break or I have the summer or something where I can actually take the time to look through and review it. Too often, I try to implement something and I only understand it halfway myself and then it just fails because the kids don't understand it.
The fact that the teachers needed an environment in which they could focus on instruction and the needed time to learn new instructional strategies connects with the concept of repetition in deliberate practice. Bryan and Harter (1899) determined that telegraph operators needed time to automatize a skill before they had the ability to use it well and learn new skills. Likewise, teachers need sustained professional development and coaching to achieve fidelity of implementation of new concepts within their classroom (Council of Chief State School Officers, 2009; Croft et al., 2010). If teachers taught in a building where they had to focus more on discipline and other matters, they would not be able to focus their efforts on improving their instructional strategies and would most likely stagnate at a similar skill level.

As teachers practice new strategies, they can add it to their repertoire of strategies. An expert teacher explained that when she learns something new,

    when it is something that I would not have done normally and I changed it and it worked for the kids now, maybe when I teach it again, I am going back to the way that I like, but I still have a different way I can do this because the kids change, really, day-to-day.

When teachers are given sustained professional development and time to implement what they have learned, the teachers are able to fully develop the skills and automatize them within their classrooms (Bryan & Harter, 1899; Croft et al., 2010). As teachers progress on the continuum towards expertise, they increase their ability to examine a situation and understand the underlying issues that exist as they seek to instruct their students (Berliner, 2004). This analysis allows them to determine which strategy in their repertoire will be most effective in a given situation (Fairbanks, 2010). Similarly, the teachers in the study were able to learn new strategies and, as the expert
teacher explained about choosing whether or not to use a new strategy she learned, they were able to identify when it was appropriate to use certain strategies in their classroom.

**Correction of error.** Since building principals cannot be in every classroom for every lesson, they need to also rely on teachers to speak about where they are having issues and how the principals can help them address these issues. In addition, trying something new to keep improving one’s performance involves teachers taking risks and being vulnerable to failure. Consequently, both principals spoke about the need to build relationships with the teachers over time so they felt comfortable talking about their issues and trying new things. The principals tried to establish a risk-free environment.

The principal of site 1 spoke about developing these relationships.

I knew the staff- I was here for two years. I was going to be their third principal so they needed to start trusting me that I wasn't going to go anywhere and that I was there to support them. So, we really started with relationship building. I needed to develop relationships with them and I needed them to understand the importance of developing relationships with their students and, not only their students, but their students’ families as well. Once they started doing that, we started seeing some enormous success… We are all very supportive of one another. We definitely have a risk free environment- a culture where error is acceptable. Because of that, we have a lot of teachers that will come and say, “I found this great interactive website or I found this great word work component that I want to bring in to the benchmark series we are working on- what do you think?” As long as they can give me some data behind it or some statistics stating that someone has used this and has found success with it, then I am fine to put the time and money in to it. That has taken a couple of years to follow up with that culture that they feel like they can come to me… That has taken a few years to cultivate so they feel comfortable and safe with one another.

The principal of site 2 also spoke of needing time to work with teachers to improve student learning. The principal wanted teachers to understand that “If you have these kids and they are already where they need to be, then you can build on that. It took five years for teachers to see that.” Both principals spoke of needing time to work with
staff. This reality speaks to the necessity of sustainable leadership within schools. If teachers need time to feel comfortable and make changes, the leadership of the school needs to be stable so the process does not begin anew with if a different person comes in to the role.

The necessity to build relationships over time so teachers felt comfortable aligns with the concepts of deliberate practice. If teachers are to make continuous improvements, they must leave their comfort zone, work at the edge of their competence, and face possible failure (Bereiter & Scardamalia, 1993). As a result, the teachers need support and encouragement in an environment that allows people to take risks (Gardner, 2002). The principals modeled sustainable leadership by ensuring a relationship existed with their teachers and developed systems to support the expectation that students would achieve at their full potential (Hargreaves & Fink, 2006).

Both principals held the expectation and put systems in place so that teachers would work with students until they mastered the objectives. This expectation requires that teachers adapt what they are doing and find new ways to teach students a concept if they do not readily master it. The principal of site 1 explained,

My goal and vision is always for student success. We have students who come to us at low levels and high levels. To me, it does not matter. As long as they are with us, I expect to see a year's worth of growth if they are with us for a year. For a big majority of our students, a year's growth is not going to be enough- they need a year and a half or two years. That takes time as we need to build, we need to scaffold. That is my end goal. That is my driving force.

The principal of site 2 adopted a system to ensure teachers worked with students. She explained,
We did something called teach to mastery. If a child was doing math and didn't pass with 70 percent, I set it at 70, then the teacher was to give that child a manila folder and have it in the center with that child's name on it. When the child had time that they were sitting with nothing to do, then they could go and get their folder and they would have worksheets—this was a worksheet activity, or something they could do to build on the skill that they were missing. The teacher would come back, working with them in small groups and then she would come back in two weeks and do an assessment and they had to have 80 percent. Now, teacher assessment is at 85 percent. If any kid does not get 85 percent, she is going to teach to mastery. She is going to go over that information.

The principals also use data for teachers to set goals for improvement during the data days each school utilizes with teachers. The principal of site 1 stated, “Once we have had an opportunity to meet with teams to review data, we begin putting a plan into place to address any deficits we see based off our data.” The principals of both schools then provide follow-up with teachers throughout the year to determine their progress on the given goals.

The use of student data to refine what teachers are doing follows the finding of Slavin et al. (2013) that leaders and teachers must not just analyze student data, but must also make changes in order to increase student achievement. Within deliberate practice, it is essential that people learn from their mistakes (i.e., students not achieving to the proper level) and actively work to improve their performance (Gardner, 2002). For example, school leaders expect teachers to use student data to determine which students need extra help and then work to find ways to re-teach concepts until the students master them, which was a change from how teachers operated before the principals came to the sites. In addition, the setting of achievable goals with teachers based on student data with appropriate follow-up also appears to drive positive changes within the schools.
(Bambrick-Santoyo, 2012; Fullan, 2010). Thus, teachers are asked to continually refine their practices to ensure their students are able to successfully master the curriculum.

It is difficult to work in this type of complex environment in which teachers continually are required to adapt based on issues that arise in their classroom. As a result, both principals expressed the need for teachers to feel success in order for them to be truly comfortable with the changes being made. The principal of site 2 stated, “Once they see success, everybody jumps on the bandwagon.” This need to encounter success is similar to Collins’s (2001) flywheel effect in which the success of an organization starts with small successes that build in to great ones while also building the enthusiasm of the people involved in the organization. He states,

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When people begin to feel the magic of momentum- when they begin to see tangible results, when they can feel the flywheel beginning to build speed- that’s when the bulk of people line up to throw their shoulders against the wheel and push. (p. 178)
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Overall, the practices of the principals from the two sites closely correspond with the concepts of deliberate practice. The principals established an environment in which teachers could work at the appropriate level of their practice by giving them flexibility to try new things that would refine their instructional practices to meet the needs of their students with support from the principals of resources and collaboration (Bambrick-Santoyo, 2012; Danielson, 2007). Furthermore, the principals found ways to provide feedback on the teachers’ instructional practice through observations, the examination of student data, encouraging discussions with other teachers, and other resources that
facilitate the teachers making small, but continuous changes to their practice (Bambrick-Santoyo, 2012; Darling-Hammond, 2012). The leaders also had to create an environment conducive to teachers repeatedly practicing their instructional strategies so they could develop a repertoire of strategies after the leaders shifted the teachers’ mindsets to focus on what the teachers themselves could do to improve student achievement (Croft et al., 2010). The principals focused the efforts of the teachers by building relationships with them so they felt comfortable looking at data to set and implement goals to refine their practice to improve student achievement (Gardner, 2002; Slavin et al., 2013).

The principals of both sites continued to focus and support the work of the teachers to improve student achievement. It does appear that more support is given to beginner teachers through the mentor programs at both sites, but the principals remained involved in the improvement process with intermediate and expert level teachers as well. In addition, the expert level teachers discussed that it is still helpful to dialogue with colleagues about how best to refine their practice to meet the needs of their students. While there is some scaffolded support (Bronkhorst et al., 2011), the expert teachers still need support in implementing new changes within their classroom and desire feedback on their performance. This reliance on the leader speaks to the complex environment within schools that requires the continual refinement of a teacher’s instructional practices.

**Research Question 2**

How did school leaders provide an environment for teachers to implement deliberate practice to aid in the development of expertise in their instructional performance within the school?
The principals of both schools needed to change the culture and environment of the schools when they became principal. They needed to change the focus of teachers from what the students and families did not do to what the teachers could do to improve student achievement. They both had explicit conversations about the non-negotiable need to change in order to move the school forward. The principal of site 1 quoted from her superintendent and said to the staff, “’Can you teach our kids? Can you teach these kids? And if you can't, maybe this is not the place for you.’”

Once there was acceptance of the need to change, school leaders helped teachers examine how they could improve their instructional strategies to meet the needs of all students. This change required vulnerability on the part of the teachers as they had to admit to the person who evaluates them what their areas for improvement were and where they needed help. The teachers also needed to be vulnerable with one another so they could learn from their colleagues. As a result, the principals made explicit expectations that the schools would have a caring, collegial environment.

The principal of site 1 started by building relationships with her staff members and having the expectation that her staff members would build relationships with their students and families.

We really started with relationship building. I needed to develop relationships with them and I needed them to understand the importance of developing relationships with their students and, not only their students, but their students’ families as well. Once they started doing that, we started seeing some enormous success. I feel and the district feels that unless you can get to a child's heart, you are not going to get to a child's mind.
The teachers of site 1 spoke about how the principal established these relationships and provided a supportive environment through training, materials, and motivation for the teachers. A beginner teacher of site 1 explained,

I feel like they are very open. If you have a question, you can go in there and they will definitely help you with it. They are there for you as a person, too, not just as a boss. I know I had rough days when I began, just stressed out. They were there to say, “How can we help you? Calm down. You need data? Who can we pull in to get this data for you last minute?” I recently asked for a book this summer to improve on my reading and, right away, my principal said, “Oh yeah, I will get that for you.” And she got me a book. I used it and I loved it. They never look at you like you were stupid - there is no stupid question. I feel like they really appreciate any questions that we bring to them. They are willing to support us that way.

An expert teacher in site 1 stated,

They give us the time for training. They support us. They are wonderful. “So you need resources? We will find the money somewhere.” They are very accommodating with the physical materials, with the information, and allowing us to get the training. I think that is one of the best ways.

When looking at how school leaders help teachers improve, an expert teacher of site 1 spoke of the way that the leaders are present to teachers and how they approach feedback.

They are in all of the time. They are very hands-on. They do a lot of observation. They are very data-driven and it is a non-threatening way. I have sat in meetings where, “This is an issue. Let’s brainstorm why this is an issue. We are not saying something is being done wrong, but there is a trend here.” They are very much in to trying to figure out the pieces to the puzzle. It is very nice, positive atmosphere.

An intermediate teacher of site 1 concurred with the school being a risk-free environment.

They will initially start out by saying, “What can I do? Personally, what can we do as your leaders to help you?” before they say, “You need to be doing this, that, or the other. How can we help you?” That is a great way to be. I think it is a
great way, especially for step one of solving a problem—feeling like you are supported.

The principal of site 2 also expected that teachers would be collegial with one another.

You don't have to like the bus. You don't have to like the driver of the bus. But, you will, if you are going to stay on the bus, work with everyone on the bus collectively. We have to have a spirit of collaboration. If you don't, if you just want to be one of these people throwing things at the bus, then you know what, go home.

She also set the example for showing care for the students by setting up a Friday night basketball night. The principal explained,

Once these kids realized that I cared enough to come on Fridays, I cared enough to do school events... it was interesting because the second year that I started doing all of this stuff, all at once my teachers started coming. It is like, “If you are willing to work, I am willing to work.” Now, I give my teachers a list, they are willing to sign up. They do not get paid.

Overall, it appears that both leaders were able to establish the importance of creating a caring environment as the results from the surveys of all teachers showed that attributes denoting “caring” or “relationships” was given for many levels of expertise as a reason in both sites for why respondents nominated teachers.

The teachers of site 2 were not as explicit in identifying the support of the principal. One expert teacher stated that “the leader plays an important role in overall school improvement. I think our leader definitely makes us feel like we are qualified, we are capable, and she supports us. She has been instrumental in pushing professional development.” However, the other expert teacher from the site wanted a leader who would be more visible within the classroom.
It is difficult to sit and watch all of these changes that are coming through when people have not... I mean she has probably been out of the classroom for twenty plus years. To have criticism based on something that you have not really had to experience... it is difficult to swallow. I would like somebody to come in to the trenches with us and see what it is like to teach this on a consistent basis. To see what it is like to have them not understand it or see what it is like to have them understand it and see where you go from there.

Although site 2 experienced similar results of raising student achievement as site 1, it appears there was more of a positive feeling across all of the teachers in site 1. A beginner teacher from site 1 explains, “I think having that staff morale up makes us want to be here. So, probably in turn, makes our jobs better, which in turn makes the kids improve.”

The purposeful creation of an environment within the school conducive to learning corresponds to the components of deliberate practice. Ericsson (2002) speaks of the need to ensure that people do not automatize their performance to the point that they stop adjusting their performance to meet the needs of their current situation. When the principals arrived at the school, the teachers of the schools had automatized their performance and accepted the current level of low student achievement, a situation the principals ended through their discussions with the teachers about the need to change. The principals established an environment in which the teachers felt support and encouragement, as discussed by Gardner (2002), by actively working with the teachers and giving them the resources they needed to effectively refine their instructional practice.

However, the principals used different leadership strategies to achieve their outcomes. The principal of site 2 tended to rely more on a Sergiovanni’s (1992)
bureaucratic authority in which she inspected to ensure her expectations were met (e.g., lesson plans) and teachers faced consequences if they were not successful in meeting those expectations (e.g., being very upfront about terminating teachers who did not comply). The principal of site 1 appeared to rely more heavily on professional and moral authority in which the school had established norms (e.g., asking the teacher if they could teach these kids) and teachers had flexibility to meet their students’ needs based on research and their own knowledge. Similar to Sergiovanni’s findings, the teachers in site 1 had a more positive view of their school and its leadership overall.

**Research Question 3**

What differences, if any, are there between the ways that school leaders differentiate support within the framework of deliberate practice for teachers at different levels of expertise within their school building?

Both sites had a mentoring program for beginner teachers. In site 1, the program involved a series of professional development workshops and a mentoring program. A beginner teacher from site 1 spoke about the professional development offered in the program.

The ones that I know of are from the mentoring program that I think I am still in. I think it is a four year program, but you are only actively doing things for two years. I had to sign up for x amount of courses. Like, one of them was for training on the SMART board. One of them was on classroom management. I don't remember what the other ones were. Then, we had meetings with mentors throughout the year that were part of it.

The beginner teacher from site 2 spoke of a mentor coming in to observe her with the principal.
Our principal does come in and she does do an observation three times a year for us. I also, with this being my first year, I am part of the mentor program so I have a mentor that comes in four times a year to observe me as well and see how I am implementing those things I am learning from the professional development days and seeing what I can do to better myself, things that I would do different.

The principal from site 1 observes all teachers in her building even after this initial period of being a new teacher and tries to give the teachers periodic quantitative feedback. An expert teacher from site 1 explained,

Our administration, in the last several years, have gotten very consistent about getting up and walking around the school. It has gotten so regular that students do not notice when someone walks in the door. They keep on going with what they are doing. As the administrators are walking through, especially this year, they are looking for specific things and they let us know now, “Well, this is what we are going to be looking for.” They come through and I get feedback when they came through and asked these questions. They send me a quick email, “This is what I asked. I asked three different students. This is what each student was able to say. One student said this, one said this, and one said this.” Or, it might be a quick email that says, “Came, walked around- everyone was doing what they were supposed to be doing. A lot of stuff going on, but 100% on task.”

The principal of site 2 does not observe teachers on a regular basis after the first few years of teaching. The principal discussed that she only gives teachers two years to show they can teach.

You have two years with me. At two years, you can say you are not going to take a teacher back and you will not have repercussions. The first year I give you. I go in and work with you. I will model for you. I will give you support. I will have you go to other classroom teachers that are strong. I am hands-on. The second year, I am still hands-on, but everyone is not a teacher even if you go in to it. We have to tell the real truth. If you are not able to do good for children, then you have to find another career.

After a teacher is tenured, the principal only observes every other year. An expert teacher reported, “The principal does observe us every other year and she tells it like it is.”
However, the principal does supervise teachers through the use of a required lesson plan template turned in weekly. An expert teacher described the template, “We also do another lesson plan for the principal. That is basically a math and reading one that gives us all the common core standards and tells us all of the objectives. It is a very laid out plan that we have to turn in every week.”

Both principals give the teachers the flexibility to try new things within their classroom. This flexibility allows teachers to adapt their improvement efforts to their level of expertise. An intermediate teacher from site 1 stated that

as long as you are yielding great results, they will let you use and manipulate different activities and lessons and everything in the way in which you see best fits your style- the style of your particular kids for that year and your own personal style and I love that.

Furthermore, the collaborative culture allows teachers to ask questions on topics that are pertinent to their own professional growth. A beginner teacher from site 1 said that she gets help from her colleagues when she has an issue.

I seek out help from my teammates. There have been times where I said, “Are your kids getting this?” or “Have you struggled with this?” If, “Yes,” then me and my teammates brainstorm together what are some other ways we can come at this or if something else works for them. They'll say, “Oh, I have tried this. Why don't you try it?”

Additionally, while it was not necessarily addressed by the principals, there was also a difference in the way that beginner teachers lesson planned as opposed to more experienced teachers. Beginner teachers tended to spend more time on lesson planning, even scripting lessons. A beginner teacher from site 1 recalls that

when I was first a teacher, it was way more detailed. There was a lot of scripting. It would be like pages and pages- kind of unnecessary because so many spontaneous things happen in the classroom that you kind of go with sometimes.
It is not necessary to script like that. I think I have gotten more realistic with my planning and allowed for flexibility, too.

 Teachers in both sites expressed that lesson planning was not really discussed at their schools, which may be an area in which school leaders can provide further assistance, especially for beginner teachers.

 However, the principals did not always differentiate expectations in relation to teachers’ level of expertise. For example, all teachers were expected to establish an environment embedded with the components of deliberate practice for their students. Teachers were expected to use assessments to determine the appropriate level of instruction. An intermediate teacher in site 2 uses frequent assessments so “we can group them and meet them where they are at, see what they are missing, and get them to where they need to be.” Teachers would then use such strategies as guided math, flexible groupings, and small group work to teach students at these different levels. In site 2, an expert teacher thought that the decision to specifically target middle level students was successful.

 We always targeted the low group and we got no progress, no progress. We started targeting that middle group, pushing them a little further. And when we targeted that middle group a little bit and they moved up, that gave our scores a little bump and gave us more time to work with the lower group because that middle group was already gone.

 The leaders also expected that teachers use formative assessments to give students feedback on their performance and then allow them time to practice their skills and correct their errors, if necessary, through re-teaching. Site 2 formalized this program with something called teach to mastery.
If a child was doing math and didn't pass with 70 percent, I set it at 70, then the teacher was to give that child a manila folder and have it in the center with that child's name on it. When the child had time that they were sitting with nothing to do, then they could go and get their folder and they would have worksheets - this was a worksheet activity, or something they could do to build on the skill that they were missing. The teacher would come back, working with them in small groups and then she would come back in two weeks and do an assessment and they had to have 80 percent. Now, teacher assessment is at 85 percent. If any kid does not get 85 percent, she is going to teach to mastery. She is going to go over that information.

Other teachers did it more informally with the results of formative assessments (e.g., exit slips and listening to the students) in class.

Similar to the principals building a relationship with the teachers, it was also necessary for the teachers to establish caring relationships with their students so the students felt comfortable taking these academic risks. An expert teacher from site 2 said,

I also think it helps that teachers are really caring about the children. So, they care about what happens to them and it is not only just education-wise, it is, “Do they need a coat? Do they a hat? Do they need gloves? Do they need a snack today?” I think that helps the children start buying-in to the classroom itself, like, “Oh. She cares about me. This is a nice place to be.” I think you have to get the children to think that way, too, not just, “I go there. I hate that school. I hate my teachers.” You want them to go there and say, “I love my teacher. I love my school.”

This caring environment allowed students to feel comfortable sharing where they are having issues to the point that an intermediate teacher from site 1 could ask them, “What was confusing to you? Where did you feel that you were struggling?” … We had a problem. We are going back.”

Teachers also tried to ensure that students felt success. An expert teacher from site 2 stated that

I want them to be successful so I try to give every child a chance to show me some success in my lesson so that they are all listening and involved and, “I can
do it.” Sometimes children are, if they are a child that may not be able to do that skill as easily as another child, giving them something that is more successful. I know that is going to get them to get involved and say, “I can do that.” I really try to look at my objective, get everybody involved, make everybody want to do it and say, “I can do it.”

Similar to the ideas of deliberate practice, the leaders provided some differentiated support for their teachers (Glaser, 1996). School leaders provided more scaffolded support for beginner teachers with the mentoring programs present in both sites (Bronkhorst et al., 2011). However, school leaders still provided support and guidance to teachers after they became tenured through feedback using several data points from observations in site 1 and lesson plans in site 2 in addition to evaluations done at both sites (Darling-Hammond, 2012). Teachers at all levels stated that the supportive environment present in the school, similar to what Gardner (2002) discusses, allows teachers to collaborate and get help from one another. It is interesting to note that the principals of both sites did not explicitly address the process of lesson planning, with the exception of the required template for site 2, even though research has shown that beginner teachers often need help adjusting their lesson planning to meet the context of the classroom in which they are teaching and reflecting on the effectiveness of those plans in their execution (Bronkhorst et al., 2011).

**Research Question 4**

What are the implications for school leaders as they try to enhance instructional practices through professional growth activities using deliberate practice in order to improve student achievement in their schools?

Focus on Student Achievement
School leaders must ensure that teachers are focused on what they, as teachers, can do to improve student achievement. The principals of the two sites needed to have very explicit conversations about this shift in mindsets with their staff members. As a result, the teachers in the site began to hold themselves accountable for whether or not students were successful in their classrooms. When looking through the lens of deliberate practice, these explicit conversations are necessary as teachers can automatize their performance to the point that they no longer look at whether it is effectively meeting the needs of their current situation and students, especially if their practices have been effective in the past (Ericsson, 2002). Consequently, after shifting teachers’ mindsets, school leaders need to both ensure that teachers continually refine their practice so they do not get complacent again while also giving teachers enough time to master new instructional strategies (Ericsson, Prietula, & Cokely, 2007). The act of school improvement is accomplished through school leaders facilitating the deliberate practice of teachers to continually refine their strategies.

Consequently, school leaders must take an active role to help drive the change to meet the needs of students. They must provide training, materials, and support for teachers. They must provide teachers with sustained professional development with new initiatives. In addition, they need to create an environment conducive to both student and teacher learning.

**Use of student assessment data in teacher evaluations.** The call for the use of student assessment data seems to support the conclusion that teachers need to be accountable for student learning. However, there are also dramatic shifts occurring
within field of education and the expectations of what students should be able to achieve have risen significantly. The teachers in both sites experienced students who were unable to meet these new expectations, which necessitated the teacher changing the way they worked with these students. School leaders must allow for teachers to work with students at their appropriate level to bring them up to the new standards and expectations.

Furthermore, a school leader must strike a balance between using assessment data as an evaluative instrument and a tool for improvement. Teachers must feel comfortable sharing the data in a non-threatening way and understand how to read, interpret, and use the data to adjust their instructional strategies to meet students’ needs (Slavin et al., 2013). If teachers feel that data is solely used in a punitive way, it will be difficult for them to feel comfortable to have these conversations. Therefore, school leaders need to find a balance between accountability and creating a non-threatening environment in which they can correct their errors (i.e., not having students work to their full potential) (Gardner, 2002). The principal of site 1 offers some examples of how to do that as she told teachers that there was a trend and that did not necessarily mean anything was wrong. She first asked teachers how she could support them and she gave teachers the training and materials they needed to be successful. Consequently, school leaders must expect teachers to use the components of deliberate practice to continually refine their practice and, thus, student achievement as shown through assessment and other data.

**Flexibility and setting minimum expectations.** With the call for increased accountability, there can be a desire for school leaders to become more controlling of what happens in classrooms and begin to dictate such things as a scripted curriculum for
their teachers. The participants of both sites recognized that different students have different needs and even the needs of the same students can change on a daily basis. Consequently, having a strict program does not allow a teacher to respond to the specialized needs they encounter with students. Giving teachers the flexibility to try new things also allows them to work at their appropriate level of expertise.

Research has shown that expert teachers are able to use context information to determine the best strategy to use in a given situation (Bond et al., 2000). Since education is a multifaceted field in which many complex issues may affect student achievement, the teacher in a classroom will often have the best knowledge of the students and context, especially if they are at the expert level, and need the flexibility to choose the best strategy that will achieve the best results for their students (Frontier & Rickabaugh, 2014).

Nonetheless, the principals also established minimum expectations that all teachers were required to meet. These expectations corresponded with the components of deliberate practice. Sternberg, Grigorenko, and Ferrari (2002) found that people improved when they practiced deliberately at an appropriate (but increasing) level of performance, obtain feedback on their performance that allows them to refine their performance to improve it, allows them to repeat their performance until they master it, and facilitates the correction of errors in the improvement process. Likewise, the principals expected teachers to set explicit objectives for students, use formative assessment to determine the appropriate level of instruction to help them achieve those objectives, give feedback on the students’ performance and give them time to practice,
and help them correct errors in a caring environment through the use of re-teaching and other methods until the students mastered the objective. As a result, the teachers utilize deliberate practice in teaching as they are “deliberating teaching to enhance learning” (Vermunt, 2011, p. 1127).

Creating a collaborative environment. The creation of a collaborative environment within a school gives teachers access to assistance from their colleagues and administrators so they can obtain help at their appropriate level. The principals of both schools involved in the study set the expectation of a caring environment as a non-negotiable. They led by example and demanded that their staff members worked collaboratively with each other and the families in the school. Within deliberate practice, this type of environment is essential to the process as people are working at the edge of their competence and often face the possibility of failure as they try new things (Bereiter & Scardamalia, 1993).

However, this culture of caring and the relationships took several years to build before teachers felt comfortable sharing with the principals and one another. Consequently, a leader of the school needs to remain in a position for several years to build these relationships and have these conversations with teachers, which speaks to the need for sustainable leadership within schools. If a new leader comes to a school every few years, this type of culture would be difficult, if not impossible, to create within a school.

Observation and feedback. With the current focus on principals serving as instructional leaders, the study offers a way for principals to help teachers improve.
Teacher in both sites desired to have regular observation and feedback about their lessons from their principal and colleagues. They found quantitative feedback the most helpful. Within the lens of deliberate practice, feedback is a key step in that it allows people to identify areas in their practice on which they can take deliberate action to improve (Ericsson, Krampe, & Tesch-Romer, 1993). Without feedback and determining ways to refine practice, beginners often lack the skills to know what to do in order to improve and everyone has the risk of becoming complacent with their present level of performance, thus stopping the growth process (Batt, 2010; Bereiter & Scardamalia, 1993).

Consequently, school leaders need to ensure that deliberate practice occurs, allowing teachers to work on mastering current skills while continually working to refine their practice to move to the next level of performance (Ericsson, Prietula, & Cokely, 2007).

Corresponding with the need to have teachers deliberately practice to refine their skills, the respondents of both sites stated that the principal was willing to have difficult conversations to ask people to change. If a leader wants the teacher to change something, then the leader needs to give them practical ways to do so and let them see the change that is being asked of them at their specific grade level so they have a conceptual understanding of the change. This finding corresponds with May and Suppowitz’s (2011) finding that principals were most effective when they helped specific teachers improve their practice rather than just leading general changes in the school. Furthermore, teachers need the training, materials, and time to become comfortable with the change and implement it within their classrooms. Leaders also need to find ways for teachers to experience success to keep them motivated in the change process.
Results compared to professional learning communities. Several practices have emerged as being essential for professional learning communities including creating clarity around the focus on student achievement, creating a culture of collaboration, empowering people to inquire on how to improve their practice, taking action on ideas and aligning systems to support them, and reflecting on the results of their action and the process itself (Dufour et al., 2006; Erkens & Twadell, 2012). This list of practices appears somewhat similar to the practices found in this study. However a key difference appears to exist in the role of the principal between the professional learning community model and the framework of deliberate practice.

Within this study, the principals were not just a facilitator, but were a main driving force behind the change efforts within the schools. While the principals gave teachers some flexibility to meet the needs of their students, they also expected teachers to meet certain foundational requirements and actively supervised teachers to ensure those requirements were met. Whereas the professional learning community process wants the focus to be on what students can do, the principals also found ways to actively supervise what teachers were doing through frequent observations and feedback in site 1 and monitoring of lesson plans in site 2. When necessary, the principals had difficult conversations with people and worked with the teachers so they could achieve what was asked of them. Although many of the characteristics are similar, this top-down drive to achieve results and accountability for teachers was a constant presence in the schools as opposed to being “as needed” as suggested in the professional learning community model (Dufour et al., 2006, p. 191).
Relationship with effective instructional leadership and professional development. The concept of deliberate practice appears to have a relationship with the components of effective instructional leadership and effective professional development based on the findings in this research study (see Table 31). To help teachers improve at their appropriate level, the principals of the two sites provided teachers with training, materials, and support. Similarly, in effective instructional leadership, a principal is expected to provide resources and participate in professional development (Edmonds, 1982; Marzano, 2003; Robinson, Lloyd, & Rowe, 2008; Shatzer et al., 2013). This professional development is effective if it is intensive and ongoing such as the math consultant from site 1 and the guided reading sessions from site 2 (Darling-Hammond, Wei, & Adamson, 2010). Principals had certain expectations for teachers such as the learning targets in site 1. All of the teachers used that common language, a component of effective professional development, to discuss those expectations (Marzano, 2010).

For feedback on performance, the teachers wanted frequent observation and feedback and they also used other data to receive feedback about their teaching (e.g., student assessment data, discussions and observations with other teachers, and other resources such as books). These practices correspond to how effective instructional leadership asks for leaders to evaluate the curriculum and teaching and how effective professional development calls for teachers to have opportunities to observe and discuss (Darling-Hammond, Wei, & Adamson, 2010; Marzano, 2010). While giving feedback, the principal focused on specific strategies and asked for small changes from the teachers, another component of effective professional development (Darling-Hammond, Wei, &
Adamson, 2010). For example, the principal of site 1 focused on reading when she became principal.

Both principals had to change the teachers’ focus on to what the teachers could do to improve student outcomes and created the expectation that all students should show academic growth, which created clear goals and expectations for them, a component of effective instructional leadership (Edmonds, 1982; Marzano, 2003; Robinson, Lloyd, & Rowe, 2008; Marzano, 2010; Shatzer et al., 2013). Principals had to ensure a safe and orderly environment existed that was conducive to learning (e.g., the principal of site 2 had to establish the equitable distribution of special education students and students with behavioral issues in the district), which corresponds to effective instructional leadership (Edmonds, 1982; Marzano, 2003; Robinson, Lloyd, & Rowe, 2008; Shatzer et al., 2013). Principals also had to give teachers time to work on changes. In site 1, the district negotiated more time within the teachers’ contract for additional collaboration and professional development time. During the observation of some of the professional development, the principal connected what was discussed (i.e., text-dependent questions) to what teachers had learned before (i.e., the new state assessment).

The principals used data days to help teachers examine student data and reflect on how they could improve the effectiveness of their own instructional practices. The principals set goals with the teachers and then tracked their progress on these goals throughout the year. Consequently, the principals focused teachers on student learning by evaluating student outcomes and tracked their progress towards meeting the
established goals (components of both effective instructional leadership and effective professional development) (Marzano, 2010).

Table 31

*Relationship between Components of Deliberate Practice, Effective Instructional Leadership, and Effective Professional Development*

<table>
<thead>
<tr>
<th>Component of Deliberate Practice</th>
<th>Practice from Research Study</th>
<th>Effective Instructional Leadership</th>
<th>Effective Professional Development</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appropriate Level</strong></td>
<td>- Principals provided training, materials, and support for change</td>
<td>- Provide Resources - Participate in professional development</td>
<td>- Intensive and ongoing professional development</td>
</tr>
<tr>
<td></td>
<td>- Principals had certain minimum requirements for all teachers (e.g., learning targets)</td>
<td></td>
<td>- Common language to talk about instruction</td>
</tr>
<tr>
<td><strong>Feedback</strong></td>
<td>- Teachers want frequent observation and feedback - Use of student data, discussion/observations of peers, and other resources for feedback</td>
<td>- Evaluate curriculum and teaching</td>
<td>- Opportunities to observe and discuss</td>
</tr>
<tr>
<td></td>
<td>- Principals gave targeted feedback and asked for small changes</td>
<td></td>
<td>- Focus on specific strategies and content area</td>
</tr>
<tr>
<td><strong>Allows for Repetition</strong></td>
<td>- Principals changed focus to what teachers could do to improve student achievement</td>
<td>- Create clear goals/expectations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Principals provided environment conducive to learning</td>
<td>- Safe and orderly environment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Teachers need time to learn about and implement changes</td>
<td></td>
<td>- Connected to other initiatives</td>
</tr>
<tr>
<td><strong>Correction of Errors</strong></td>
<td>- Principals used student data to gauge the effectiveness of instructional strategies - Principals expected teachers to ensure students mastered objectives - Principals established and evaluated data-based goals with teachers</td>
<td>- Evaluate student outcomes</td>
<td>- Track teacher progress - Focus on student learning through data</td>
</tr>
</tbody>
</table>
Part of the instructional leadership the principals exhibited was ensuring that teachers provided students with a deliberate practice environment that included practice at the appropriate level, feedback from the teacher, repetition to practice new skills, and correction of errors (Sternberg, Grigorenko, & Ferrari, 2002). Teachers provided these components in a variety of ways within their classroom. For the appropriate level, teachers provided initial teaching to students and then gave more individualized teaching to smaller groups of students based on their needs. Teachers gave students feedback through the use of formative assessments during the class and adapted their teaching to ensure students mastered the material. Students were allowed to practice material through activities in a classroom with good classroom management that would deter behavioral issues that might disrupt learning. Teachers expected students to correct their errors and master the material as the teachers worked with students in small groups and provided re-teaching as necessary.

Consequently, school leaders must establish an environment in which deliberate practice exists for both the teachers and students within a school. The leader must take an active role to ensure that there is continuous improvement within a caring environment and that people do not become complacent at their current level of performance. The school leader can facilitate this continual improvement through reflection and feedback on data and then providing the resources necessary to make changes needed to improve student achievement.
**Table 32**  

*Comparison of Deliberate Practice for Teachers to Students*

<table>
<thead>
<tr>
<th>Component of Deliberate Practice</th>
<th>Teacher Practice from Research Study</th>
<th>Student Practice from Research Study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appropriate Level</strong></td>
<td>- Principals provided training, materials, and support for change</td>
<td>- Provided training and resources at appropriate level (e.g., using 1st grade materials in 2nd grade classroom)</td>
</tr>
<tr>
<td></td>
<td>- Principals had certain minimum requirements for all teachers (e.g., learning targets)</td>
<td>- Teachers set learning targets within the classroom</td>
</tr>
</tbody>
</table>
| **Feedback**                     | - Teachers want frequent observation and feedback  
                                                 - Use of student data, discussion/observations of peers, and other resources for feedback | - Teachers used formative assessment and observation of students to determine mastery of concepts |
|                                  | - Principals gave targeted feedback and asked for small changes | - Teachers used small groups to provide support for students who struggled or who needed a challenge |
| **Allows for Repetition**        | - Principals changed focus to what teachers could do to improve student achievement | - Learning targets included how students would know when they mastered the concept |
|                                  | - Principals provided environment conducive to learning | - Classroom management was the first thing leaders ensured teachers mastered |
|                                  | - Teachers need time to learn about and implement changes | - Teachers let students participate in activities to practice their new skills |
| **Correction of Errors**         | - Principals used student data to gauge the effectiveness of instructional strategies  
                                                 - Principals expected teachers to ensure students mastered objectives  
                                                 - Principals established and evaluated data-based goals with teachers | - Teachers used data to ensure students mastered the concept and refined their instructional practices when necessary |
Limitations

This research study purported to understand how school leaders use deliberate practice to improve teachers’ instructional practice and, thus, improve student achievement. Several limitations existed within the study, including:

1. The study was completed in suburban public schools that served grades preschool/Kindergarten through 5th grade. Consequently, it may be difficult to generalize the results to other types of schools.

2. The study used standardized test scores in the sampling selection process to identify successful schools. Standardized tests are just one measure of student success and do not measure all areas in which a school can have an impact on student learning.

3. The selection of the subsample of teachers at the various skill levels was completed through principal and peer nomination for the beginner and intermediate level and in the absence of national board certified teachers at the expert level. This nomination process is unscientific, but no other researcher has given a process to identify teachers at the various skill levels. The researcher also recognizes that teachers can be experts although they do have national board certification. The nomination process allowed for other teachers to be chosen for the subsample.

4. The participants in the study were all female. The study may have had different results if males were also represented in the subsample of principals and/or teachers.
5. It was difficult to secure participation in the subsample of teachers for site 2. This factor may have resulted in teachers participating in the study that may not have truly represented the given skill level and did result in only one beginner teacher being interviewed at the site.

**Recommendations for Further Research**

The purpose of this study was to see how school leaders utilize the components of deliberate practice in their leadership to help teachers improve student performance. While conducting the study, the researcher identified other areas for future research:

1. Within this study, teachers stated that they did not know how professional development was chosen and/or evaluated. Therefore, a study should examine how district/school leaders choose and evaluate professional development and how they incorporate teacher input in their decisions.

2. The principals and teachers in this study did not appear to nominate the teacher leaders (e.g., literacy leaders, grade level leaders, etc.) within their schools as expert teachers. It would be interesting to study the criteria school leaders use to select teacher leaders within their school and how it relates to the selected teachers’ level of expertise.

3. There was very little agreement about the reasons teachers gave for nominating people at each level of expertise on the survey given to all teachers in the two sites. This fact leads to a study about the criteria teachers and school leaders use to identify expert teachers within their districts and whether there is a shared perception of those criteria.
4. The principals of both sites expressed the needs to change the mindsets of the teachers to focus on what the teachers themselves could do to improve student achievement. It would be educative to perform a study that focuses on how school leaders change the mindset of teachers in school buildings with a history of poor student performance.

5. Within this study, site 1 did not have requirements for lesson planning while site 2 had a specific format that the principal required of teachers. It would be instructive to study whether the requirement of lesson plans and/or specific forms of lesson planning by school leaders shows an increase in teacher effectiveness and student achievement.

6. The principal of site 2 discussed how she made a determination after beginning teachers had been with her for two years as to whether or not she would retain those teachers. It would be interesting to study how school leaders determine whether a beginner teacher will be able to progress to become an expert teacher.

Summary of Findings

The research study examined how leaders used deliberate practice to guide their efforts to help teachers improve student achievement in public schools with high percentages of students identified as minority and low income. Deliberate practice was defined as practice that is “(a) at an appropriate level, (b) provides informative feedback, (c) provides for opportunities for repetition, and (d) allows for correction of errors” (Sternberg, Grigorenko, & Ferrari, 2002, p. 71). Although differences existed in the two
schools in the study with the demographics of the students, similar themes and subthemes emerged within the components of deliberate practice between the two schools.

The component of appropriate level becomes complex in education because not only are the teachers at different levels of performance, but the students they teach are different and have changing needs to which teachers must continually refine their practice. The principals in the study gave teachers flexibility to try new instructional practices within their classrooms, which allowed teachers to work at their level of expertise. Even with this flexibility, the principals gave teachers foundational expectations for their work with students that included setting objectives and working with students at the appropriate level to meet those objectives and show growth.

As teachers commence change efforts, they look to their principals for help with support, materials, and practical training to make changes at their appropriate level. Teachers spoke about principals providing them with such things as books and professional development to learn about new instructional strategies. Furthermore, the fact that the schools had a collaborative culture allowed teachers to feel comfortable acquiring help from colleagues or the administration with the immediate issues they faced. The teachers were able to go to administrators and colleagues to discuss ways they could implement changes within their classrooms. All of these practices allowed teachers to receive help at the appropriate level and with the proper amount of support they needed to be successful (Bambrick-Santoyo, 2012; Danielson, 2007).

Feedback on performance occurs in several different ways for teachers. Teachers in both sites desired observations and feedback on their own performance as they could
not see everything happening in their classroom. The teachers asked for targeted, quantitative feedback that would allow them to reflect on their instructional practice. Teachers also used student data to judge the effectiveness of their instructional practices from such things as class discussions, formative assessment, and standardized tests. During data days, teachers would compare their data to other teachers within the building or district and compare their practices to their colleagues to identify any areas in which they could improve.

Teachers also received feedback on their performance through observations of other teachers, discussions with other teachers (e.g., vertical articulation and grade level meetings), and other materials including books, magazines, and websites. Teachers wanted to obtain practical information on how to enact changes that explicitly shows them what a requested change looks like in a classroom that is similar to their own. Principals were also willing to have difficult conversations with teachers who needed to change and one of the principals found it effective to start the conversation asking how the principal could support the teacher in her efforts. As a result, the principals explicitly lead the change efforts within their schools and ensured that teachers acted on the feedback they received to refine their instructional practice and, thus, improve student achievement. This model of feedback aligns with Marzano’s (2010) model of deliberate practice in education in which school leaders ensure teachers’ progress has a positive effect on student achievement.

For repetition, both principals began their tenure as principal with teachers who were stuck in a routine, one of the possible negative outcomes from repetition. They had
to have conversations with people to change their mindset to focus on what the teachers could do to help improve student achievement rather than what students or families were not doing. Teachers also needed the time and environment in which to use their instructional strategies, which required the principals to ensure the proper environment existed in the school (e.g., good discipline existed). As teachers focused on instruction, they were able to add to the repertoire of strategies from which they could use to help students in their classroom.

Both principals established a safe, collaborative environment in which teachers could identify where they were having issues and correct them. Establishing the trust and relationships necessary for this environment took several years to complete. Both principals expected teachers to show the same care towards students and to work with students until they mastered the objectives and showed growth using methods similar to deliberate practice, which often required teachers to find new ways for students to learn the material. Principals set data-driven goals with the teachers and provided follow-up to ensure the goals were met. The principals also recognized that continuous improvement is difficult work and some people are hesitant to try new things, so they tried to show people success to keep them motivated in their efforts.

The results of the study lead to several implications for school leaders as they look to improve student achievement. First, school leaders must ensure there is a focus on student learning and what the teachers themselves can do to improve student success rather than placing blame on things outside of the school’s control. Second, school leaders must take a balanced approach for how student data is used since it is often used
as both an evaluative measure and a tool for improvement. Teachers must feel comfortable talking about the data and understand how to use it to drive instructional improvements.

Third, while there were some foundational expectations within the schools around setting objectives and ensuring students reached them and showed growth, the principals allowed flexibility in how teachers helped students meet those objectives, which seems contrary to the impulse of many leaders to tighten control when student scores are not at the desired level. Both sites established a collaborative environment over a period of time in which teachers felt comfortable talking with colleague and the administration about their improvement efforts. The fact that it took several years to establish this environment speaks to the necessity of sustainable leadership within the schools. If the principalship of a school is a revolving door of people moving through the position, it would be difficult, if not impossible for teachers to become comfortable enough with the person in the position to discuss the areas in which they need to improve and to take risks to make the necessary improvements. Finally, teachers desired frequent observation and feedback of their performance with practical ways and materials to help them understand the changes expected from them. Leaders found ways for teachers to experience success as they completed the process of change.

The concept of deliberate practice seems to help explain several common educational concepts including instructional leadership, professional learning communities, and effective professional development. The principals of the two schools in this study were drivers of the change required in the school and provided active
supervision of that change process in different ways. The principal of site 1 focused on teacher observations of all teachers to ensure high quality instruction was taking place within the school. The principal of site 2 ensured she had the best teachers and then inspected lesson plans to supervise the teachers’ instruction. Both principals facilitated the examination of student data to ensure that the teachers’ instructional strategies met the needs of the students currently in their classroom. Teachers in both sites expressed the need to have this help from the principal in order to continually improve their instructional practices.

The research study highlights the fact that the improvement of student achievement takes time and that there are no quick fixes within the field of education. The changing needs of students, the addition of requirements for schools from the state and federal government, and the shifting needs of a community can complicate the improvement process. The changes required of teachers to effectively make students’ college and career ready will require hard work and perseverance. The current climate in which teachers are often blamed for the lack of progress and derided by politicians and pundits makes the change more difficult. School leaders must give teachers the proper environment, flexibility, and support while creating a drive towards continuous improvement to ensure all students can be successful.

Consequently, principals must act as a coach who ensures that the teachers focus not only on what the teachers themselves are doing (i.e., the mechanics of performance), but also focus on whether their instructional practices are increasing student achievement (i.e., the performance goals) (Zimmerman, 2002). The school leaders must use deliberate
practice to ask the teachers to refine their practice to meet the needs of all students by making small, but continuous changes. There is an intentional continuous cycle of improvement facilitated by the principal of looking at data to correct errors in which students are not learning to their full potential, implementing new strategies at the appropriate level of the teacher, getting feedback on the strategies through various sources of data, practicing those strategies until teachers master them, and then starting the process over by examining student data to ensure those practices remain effective for students. The model of deliberate practice that was actively led by the principals in both sites led to the improvement of the two schools in the study and serves as an example for other school leaders to follow.
APPENDIX A

LETTER OF COOPERATION TO SUPERINTENDENTS AND PRINCIPALS
If you agree to participate in this research study, please download this form. It should then be printed on your letterhead and signed. Please return it to Matthew Banach in the self-addressed, stamped envelope enclosed for your convenience. Your signature on the letter of cooperation indicates that you have read and understood the information provided above, have had an opportunity to ask questions, and agree to participate in this research study.

INSTITUTIONAL LETTERHEAD

Today’s Date

Office of Research Services
Loyola University Chicago
6439 Sheridan Rd., Suite 400
Chicago, IL 60626-5309

On behalf of District ABC and XYZ School, I agree to cooperate with the research study, Instructional Leadership and Deliberate Practice: A Framework for Improving Student Achievement, being conducted by Matthew Banach for his dissertation, under the supervision of Dr. Marla Israel in the School of Education at Loyola University of Chicago.

I understand the school in my district was chosen to participate because it met the criteria identified in the dissertation, namely:

1) Having a student population with over 50% of students identified as being low income
2) Having a student population with at least 50% of student identified as ethnic minorities
3) Showing improvement in student achievement as evidenced by being recognized with the Illinois Spotlight Award and/or the Academic Improvement Award in 2011
4) Having at least one teacher on staff who has national board certification

I understand that by agreeing to participate in this study, my staff will be asked to do the following:

Principal
- The researcher will ask the principal of the school to participate in the research study. If the principal agrees, he/she will participate in a 30-45 minute long interview to gain information about the context of the school and how he/she works with teachers. The principal will also be asked to confidentially identify teachers at various skill levels who will be asked to participate in an interview. The interview with the principal will be audio taped and transcribed.
All Teachers in the Selected School

- The researcher will observe 2-3 sessions of activities designed to improve the instructional practices of teachers (e.g., professional development activities, staff meetings, curriculum meetings, team level meetings, etc.) at sessions arranged with the principal of the school prior to the events. He will gain oral consent from participants to participate in the events. He will take field notes during the activities about such things as the topics discussed, interactions between participants and activities from the session.

- All teachers in the school will be asked by a letter in their mailbox and/or email to their listed email address on the school’s website to participate in a survey that should take approximately 10-15 minutes to complete. Teachers will also be asked to confidentially identify teachers at various skill levels who will be asked to participate in an interview. The survey will be administrated electronically. Answers will not be attributed to individual teachers.

Six Teacher Identified at Various Skill Levels (Including Board Certified Teachers)

- Six teachers will be asked to participate in two 30-45 minute interviews by a letter in their mailbox and/or email to their listed email address on the school’s website. The first interview will delve deeper into how the teacher approaches improvement of his/her instructional practice. The second interview will take 30-45 minutes and will ask the teachers to walk the researcher through the steps of how they approach lesson planning. The interviews will be audio taped and transcribed.

If I have questions about this research study, I will contact: Matthew Banach at matthewbanach@yahoo.com or Dr. Marla Israel at misrael@luc.edu.

Sincerely,

Superintendent’s Signature

Date

Principal’s Signature

Date
APPENDIX B

CONSENT FORMS FOR PRINCIPALS
CONSENT TO PARTICIPATE IN RESEARCH

Project Title: Instructional Leadership and Deliberate Practice: A Framework for Improving Student Achievement
Researcher(s): Matthew Banach
Faculty Sponsor: Dr. Marla Israel

Introduction:
You are being invited to participate in a research study being conducted by Matthew Banach for his dissertation, under the supervision of Dr. Marla Israel in the School of Education at Loyola University of Chicago.

You are being asked to participate because you are a principal in a school that has successfully increased student achievement in a school with a high percentage of minority students and students who qualify for the free and reduced lunch program. The research project will take place at two schools. The researcher will ask all teachers within the schools to participate in a survey. The researcher will ask the principal to participate in an interview and teachers identified at various skill levels to participate in two short interviews.

Please read this form carefully and ask any questions you may have before deciding whether to participate in the study.

Purpose:
The purpose of this study is identify an underlying theory that explains why some schools are able to increase student achievement through the professional growth of teachers when many schools in similar situations are not able to achieve the same level of success. The study will look particularly at how school leaders help frame the work of the school, provide an environment conducive to professional growth, and work with teachers to help make improvements.

Procedures:
If you agree to be in the study, you will be asked to do the following:
• The principal will be asked to participate in an interview about the reasons for the increase in student achievement and the professional growth of teachers. The researcher will work with the participant to find a convenient time and place to hold the interview. It is expected the interviews will take approximately 30-45 minutes. The researcher will ask the participant whether it is permissible to audio record the interview.

Your teachers will be asked to:
All Teachers

- All teachers in the school will be asked to participate in a survey that should take approximately 10-15 minutes to complete. Teachers will also be asked to confidentially identify teachers at various skill levels who will be asked to participate in an interview. The survey will be administrated electronically. Answers will not be attributed to individual teachers.

Six Teacher Identified at Various Skill Levels (Including Board Certified Teachers)

- Six teachers will be asked to participate in two 30-45 minute interviews. The first interview will delve deeper into how the teacher approaches improvement of his/her instructional practice. The second interview will take 30-45 minutes and will look ask the teachers to walk the researcher through the steps of how they approach lesson planning. The interviews will be audio taped and transcribed. The researcher will send each individual transcript to the corresponding interviewee to ensure the conversation was captured correctly. The researcher will also share analysis from the study to get feedback on the findings.

Risks/Benefits:
The research study involves the topic of teacher professional growth, which is usually included in teacher and administrator evaluations. Therefore, there may be a slight risk for participation in the research study. However, the study seeks to examine successful forms of professional growth. In addition, the participants of the study will remain confidential.

There are no direct benefits to you from participation, but the researcher hopes the results of the study can be used to help teachers and administrators to more effectively create successful schools that meet the needs of all learners.

Confidentiality:

- All responses will remain confidential. The names of the district, school, and participants will not be used in the final report. The researcher will not share individual participant data with other members of the school district.
- The researcher will keep information confidential. If participants choose to remain confidential, the researcher will code information using pseudonyms.
- The researcher will keep all notes and digital files from the audio recordings on a secure computer within the researcher’s home.

Voluntary Participation:
Participation in this study is voluntary. If you do not want to be in this study, you do not have to participate. Even if you decide to participate, you are free not to answer any question or to withdraw from participation at any time without penalty.
Contacts and Questions:
If you have questions about this research study, please feel free to contact Matthew Banach at matthewbanach@yahoo.com or the faculty sponsor, Dr. Marla Israel, at misrael@luc.edu.

If you have questions about your rights as a research participant, you may contact the Loyola University Office of Research Services at (773) 508-2689.

Statement of Consent:
Your signature below indicates that you have read the information provided above, have had an opportunity to ask questions, and agree to participate in this research study. You will be given a copy of this form to keep for your records.

____________________________________________   __________________
Participant’s Signature                                                   Date

____________________________________________  ___________________
Researcher’s Signature                                                  Date
APPENDIX C

CONSENT FORM FOR TEACHER SURVEY
CONSENT TO PARTICIPATE IN RESEARCH

Project Title: Instructional Leadership and Deliberate Practice: A Framework for Improving Student Achievement
Researcher(s): Matthew Banach
Faculty Sponsor: Dr. Marla Israel

Introduction:
You are being invited to participate in a research study being conducted by Matthew Banach for his dissertation, under the supervision of Dr. Marla Israel in the School of Education at Loyola University of Chicago.

You are being asked to participate because you are a teacher in a school that has successfully increased student achievement in a school with a high percentage of minority students and students who qualify for the free and reduced lunch program. The research project will take place at two schools. The researcher will ask all teachers within the schools to participate in a survey. The researcher will ask the principal to participate in an interview and teachers identified at various skill levels to participate in two short interviews.

Please read this form carefully and ask any questions you may have before deciding whether to participate in the study.

Purpose:
The purpose of this study is to identify an underlying theory that explains why some schools are able to increase student achievement through the professional growth of teachers when many schools in similar situations are not able to achieve the same level of success. The study will look particularly at how school leaders help frame the work of the school, provide an environment conducive to professional growth, and work with teachers to help make improvements.

Procedures:
If you agree to be in the study, you will be asked to do the following:
• All teachers will be asked to participate in a teacher survey to confidentially nominate teachers at various levels of expertise. The participant will be able to complete the survey questions online and it is expected the survey will take approximately 10-15 minutes to complete.

Risks/Benefits:
The research study involves the topic of teacher professional growth, which is usually included in teacher and administrator evaluations. Therefore, there may be a slight risk for participation in the research study. However, the study seeks to examine successful forms of professional growth. Confidentiality will be maintained to the degree permitted by the technology used. Your participation in this online survey involves risks similar to
a person’s everyday use of the Internet. If a participant completes an anonymous survey and then submits it to the researcher, the research will be unable to extract anonymous data from the database should the participant wish to withdraw. There are no direct benefits to you from participation, but the researcher hopes the results of the study can be used to help teachers and administrators to more effectively create successful schools that meet the needs of all learners.

**Confidentiality:**
- All responses will remain confidential. The names of the district, school, and participants will not be used in the final report. The researcher will not share individual participant data with other members of the school district.
- The researcher will keep information confidential. If participants choose to remain confidential, the researcher will code information using pseudonyms.
- The researcher will keep all notes and digital files from the audio recordings on a secure computer within the researcher’s home.

**Voluntary Participation:**
Participation in this study is voluntary. If you do not want to be in this study, you do not have to participate. Even if you decide to participate, you are free not to answer any question or to withdraw from participation at any time without penalty.

**Contacts and Questions:**
If you have questions about this research study, please feel free to contact Matthew Banach at matthewbanach@yahoo.com or the faculty sponsor, Dr. Marla Israel, at misrael@luc.edu.

If you have questions about your rights as a research participant, you may contact the Loyola University Office of Research Services at (773) 508-2689.

**Statement of Consent:**
By completing the online survey, you are indicating that you have read the information provided above, have had an opportunity to ask questions, and agree to participate in this research study.
APPENDIX D

CONSENT FORMS FOR TEACHER INTERVIEWS
CONSENT TO PARTICIPATE IN RESEARCH

Project Title: Instructional Leadership and Deliberate Practice: A Framework for Improving Student Achievement
Researcher(s): Matthew Banach
Faculty Sponsor: Dr. Marla Israel

Introduction:
You are being invited to participate in a research study being conducted by Matthew Banach for his dissertation, under the supervision of Dr. Marla Israel in the School of Education at Loyola University of Chicago.

You are being asked to participate because you are a teacher in a school that has successfully increased student achievement in a school with a high percentage of minority students and students who qualify for the free and reduced lunch program. The research project will take place at two schools. The researcher will ask all teachers within the schools to participate in a survey. The researcher will ask the principal to participate in an interview and teachers identified at various skill levels to participate in two short interviews.

Please read this form carefully and ask any questions you may have before deciding whether to participate in the study.

Purpose:
The purpose of this study is identify an underlying theory that explains why some schools are able to increase student achievement through the professional growth of teachers when many schools in similar situations are not able to achieve the same level of success. The study will look particularly at how school leaders help frame the work of the school, provide an environment conducive to professional growth, and work with teachers to help make improvements.

Procedures:
If you agree to be in the study, you will be asked to do the following:

- Teachers nominated by their peers and/or who have obtained national board certification will be asked to participate in an interview about the reasons for the increase in student achievement and the professional growth of teachers. The researcher will work with the participant to find a convenient time and place to hold the interview. It is expected the interviews will take approximately 30-45 minutes. The researcher will ask the participant whether it is permissible to audio record the interview.

Risks/Benefits:
The research study involves the topic of teacher professional growth, which is usually included in teacher and administrator evaluations. Therefore, there may be a slight risk
for participation in the research study. However, the study seeks to examine successful forms of professional growth. In addition, the participants of the study will remain confidential.

There are no direct benefits to you from participation, but the researcher hopes the results of the study can be used to help teachers and administrators to more effectively create successful schools that meet the needs of all learners.

Confidentiality:
- All responses will remain confidential. The names of the district, school, and participants will not be used in the final report. The researcher will not share individual participant data with other members of the school district.
- The researcher will keep information confidential. If participants choose to remain confidential, the researcher will code information using pseudonyms.
- The researcher will keep all notes and digital files from the audio recordings on a secure computer within the researcher’s home.

Voluntary Participation:
Participation in this study is voluntary. If you do not want to be in this study, you do not have to participate. Even if you decide to participate, you are free not to answer any question or to withdraw from participation at any time without penalty.

Contacts and Questions:
If you have questions about this research study, please feel free to contact Matthew Banach at matthewbanach@yahoo.com or the faculty sponsor, Dr. Marla Israel, at misrael@luc.edu.

If you have questions about your rights as a research participant, you may contact the Loyola University Office of Research Services at (773) 508-2689.

Statement of Consent:
Your signature below indicates that you have read the information provided above, have had an opportunity to ask questions, and agree to participate in this research study. You will be given a copy of this form to keep for your records.

____________________________________________   __________________
Participant’s Signature                                      Date

____________________________________________  ___________________
Researcher’s Signature                                    Date
APPENDIX E

CONSENT FORM FOR TEACHER THINK ALOUDS
CONSENT TO PARTICIPATE IN RESEARCH

Project Title: Instructional Leadership and Deliberate Practice: A Framework for Improving Student Achievement
Researcher(s): Matthew Banach
Faculty Sponsor: Dr. Marla Israel

Introduction:
You are being invited to participate in a research study being conducted by Matthew Banach for his dissertation, under the supervision of Dr. Marla Israel in the School of Education at Loyola University of Chicago.

You are being asked to participate because you are a teacher in a school that has successfully increased student achievement in a school with a high percentage of minority students and students who qualify for the free and reduced lunch program. The research project will take place at two schools. The researcher will ask all teachers within the schools to participate in a survey. The researcher will ask the principal to participate in an interview and teachers identified at various skill levels to participate in two short interviews.

Please read this form carefully and ask any questions you may have before deciding whether to participate in the study.

Purpose:
The purpose of this study is identify an underlying theory that explains why some schools are able to increase student achievement through the professional growth of teachers when many schools in similar situations are not able to achieve the same level of success. The study will look particularly at how school leaders help frame the work of the school, provide an environment conducive to professional growth, and work with teachers to help make improvements.

Procedures:
If you agree to be in the study, you will be asked to do the following:

- Teachers nominated by their peers and/or who have obtained national board certification will be asked to participate in an interview about how they approach lesson planning. The researcher will work with the participant to find a convenient time and place to hold the interview. It is expected the interviews will take approximately 30-45 minutes. The researcher will ask the participant whether it is permissible to audio record the interview.

Risks/Benefits:
The research study involves the topic of teacher professional growth, which is usually included in teacher and administrator evaluations. Therefore, there may be a slight risk for participation in the research study. However, the study seeks to examine successful
forms of professional growth. In addition, the participants of the study will remain confidential.

There are no direct benefits to you from participation, but the researcher hopes the results of the study can be used to help teachers and administrators to more effectively create successful schools that meet the needs of all learners.

Confidentiality:
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- The researcher will keep information confidential. If participants choose to remain confidential, the researcher will code information using pseudonyms.
- The researcher will keep all notes and digital files from the audio recordings on a secure computer within the researcher’s home.

Voluntary Participation:
Participation in this study is voluntary. If you do not want to be in this study, you do not have to participate. Even if you decide to participate, you are free not to answer any question or to withdraw from participation at any time without penalty.

Contacts and Questions:
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If you have questions about your rights as a research participant, you may contact the Loyola University Office of Research Services at (773) 508-2689.

Statement of Consent:
Your signature below indicates that you have read the information provided above, have had an opportunity to ask questions, and agree to participate in this research study. You will be given a copy of this form to keep for your records.

____________________________________________   __________________
Participant’s Signature                      Date

____________________________________________  ___________________
Researcher’s Signature                             Date
APPENDIX F

SCHOOL LEADER INTERVIEW PROTOCOL
1. What is your position within the school/district?

2. What are your responsibilities within the school/district?

3. How many years have you worked in that position in this school?

4. How many years have you worked in this position or a similar one over all?

5. Based on the award (name the award) your school recently received, your school has shown growth in student achievement. What contributed to the success of the school? (probe: how did school leadership help focus teachers’ efforts on improving student achievement)?

6. What is the guiding principle behind your efforts? Is there a goal, vision, etc.?

7. How do you measure the success of your efforts?

8. How does the culture or environment help support the work the school is doing to improve student achievement?

9. Why has your school been successful when so many other schools struggle with improving student achievement (probe: why are these changes different from others you have made in the past?)

10. What activities do you think enabled the improvement in student learning? (Probe: Who leads these activities?)

11. How did you implement these changes necessary to increase student achievement?

12. What do you think made these particular factors or strategies successful in increasing student achievement?

13. What caused or motivated teachers to change their practice?
14. How often do you give teachers feedback? What type of feedback do you give? If you are asking a teacher to change something, can you give me an example of something you might tell a teacher?

15. Are there any other activities that the school does to help teacher improve their instructional practice?

16. How do you or other school leaders identify what a teacher needs to work on to grow professionally? (probe: how often does that activity take place)

17. Is there any other way you support the individual teachers in their pursuit of professional growth?

18. What roadblocks or issues have you faced with professional growth?

19. One of the things I am interested in studying is how teachers at different skill levels approach improvement efforts. In order to study this, I need to identify teachers at various skill levels. Your answers to these questions will be kept confidential. Can you name the top three teachers in your school who are true experts or excellent teachers (probe: has anyone received national board certification?)? Typically, the teachers would have approximately five or more years of experience.

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<tr>
<th>Expert or Excellent Teacher</th>
<th>Why Did You Choose This Person?</th>
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20. Who are the top two to three people in your school who you would say are new to the profession, a teacher with zero to three years of experience? Your answers to this question will be kept confidential.

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<th>New Teacher</th>
<th>Why Did You Choose This Person?</th>
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21. Who are the top two to three people in your school who you would say have been in education for approximately three years to five years and are showing incredible professional growth in his/her instructional practices on the way towards becoming an expert, but are not quite experts yet?

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<tr>
<th>Experienced Teacher who is Showing Incredible Professional Growth</th>
<th>Why Did You Choose This Person?</th>
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22. Is there anything else you want to share on this topic or any questions I should have asked?
APPENDIX G

ORAL CONSENT FOR OBSERVATION
A waiver for the documentation of informed consent will be obtained. At the beginning of the activities I will observe, I will ask to read the following statement:

My name is Matthew Banach. I am a graduate student at Loyola University doing research for my dissertation to receive my doctorate in educational leadership. The purpose of this study is to examine how school leaders successfully work with teachers to improve student achievement. As part of the project I want to observe the professional development activity today to get more information on how you approach improving your instructional practices. I will take notes, but will maintain confidentiality and not use real names of participants in my notes or paper. Participation in this study is voluntary. If you do not want to be in this study, you do not have to participate. There are no perceived risks or benefits for your participation. If you have questions about the project, you can contact me at matthewbanach@yahoo.com or contact the research department at Loyola University.
APPENDIX H

PROFESSIONAL DEVELOPMENT OBSERVATION PROTOCOL
For the observation of meetings and activities, open jottings will be taken to document physical space, actors, activities, events, goals, and interactions (Emerson, Fretz & Shaw, 1995). The following questions will guide the collection of data from each observation.

1. What is the event that is taking place?
2. Who is involved with the event?
3. Which people show leadership during the event?
4. Where does the event occur?
5. How does the event help teachers reflect on their instructional practices?
6. How does the event help teachers identify areas to improve their practice?
7. How does the event help teachers to identify how to improve their practice?
8. How does the event provide the teachers time to practice the new skills they learn?
9. How do teachers receive feedback on their instructional practice as they improve?
10. How does the event provide teachers with support to improve their instructional practice?
11. How does the event provide teachers with motivation to improve their instructional practice?
12. How often does this event occur?
APPENDIX I

INVITATION FOR ALL TEACHERS TO COMPLETE QUESTIONNAIRE
To: Teachers of ABC School  
From: Matthew Banach, Graduate Student at Loyola University  
Date: September 1, 2014  
Subject: Participation in Research Project for Dissertation

My name is Matthew Banach. I am a graduate student at Loyola University. I am currently working on a research study for my dissertation to receive my Ed.D. in Educational Leadership. The purpose of this study is to examine how school leaders successfully work with teachers to improve student achievement. The study will specifically look at how leaders frame the situation in the school, develop an environment conducive to school improvement, and how they work with teachers in different ways based on the teachers’ skill level.

There are several parts to this study. For the current section, I am asking all teachers in ABC School to take a brief 10-15 minute online survey. In the survey, teachers will be asked to identify teachers within the school who are at various skill levels (descriptions are provided for the various levels).

**To participate in the study, please go to http://www.thelinktothesurvey.com and complete the survey by September 10, 2014**

Answers to the questions will be kept confidential and answers will not be attributed to an individual teacher. The names of the district, school, and participants will not be used in the final report. The researcher will not share individual participant data with other members of the school district.

The completion of this survey will help me as I would like to interview teachers at these various levels of skill to understand how they grow professionally. This school was specifically chosen for the study because the school has shown an increase in student achievement as shown by the Illinois Spotlight Award and/or the Academic Improvement Award in 2011, the school has at least 50% of students identified as being low income, and the school has at least 50% of the school population who are identified as ethnic minorities.

Participation in this study is voluntary. If anyone does not want to be in this study, they do not have to participate. Even if they decide to participate, they are free not to answer any question or to withdraw from participation at any time without penalty. There are no direct benefits to you from participation, but the researcher hopes the results of the study can be used to help teachers and administrators to more effectively create successful schools that meet the needs of all learners.

If you have questions about this research study, please feel free to contact Matthew Banach at matthewbanach@yahoo.com or the faculty sponsor, Dr. Marla Israel, at misrael@luc.edu. If you have questions about your rights as a research participant, you may contact the Loyola University Office of Research Services at (773) 508-2689.

Thank you, in advance, for any help you can provide for this project.
APPENDIX J

TEACHER QUESTIONNAIRE PROTOCOL
1. One of the things I am interested in studying is how teachers at different skill levels approach improvement efforts. In order to study this, I need to identify teachers at various skill levels. Your answers to these questions will be kept confidential. Can you name the top three teachers in your school who are true experts or excellent teachers. Typically, the teachers would have approximately five or more years of experience.

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<th>Expert or Excellent Teacher</th>
<th>Why Did You Choose This Person?</th>
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2. Who are the top two to three people in your school who you would say are new to the profession, a teacher with zero to three years of experience?

<table>
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<tr>
<th>New Teacher</th>
<th>Why Did You Choose This Person?</th>
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3. Who are the top two to three people in your school who you would say have been in education for approximately three to five years and are showing incredible
professional growth in his/her instructional practices on the way towards becoming an expert, but are not quite experts yet?

<table>
<thead>
<tr>
<th>Experienced Teacher who is Showing Incredible Professional Growth</th>
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APPENDIX K

INVITATION TO NOMINATED TEACHERS TO PARTICIPATE IN INTERVIEWS
To: “Nominated Teacher”
From: Matthew Banach, Graduate Student at Loyola University
Date: September 15, 2014
Subject: Participation in Research Project for Dissertation

My name is Matthew Banach. I am a graduate student at Loyola University. I am currently working on a research study for my dissertation to receive my Ed.D. in Educational Leadership. The purpose of this study is to examine how school leaders successfully work with teachers to improve student achievement. The study will specifically look at how leaders frame the situation in the school, develop an environment conducive to school improvement, and how they work with teachers in different ways based on the teachers’ skill level.

There are several parts to this study. For the current section, I am interviewing teachers at various skill levels. You are receiving this email because you have been nominated by your peers as being at one of those skill levels and/or you have obtained national board certification. As a result, you are being asked to participate in two separate interviews at convenient times and locations for you. The interviews will consist of the following:

1. An interview about the reasons for the increase in student achievement the school has experienced and how you work both individually and with school leadership to grow professionally. It is expected the interviews will take approximately 30-45 minutes.

2. An interview about how you approach lesson planning and what data you use in the process. It is expected the interviews will take approximately 30-45 minutes.

If you are willing to participate in the study, please email me by September 30, 2014 at matthewbanach@yahoo.com to let me know.

Answers to the questions will be kept confidential and answers will not be attributed to an individual teacher. The names of the district, school, and participants will not be used in the final report. The researcher will not share individual participant data with other members of the school district.

This school was specifically chosen for the study because the school has shown an increase in student achievement as shown by the Illinois Spotlight Award and/or the Academic Improvement Award in 2011, the school has at least 50% of students identified as being low income, and the school has at least 50% of the school population who are identified as ethnic minorities.

Participation in this study is voluntary. If anyone does not want to be in this study, they do not have to participate. Even if they decide to participate, they are free not to answer any question or to withdraw from participation at any time without penalty. There are no
direct benefits to you from participation, but the researcher hopes the results of the study can be used to help teachers and administrators to more effectively create successful schools that meet the needs of all learners.

If you have questions about this research study, please feel free to contact Matthew Banach at matthewbanach@yahoo.com or the faculty sponsor, Dr. Marla Israel, at misrael@luc.edu. If you have questions about your rights as a research participant, you may contact the Loyola University Office of Research Services at (773) 508-2689.

Thank you, in advance, for any help you can provide for this project.
1. What grade level do you teach?
2. How many consecutive years have you taught this particular grade?
3. What subjects do you teach?
4. How many years have you been at this particular school?
5. How many years have you been a teacher both here and at other schools?
6. A lot of schools struggle with improving student achievement, but your school was able to do it. What makes this school different from the other schools that are trying to improve?
7. How does your school work with teachers to improve teaching and learning (probe: are these methods successful)?
8. How does your school choose professional development?
9. How, if it does, does your school evaluate the effectiveness of professional development?
10. How do your school leaders expect you to utilize professional development within the classroom (probe: how do actually use professional development in the classroom)?
11. Generally speaking, why do you make changes to your instructional practices?
12. Describe a successful change you made in your classroom in the recent past.
13. Why did you choose to implement this particular change?
14. How did you learn about the details necessary to implement this particular change?
15. Describe how you implemented the change in your classroom? Did you implement changes all at once or slowly over time?
16. What were some roadblocks or issues you faced as you implemented the new practice?

17. If you had questions or issues that arise when you implemented this change or another change, what are some typical steps you took to answer the questions or resolve the issue?

18. How, if you do, do you get feedback on your instructional practices (probe: Who from the school gives feedback? How often?)?

19. How do your school leaders give teachers difficult feedback if they want them to improve something?

20. What do you judge yourself against to determine whether your instructional practices were the most effective methods for your students?

21. What do school leaders use to judge you and your fellow teachers’ instructional practices?

22. If you school leader wanted you to change something about your instructional practice (probe (if needed)- e.g., a new way to do reading and writing across the curriculum) that he/she will require you to implement, what questions would you have about that practice?

23. What would the ideal way for a school leader to help you make a successful change in your classroom?

24. Was there any question I should have asked or anything else I should know about this topic?
APPENDIX M

LESSON PLAN THINK ALOUD INTERVIEW PROTOCOL
1) How do you lesson plan each week for your classes?

2) Choose a lesson you are going to use tomorrow for your students. Can you please plan the lesson you are going to do tomorrow for the same class and verbalize the thoughts going through your head as you do so? (Probe: How does that lesson relate to what you did today in class?)

3) Did you change the lesson for tomorrow based on what happened during the lesson today?

4) When you are planning a lesson, what are you thinking about?

5) Do you run through or practice the lessons you plan?

6) How do you decide if your lessons are successful?

7) If you feel your lessons are not successful, what do you do?

8) How do you incorporate your own new learning into your lesson plans?

9) How is the way you lesson plan different from the way other people lesson plan?

10) How has the way you lesson plan changed since you first became a teacher?

11) How have school leaders helped you to adjust the way you approach lesson planning?

12) Besides formally writing something down, how else do you prepare for a lesson?

13) Is there anything else I should have asked you?
REFERENCE LIST


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Matthew Banach is the son of Joseph and Susan Banach. He grew up in South Holland, Illinois. He currently resides in Oak Lawn, Illinois.

Matthew earned his Bachelor of Business Administration degree in Marketing and his Bachelor of Arts degree in Government with a concentration in Philosophy, Politics, and Economics from the University of Notre Dame in Notre Dame, Indiana in 2001. He earned his Master of Education degree in Teaching and Learning from DePaul University in Chicago, Illinois in 2005 and continued his education to receive his Administrative endorsement. He began the Doctoral program in Administration and Supervision at Loyola University in Chicago, Illinois in the fall of 2010.

Matthew volunteered for a year at North Lawndale College Preparatory Charter High School in Chicago, Illinois where he worked in the school’s library, a social studies classroom, and a math classroom. He taught junior high math at St. Agnes of Bohemia School in the Little Village neighborhood of Chicago, Illinois for five years. He served as assistant principal at St. Agnes of Bohemia for a year while teaching and became principal of the school for two years. He then became an assistant superintendent/regional director with the Archdiocese of Chicago where he worked with 56 elementary schools in Chicago, Illinois and some of the surrounding suburbs for six years.
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