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THE ASSIMILATION OF BEGINNING TEACHERS INTO AN ESTABLISHED SCHOOL IMPROVEMENT PROJECT: A QUALITATIVE CASE STUDY EXAMINING FORMATS OF JOB-EMBEDDED PROFESSIONAL DEVELOPMENT

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by

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This dissertation examined formats of job-embedded professional development that were experienced by beginning teachers at a high-poverty, high-mobility elementary school in the third year of a School Improvement Grant. A qualitative case study was conducted to examine formats of job-embedded professional development that were most useful to help beginning teachers assimilate into an established school improvement project and support gains in effective teaching practices and student achievement.

In an effort to define what good teaching is and how we can support it, this study informs education leaders about the power of instructional coaching as a way to provide support and resources to teachers in their improvement journey. It also supports the allocation of resources to provide opportunities for teachers to work together in Professional Learning Communities. The value of a systematic, well-developed appraisal process for all teachers can also be seen through this research.

The variability provided through job-embedded professional development creates a powerful tool for schools that are dedicated to student achievement and professional learning. This type of professional development is not only valuable to accelerate the impact of beginning teachers, but to strengthen the effectiveness of all teachers. With a focus on high quality professional development, and working to define and increase expectations for the use of effective practices by every teacher, schools can provide high-quality instruction for every child. This increase in instructional effectiveness can have a great impact on student achievement.

ACKNOWLEDGMENTS

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Introduction

The 1949 Walt Disney film, *So Dear to My Heart* (Schuster, 1948)*,* is the story of

a young farm boy, Jeremiah Kincaid, and his determination to raise a black lamb that was

rejected by its mother. Jeremiah dreams of showing his beloved lamb at the County Fair,

but he must overcome challenges along the way. It is a story of determination and

perseverance. The chorus of one of the songs in the film often plays in my mind,

especially at times when I am facing obstacles that seem too great to overcome.

"It's Whatcha Do With Whatcha Got,"
was recorded in 1948 by jazz singer Kay Starr.
Music by Gene Vincent De Paul
Lyrics by Don Raye

Chorus:
It's whatcha do with whatcha got,
You never mind how much you've got,
It's whatcha do with what you've got
That pays off in the end!

Researchers agree that teacher quality is the strongest school-related factor to

improve student achievement (Darling-Hammond, 2000; Hanushek, 2011; Rivkin,

Hanushek, & Kain, 2005). Traditional measurements of teacher quality are: Teacher

experience, Teacher preparation programs and degrees, including attainment of advanced

degrees, Teacher certification, Teacher coursework, and Teachers' own test scores (King-

Rice, 2003). Darling-Hammond's research (2000) supported the belief that these teacher

attributes are more responsible for student achievement than other variables such as class

size, per-pupil spending, after school programming, or teacher salary. Rivkin et al. (2005)

identified teacher quality through student performance outcomes. A simple definition of teacher quality offered by Hanushek (2011) was that they are teachers who get large gains in student achievement. In the introduction to the MET Project (Measure of Effective Teaching) conducted by the Bill and Melinda Gates Foundation (September, 2010), the fact that there is no agreement among stakeholders in education about "how to identify and measure effective teaching," serves as the purpose for conducting the project. Jennifer King-Rice (2003) called for education leaders to recognize that teaching is complex and that various elements influence others to result in the advancement of teacher quality and student achievement.

In an attempt to more accurately evaluate teacher quality, some states have taken to a "value-added" approach (Haycock & Hanushek, 2010). This is a comparative model where multiple years of data for every teacher is averaged and the growth their students have made is examined next to the growth made by other students at the same grade level or subject. The past performance of students is considered and the reasonable amount of growth that can be expected of each student becomes the basis for determining whether the teacher is able to get the student to reach this level, if they fall below, or if they exceed the trajectory that is set for them.

The difference in annual achievement growth for students with high performing teachers can be more than one grade level equivalent in test performance compared to students with low performing teachers (Rivkin et al., 2005). Being taught by above average teachers for five consecutive years can allow economically disadvantaged

students to overcome the deficit in achievement they typically experience compared to higher income peers (Rivkin et al., 2005).

High quality teachers could make a difference in the lowest performing schools. However, students in the most needy schools generally end up being taught by the least-qualified teachers (Lankford, Loeb, & Wyckoff, 2002; Rivkin et al., 2005). The lowest performing schools with the greatest needs struggle to recruit and retain highly qualified teachers. Most teachers who earn master's degrees and have the benefit of a few years of teaching experience tend to migrate to schools with fewer social problems and higher performing students (Cortese & von Zastrow, 2006). School accountability and the adoption of value-added performance measures may push high quality teachers to more secure working environments. In a 2008 letter to Chief State School Officers, then United States Secretary of Education, Margaret Spellings, discusses the "disparity in student achievement" between schools that serve low-income students and those that serve high-income students (Spellings, 2008). She stated:

> Teacher accountability systems that build on "value-added" or other teacher accountability methodologies are helping to identify those teachers who are most effective in raising student achievement. . . . These teacher accountability systems, though sometimes challenging to put in place, are getting promising results for helping to ensure the most effective use of high-quality teachers in schools with lower performing students. (Spellings, 2008, para. 5)

Johnson, Kraft, and Papay (2012) noted that once we know who is effective and who is ineffective, no matter what measure we use to gauge teacher quality, there is still a problem. Focusing solely on teachers and teaching does not allow us to examine the context in which the teachers work. This environment may well be the reason behind the

lack of teaching effectiveness and resulting student achievement. In schools with better work environments for teachers, students also achieve greater growth (Johnson, 2012).

Schools have little ability to control teacher quality as it has traditionally been measured. At the end of the year, teachers will only have gained one year of experience. Schools can provide incentives for teachers to pursue a higher education, but this is a slow process. Within the year, only a few teachers will have accumulated enough hours to receive a master's degree. Teacher quality is a serious issue that Title I Needs Improvement Schools have had to address. There are few ways to entice or provide incentives for high quality teachers to come to Needs Improvement schools. The needs these schools face are similar to the problems faced by small rural districts with a limited pool of candidates from which to select a high quality teaching staff.

This brings us back to the notion that "It's what you do with what you've got." Needs Improvement schools are facing obstacles in teacher quality that seem too great to overcome. The school in this case study found ways to influence the quality of beginning teachers with a focus on increasing effective teaching practices and assimilating teachers into a culture of improvement through job-embedded professional development.

With a focus on high quality job-embedded professional development, and working to increase the effective practices used by every teacher, schools can overcome deficits in years of experience and teacher credentials. It's what you do with what you've got that pays off in the end. In this study, this researcher proposes that through job-embedded professional development, we can increase the use of effective teaching practices that increase student achievement and demonstrate teacher quality.

Statement of the Problem

The elementary school represented in this case study was in the third year of a School Improvement Grant. The grant was awarded based on low achievement scores in math and reading on the state accountability assessment. The school's persistently low performance in academic areas qualified them for a federally funded School Improvement Grant.

The School Improvement Grant required that recipients spend grant funding on specific interventions described in the Transformation Model, such as:

1. Developing teacher and school leader effectiveness.
   A. Use evaluations that are based in significant measure on student growth to improve teachers' and school leaders' performance;
   B. Identify and reward school leaders, teachers, and other staff who improve student achievement outcomes and identify and remove those who do not;
   C. Replace the principal who led the school prior to commencement of the transformation model;
   D. Provide relevant, ongoing, high-quality job-embedded professional development;
   E. Implement strategies designed to recruit, place, and retain high-quality staff (Guidance on School Improvement Grants, 2009, p. 18)

The requirements of the School Improvement Grant brought about unique problems that the school needed to address. It was a requirement that student growth be used as a significant measure in teacher evaluations. The student mobility rate at the school was 23% during the 2012-2013 school year, which was the third and final year of the School Improvement Grant. It would be unethical to tie student achievement to teacher evaluation with the intent of rewarding those who made improvement and removing those who did not, without developing and implementing a comprehensive plan to provide ongoing, high-quality, job-embedded professional development. The term of

the School Improvement Grant spanned three years. Therefore, it was imperative to design a system for professional development that would have a great impact on student achievement in a short amount of time.

As a pre-requisite for receiving grant funding, the school was required to replace the principal who led the school prior to commencement of the transformation model. The school's principal was replaced and a new principal was hired to carry out the requirements of the grant with the remaining staff starting in the 2010-2011 school year. In the second year, there was a new assistant principal. The third year brought yet another new principal to the school. Leadership at the school did not remain constant for even two consecutive years through the term of the School Improvement Grant. In addition, likely due to the cultural strain that is brought to a school by removing the principal and changing leadership, the staff did not remain constant throughout the term of the grant either. In the 2010-2011 school year, 76% of the staff returned to the school to take part in the first year of the School Improvement Grant's interventions. In the second year, 2011-2012, 73% of the staff returned from the previous year. In the final year, 2012-2013, 59% of the staff returned. Only 34% of the staff remained at the school consecutively from 2009-2010, the year prior to the start of the grant and the 2012-2013 school year, the final year of the School Improvement Grant.

Table 1

Case Study School Three-Year Teacher Turnover

2010-11	2011-12	2012-13
76% returned	73% returned	59% returned

Note: 34% on staff consecutively 2009-10 to 2012-13

The school made gains in the traditional measures of teacher quality, rising from an average of 9.49 years of experience in 2009-2010 prior to the start of the grant, to 13.06 years of experience in 2012. However, one-fourth of the teachers in the final year were beginning teachers, with fewer than three years of experience in the school district. The school's retention rate for teachers was not high. The school had to rely on job-embedded professional development to quickly bring new teachers to a working knowledge of the expectations of the building in regards to effective teaching practices.

Beginning teachers who came to work at the case study school in the third year of the School Improvement Grant had to quickly assimilate to the building's focus on teaching practices that would have an impact on student achievement. The new teachers would have the same expectations to use effective teaching practices as identified by "the Big Four;" community building, instruction, content planning, and assessment for learning (Knight, 2009a), that other teachers in the building had. The school contracted for collection of data as evidence of the use of effective teaching practices through third-party observations. Information gathered and reported from the observations provided expectations for new teachers to follow. This put in place a framework for support

systems to be used to help the new teachers meet the demands of the building focus on teaching quality and student achievement. The support system was job-embedded professional development.

Purpose of the Study

The purpose of this qualitative case study was to examine formats of job-embedded professional development and the extent to which they helped beginning teachers to implement effective teaching practices and to increase student achievement at a Title I Needs Improvement Elementary School.

This study examined the effectiveness of different formats of job-embedded professional development as a means to assimilate beginning teachers in the third year of an established school improvement project that had been successful in increasing student achievement and demonstrating effective teaching practices.

Context and Background

The school represented in this case study was a Title I Needs Improvement Elementary School in a mid-western state. More than ninety percent of the students in the school participated in the free or reduced price lunch program. There was a 23% mobility rate in the population of students during the study year. The student body was diverse with over 30% of the students learning English as a second language.

The school received a federally funded School Improvement Grant that began in the 2010-2011 school year. Prior to the School Improvement Grant, in 2009-2010, 50% of ALL students in the testing grades were proficient on the state assessment in reading. In the first year of the grant, 2010-2011, 61% of students were proficient on the state

assessment in reading, with even larger gains in some of the demographic sub-groups. In the second year of the School Improvement Grant, 2011-2012, 69% were proficient in reading and in the final year, 2012-13, 72% were proficient. The school also saw steady increases in state math assessments for the testing grades. In 2010-2011, 56% of ALL students in the testing grades were proficient on the state assessment in math. The second year, 2011-12, 68% were proficient and in the final year, 2012-13, 74% of all students in the testing grades were proficient on the state assessment in math.

Table 2

State Assessment, Percentage of Students Proficient in Reading

	2009-10	2010-11	Change	2011-12	Change	2012-13	Change
All Students	50%	61%	+11	69%	+8	72%	+3

Source: Nebraska Department of Education (2013).

Table 3

State Assessment, Percentage of Students Proficient in Math

	2010-11	2011-12	Change	2012-13	Change
All Students	56%	68%	+12	74%	+6

Note: Math was not assessed at the State level in the 2009-10 school year.
Source: Nebraska Department of Education (2013).

Dr. Jim Knight, Director of the Kansas Coaching Project at the University of Kansas Center for Research on Learning, consulted with the school to conduct a needs assessment to determine practices that needed improvement and to establish priorities in

the improvement process. Dr. Knight suggested "the Big Four" (Knight, 2009a) as the basis for the assessment of current practice. The four areas were community building, instruction, content planning and assessment for learning. In addition to the needs assessment, Dr. Knight trained the school's instructional coaches, using "the Big Four" (Knight, 2009a) as content for what instructional coaches should focus on during professional development sessions with teachers.

The school used classroom observation data collected by the Instructional Coaching Group to design job-embedded professional development at the elementary school during the final year of the grant. Fifty-one (51) observations were made over a 4.5-day period of time representing 1,020 instructional minutes. Data were collected, analyzed, and represented in a report provided to the school. The data-gathering tool used was the 20-Minute High Impact Survey (Appendix I), developed by Dr. Jim Knight and the Instructional Coaching Group. The major areas of observation represent "the Big Four" (Knight, 2009a, 2011, 2013), which are: (a) community building, (b) instruction; (c) content planning; and (d) assessment for learning.

Community building. An observation of the teacher's clarity in posting and explaining expectations for learning activities and transitions. Student engagement is measured by an observation of the teacher's ability to interact positively with students as measured by (a) time on task, and (b) ratio of interactions.

Time on task (TOT). An observation of the amount of on-task behavior exhibited by students. A gross measure of student engagement (Knight, 2009a, 2011, 2013; Sprick, 2010; Sprick & Baldwin, 2009) (see Figure 1).
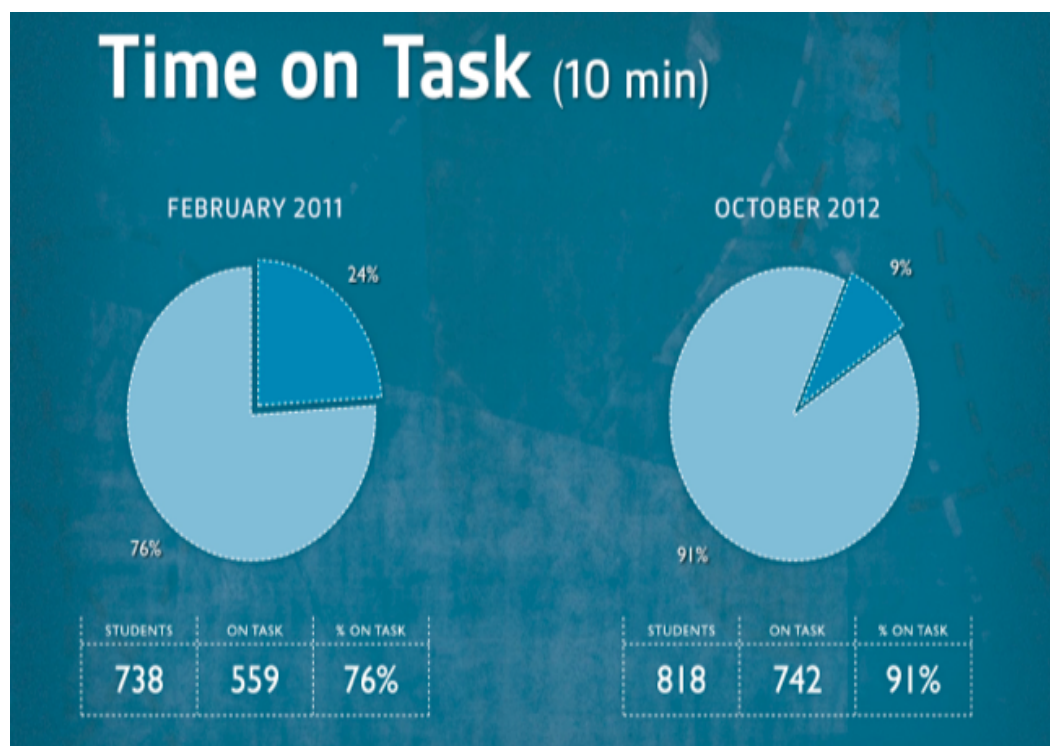
Source: Instructional Coaching Group (2011)

Figure 1. Community Building - Time on Task Comparison Observation Data, February, 2011 to October, 2012: Effective Teaching Practices - 20-Minute High Impact Survey

Ratio of interactions (ROI). An observation of the ratio of reinforcing/positive responses to students compared to corrective/negative interactions between the teacher and students (Knight, 2009a, 2011, 2013; Sprick, 2010; Sprick & Baldwin, 2009) (see Figure 2).
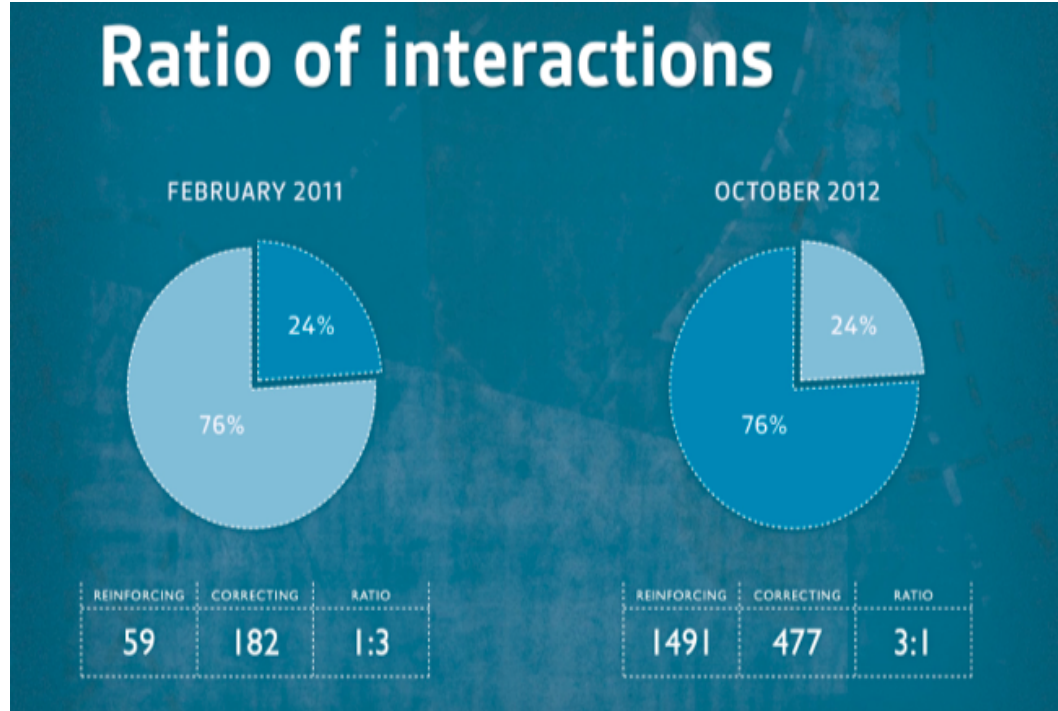
Source: Instructional Coaching Group (2011)

Figure 2. Community Building - Ratio of Interactions Comparison Observation Data, February, 2011 to October, 2012: Effective Teaching Practices - 20-Minute High Impact Survey

Instruction. An observation of what is actually happening in the classroom at the time of the classroom observation (Knight, 2009a, 2011, 2013) (see Figures 3 and 4).
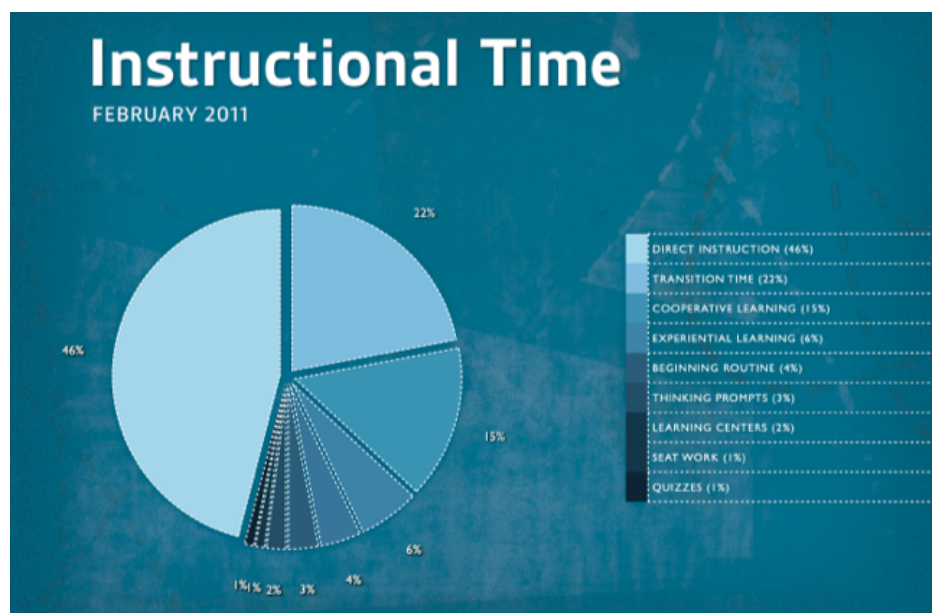
Source: Instructional Coaching Group (2011)

Figure 3. Instruction - Instructional Time Observation Data, February, 2011: Effective Teaching Practices - 20-Minute High Impact Survey.
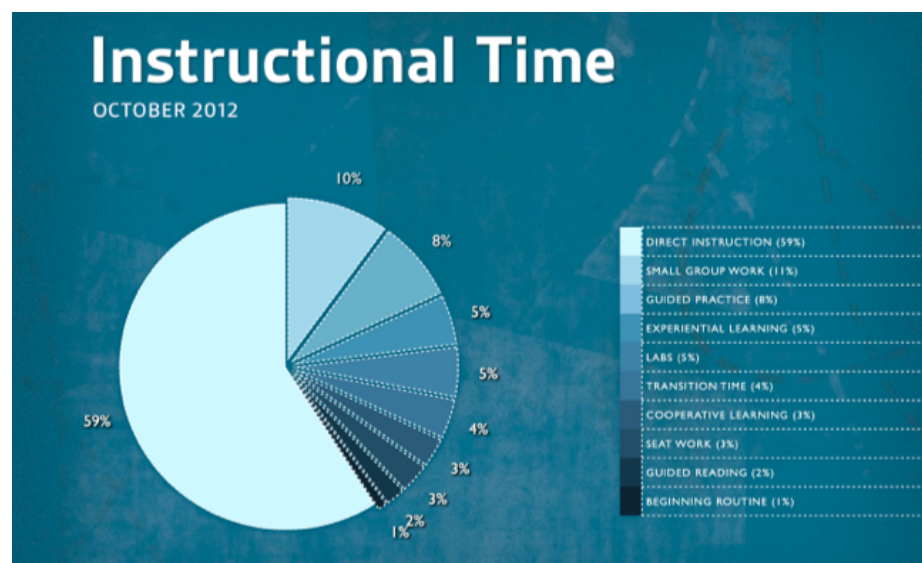
Source: Instructional Coaching Group (2011)

Figure 4. Instruction - Instructional Time Observation Data, October, 2012: Effective Teaching Practices - 20-Minute High Impact Survey)

Content planning. An observation of the teacher's use of visual representations of learning targets, explaining why the learning is important and explaining how lessons are connected to a larger unit (Knight, 2009a, 2011, 2013) (see Figures 5 and 6).
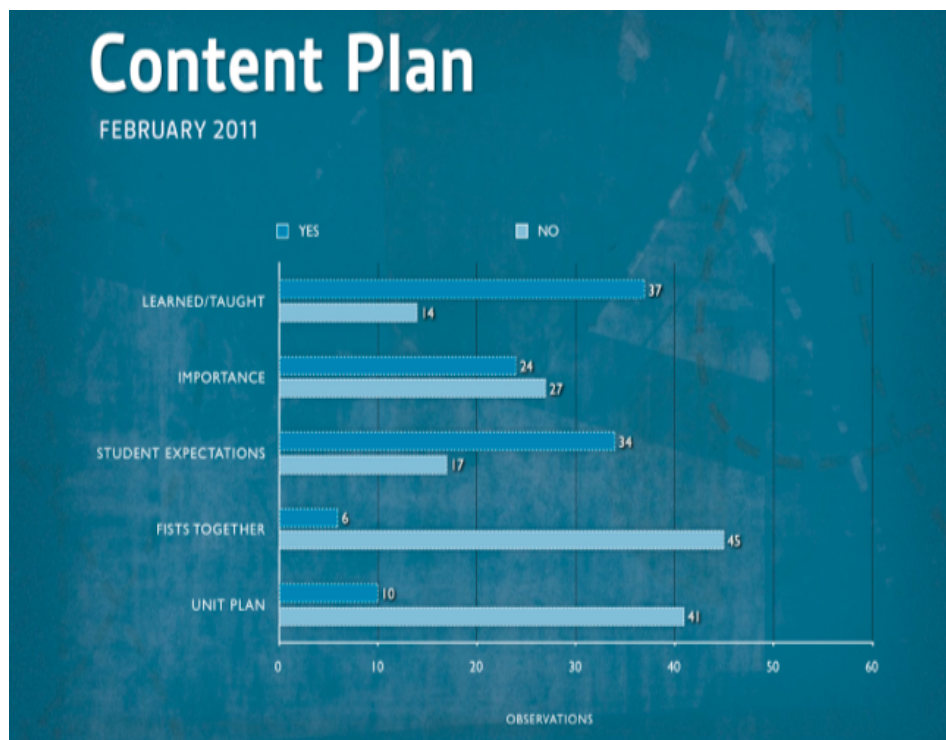
Source: Instructional Coaching Group (2011)

Figure 5. Content Planning - Content Plan Observation Data, February, 2011: Effective Teaching Practices - 20-Minute High Impact Survey.
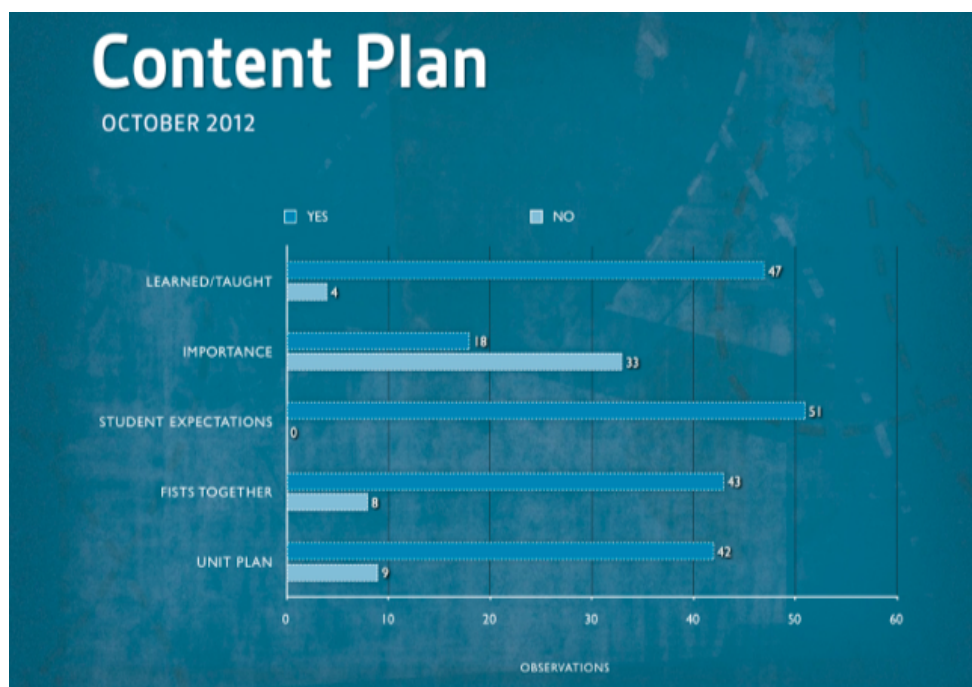
Figure 6. Content Planning – Content Plan Observation Data, October, 2012: Effective Teaching Practices (Instructional Coaching Group, 2011 - 20-Minute High Impact Survey).

Assessment for learning. Observable quick, informal activities designed to provide feedback to the teacher regarding the learning of each student in the class. Students also benefit from knowing how well they are doing in their learning. Examples of informal assessments would be the use of white boards, response cards, exit slips, etc. (Knight, 2009a, 2011, 2013) (see Figures 7 and 8).
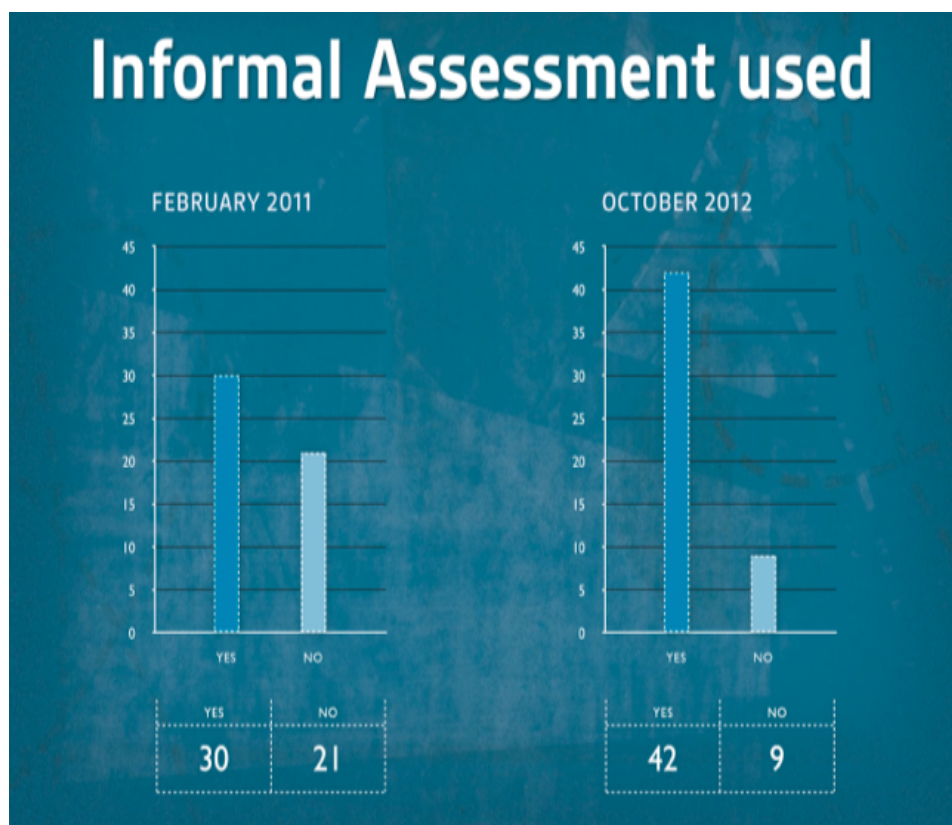
Source: Instructional Coaching Group (2011)

Figure 7. Assessment for Learning - Informal Assessment Used Comparison Observation Data, February, 2011 to October, 2012: Effective Teaching Practices - 20-Minute High Impact Survey.
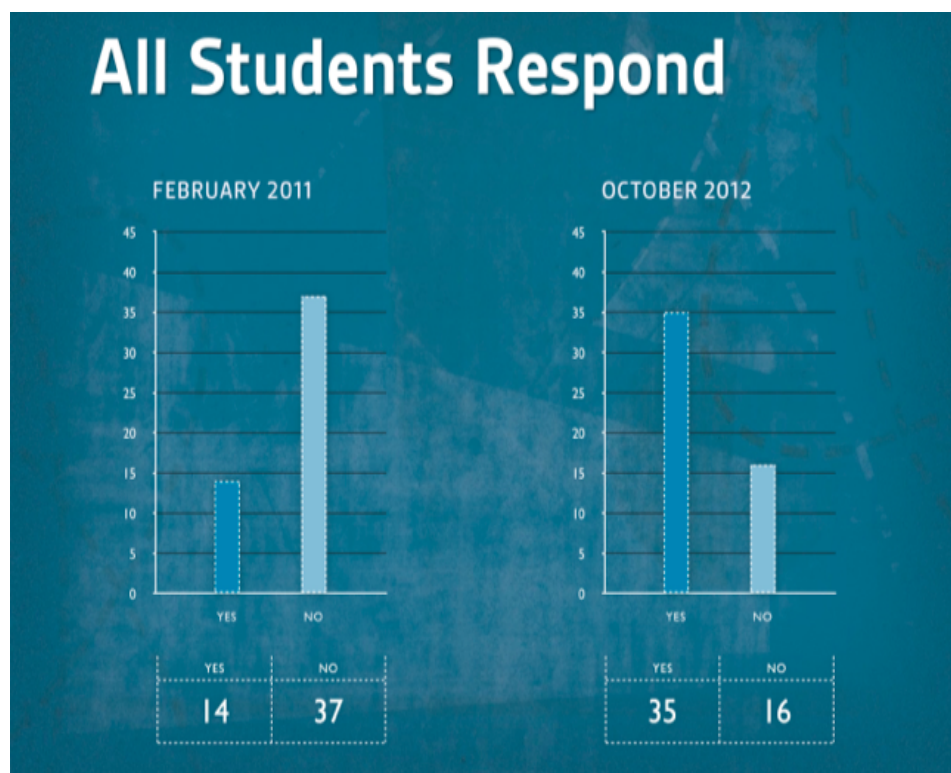
Source: Instructional Coaching Group (2011)

Figure 8. Assessment for Learning - All Students Respond Comparison Observation Data, February, 2011 to October, 2012: Effective Teaching Practices - 20-Minute High Impact Survey.

Research Design

A qualitative case study design was used to examine the effects of job-embedded professional development for beginning teachers who were new to the case study school in the third and final year of a School Improvement Grant. The qualitative design allowed teachers in the study to describe how they experienced job-embedded professional development in the case study school, the effect this had on their development and use of effective teaching practices, and the impact this had on student achievement.

In this study, the central phenomenon examined was job-embedded professional development. The researcher examined how job-embedded professional development impacts the gains made by beginning teachers as they assimilated into a community of educators that were experienced and committed to a set of standards for effective instruction. The traditional ways of measuring teacher quality is through years of experience and level of education. Since neither of these can be changed for the beginning teachers included in the case study, the conditions under which they conducted their first years as educators and the types of professional development they received need to be examined to determine types of professional development that have a greater impact.

Research Questions

Central research question. What formats of job-embedded professional development did beginning teachers experience, and which of the formats were most useful to beginning teachers to help them assimilate into the established school improvement project and support gains in effective teaching practices and student achievement?

Sub-questions.

1. How did working with an Instructional Coach help beginning teachers implement effective teaching practices and increase student achievement?

2. How did working with a Professional Learning Community help beginning teachers implement effective teaching practices and increase student achievement?

3. How did working with an Administrator through the appraisal process help beginning teachers implement effective teaching practices and increase student achievement?

4. How did attending building-based professional development help beginning teachers implement effective teaching practices and increase student achievement?

5. How did attending conferences, trainings and workshops help beginning teachers implement effective teaching practices and increase student achievement?

6. How did taking higher education courses with content aligned to school goals help beginning teachers implement effective teaching practices and increase student achievement?

Definitions

Beginning Teacher—Any teacher who has been employed in the same school district for three successive years or less.

Job-embedded professional development—Teacher learning that is grounded in day-to-day teaching practice and is designed to enhance teachers' content-specific instructional practices with the intent of improving student learning (Darling-Hammond & McLaughlin, 1995; Hirsh, 2009).

> Formats for Job-Embedded Professional Development: Action Research, Case Discussions, Instructional Coaching, Critical Friends Groups, Data Teams/Assessment Development, Examining Student Work/Tuning Protocol, Implementing Individual Professional Growth/Learning Plans (Appraisal), Lesson Study, Mentoring, Portfolios, Professional Learning Communities, Study Groups.

(Cochran-Smith & Lytle, 1990; Croft, Coggshall, Dolan, Powers, & Killion, 2010)

Effective teaching practices—The Big Four[*], a comprehensive framework of

instructional practices (Knight, 2009a, 2011, 2013):

> *Community building*—Student engagement measured by an observation of student Time on Task. An observation of the teacher's clarity in posting and explaining expectations for learning activities and transitions. This also includes the teacher's ability to interact positively with students as measured by their Ratios of Interaction.
>
> *Instruction*—An observation of what is actually happening in the classroom at the time of the classroom observation. Categories include; beginning routine, stories, thinking prompts, cooperative learning, experiential learning, learning centers, labs, seat work, direct instruction, quizzes and transitions.
>
> *Content planning*—An observation of the teacher's use of visual representations of learning targets, explaining why the learning is important and explaining how lessons are connected to a larger unit.
>
> *Assessment for learning*—Observable quick, informal activities designed to provide feedback to the teacher regarding the learning of each student in the class. Students also benefit from knowing how well they are doing in their learning. Examples of informal assessments would be the use of white boards, response cards, exit slips, etc.
>
> (Note: These four areas can be observed using the *20-Minute High-Impact Survey* (Knight, 2009a, 2011, 2013)).

Instructional coaches—On-site professional developers who work collaboratively

with teachers, empowering them to incorporate research-based instructional methods into

their classrooms (Knight, 2007, 2009b).

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[*] *Instructional Coaching Group, http://www.instructionalcoach.org; 20-Minute High-Impact Survey, (Instructional Coaching Group, 2011); http://www.corwin.com/highimpactinstruction/chapters/20-Minute_High-Impact_Survey.pdf

Delimitations

Delimitations of the study included:

1. All teachers who were new to the school in the third year of the school improvement grant were not included in the study. They came to the school as experienced teachers, having the benefit of some of the traditional measures of teacher quality, advanced degrees, and years of experience. Teachers with fewer than three years of experience were selected as beginning teachers to participate in the study because they lacked the traditional attributes that were used to define teacher quality.

2. Teachers participating in the study were presented with data representing the growth in both effective teaching practices and student achievement that were experienced by the school. This data is valuable context in reviewing the reasons why teachers, who were new to the school, and new to the profession, were able to contribute to and continue the success that the school had experienced prior to their arrival.

3. A qualitative case study approach was used to explore the most helpful formats of job-embedded professional development for beginning teachers to draw connections between the system of support for and monitoring of "the Big Four" (Knight, 2009a, 2011, 2013) framework for developing effective teaching practices.

Limitations

Limitations of the study included:

1. Due to the nature of qualitative research, the researcher may introduce personal bias into the interpretation of findings from the interview data.

2. The potential for bias exists in the study because the researcher worked in the case study school during the years of the school improvement grant that are used for the purposes of this study. She was partially responsible for selecting, allocating funds and planning for professional development activities.

3. Two school years have passed since the end of the school improvement grant period that was included in the study. Teachers have experienced other systems of professional development implementation since the time the School Improvement Project ended. Their responses will be dependent on their ability to recall what they experienced as formats of job-embedded professional development with assistance from the presentation of data representing the increase in effective teaching practices and student achievement.

4. The sample of beginning teachers was relatively small, however the number does represent one-fourth of the classroom teachers in the school during the 2012-13 school year.

Teacher quality is the strongest school-related factor to improve student achievement (Darling-Hammond, 2000; Hanushek, 2011; Rivkin et al., 2005). Through high-quality job-embedded professional development, the Title I school represented in

this case study made improvements to the instructional program offered to their students by focusing on, and monitoring the use of effective teaching practices. In the 2012-2013 school year, with one-fourth of the classroom teachers new to the school improvement project and new to the teaching profession, school leaders turned to job-embedded professional development to assist beginning teachers in their efforts to assimilate into the improvement culture that was established in prior years of the school improvement grant implementation. They embraced the notion that "it's what you do with what you've got that pays off in the end."

Chapter 2

Literature Review

Traditional Professional Development

For decades, professional development for teachers has primarily been designed to decrease a perceived deficit in content knowledge, giving little regard to the development of effective practice that would lead to better student acquisition of knowledge and skills being taught. Researcher Dylan Wiliam (2010), explained that "changes in what teachers know or believe will not benefit students unless teachers also change what they do in classrooms." The problem with changing teacher practice is that it is grounded in years of habit. Asking teachers to change the way they deliver instruction requires them to alter the way they have approached this task throughout their entire teaching career (Wiliam, 2010). Even a beginning teacher will have established habits from their pre-service teaching experience, likely formed by long-established habits that had been formed by their supervising teacher.

Darling-Hammond, Wei, Andree, Richardson, and Orphanos, (2009) found that traditional means of professional development, providing teacher-learning outside the context of the classroom, do not show a statistically significant positive effect on student learning (as cited in Vega, 2013). Vega (2013) also included in her Edutopia review of Teacher Development Research that, according to Yoon, Duncan, Lee, Scarloss, and Shapley (2007), teachers who received well-designed professional development throughout a period of six to twelve months, averaging a total of 49 hours, have been associated with a significant increase in student achievement. It is necessary to reevaluate

our system of professional development to provide teachers with adequate time and experiences that will increase their instructional impact.

Job-Embedded Professional Development

Job-embedded professional learning is teacher learning that; is grounded in day-to-day teaching practice, occurs regularly, consists of teachers analyzing students' learning and finding solutions to immediate problems of practice, is aligned with student standards, school curricula, and school improvement goals (Darling-Hammond & McLaughlin, 1995; Hirsch, 2009). Therefore, job-embedded professional learning is more likely to be "learner centered, knowledge centered, community centered, and assessment centered" (Coggshall, Colton, Jacques, Milton, & Rasmussen, 2012).

The term "job-embedded professional development" has been used to describe the type of professional learning that is required according to federal regulations for many of the funding initiatives distributed by the U.S. Department of Education. The School Improvement Grant fund regulations (U.S. Department of Education, 2010b), State Fiscal Stabilization Fund guidelines (U.S. Department of Education, 2009b) and Race to the Top Grant (U.S. Department of Education, 2010a) requirements reference job-embedded professional development. The School Improvement (SIG) program indicates that a system of job-embedded professional development be "aligned with the school's comprehensive instructional program and designed with school staff" in schools where the turnaround and transformation models of improvement are adopted (U.S. Department of Education, 2010b). It appears to be clear that the impetus behind this requirement is to connect professional learning to classroom instruction and to tie instruction to student

achievement. Guidance for the School Improvement Grant program emphasized that job-embedded professional development should focus on "understanding what and how students are learning and on how to address students' learning needs, including reviewing student work and achievement data and collaboratively planning, testing, and adjusting instructional strategies, formative assessments, and materials based on such data" (U.S. Department of Education, 2009a).

Formats of Job-Embedded Professional Development

In a 2010 Issue Brief co-authored by the National Comprehensive Center for Teacher Quality and National Staff Development Council, formats for job-embedded professional development were defined as; Action Research, Case Discussions, Instructional Coaching, Critical Friends Groups, Data Teams/Assessment Development, Examining Student Work/Tuning Protocol, Implementing Individual Professional Growth/Learning Plans, Lesson Study, Mentoring, Portfolios, Professional Learning Communities, Study Groups (Cochran-Smith & Lytle, 1990; Croft et al., 2010). Descriptions included with permission from the National Comprehensive Center for Teacher Quality (2010), currently working as the Center on Great Teachers and Leaders (Appendix G).

Action research. Teachers select an aspect of their teaching to systematically investigate, such as their wait time during questioning. They record data and consider theories from the research literature, drawing conclusions about how teaching is influencing learning and vice versa, and informing future instructional decisions. The primary intent of action research is to improve the teachers' immediate classroom

teaching; secondarily, if applicable, the intent is to generalize it across other contexts in the school or beyond.

Case discussions. Case discussions allow teachers to have a more critical analysis of teaching because they are not in the act itself (LeFevre, 2004). Formats vary from written to video to multimedia, with varying controls over content to match the purpose of the case study – for example, an exemplar of teaching decisions – or to reveal student thinking or missed opportunity. One strength of video case discussions, in particular, is the opportunity to analyze student thinking at a deep level (Sherin & Han, 2004; van Es & Sherin, 2008). Case discussions, when they take place among a school's faculty and are situated in actual practice, are a process for JEPD.

Instructional coaching. Coaching differs from mentoring in its focus on the technical aspects of instruction, rather than the larger personal and nonacademic features of teaching (Rowley, 2005). An instructional coach provides ongoing consistent follow-up by way of demonstrations, observations, and conversations with teachers as they implement new strategies and knowledge. Typically, instructional coaches have expertise in the applicable subject area and related teaching strategies. Some coaches continue to teach part-time; some come from the school; and others travel throughout the district, working with teachers.

Critical friends groups. Teachers meet and analyze each others' work, including artifacts such as student work, a lesson plan, or assessment. They also may discuss challenges they are facing with presenting the subject matter or with meeting a particular student's needs. (See Norman, Golian, and Hooker (2005) for illustrative examples.)

Data teams/Assessment development. Teachers meet together and analyze results from standardized tests or teacher-created assessments. Together, they formulate what the evidence from the data tells them about student learning and discuss teaching approaches to improve student achievement. Teachers also may work on refining assessments to gather more useful student data.

Examining student work/Tuning protocol. Examining student work enables teachers to develop a common understanding of good work, identify student misconceptions, and evaluate their teaching methods. Through the tuning protocol, teachers share student work (or their assignments and rubrics), describing the context in which the work is used; other teachers ask questions and then provide feedback on how the work may be fine-tuned to improve student learning. (See Blythe, Allen, and Powell (1999) and Brown-Easton (1999) for more details.)

Implementing individual professional growth/Learning plans (Appraisal). Alongside an instructional leader such as a master teacher or the principal, or as members of a professional learning community, teachers develop their own professional growth plans in order to understand what professional development opportunities they should engage in, as well as to track their growth in a competency area. They can choose to participate in job-embedded professional development to ensure their progress.

Lesson study. During sessions known as "research lessons," teachers alternate in preparing a lesson to demonstrate a specific teaching and learning goal (e.g., help a student master a mathematics concept, conduct a peer review of writing within groups). Other teachers observe and document what they see through video, a word processor, or

pencil and paper. After the lesson, the teachers meet and discuss the strengths of the lesson and make suggestions for improvement. Sometimes, the lesson is revised and presented again.

Mentoring. Increasingly implemented as part of the induction phase for new teachers, mentoring may develop into coaching or peer support relationships as teachers gain experience. Best practice includes matching teachers of the same content area, establishing common planning time, and structuring time for further collaboration. Mutual observance of classroom teaching is usually included.

Portfolios. Teachers assemble lesson plans, student work, reflective writing, and other materials that are used to prepare for teaching or are used directly in the classroom. This body of work can be used to track a teacher's development in a competency area, or for reference by other teachers. Teachers also report that developing a portfolio is a powerful learning activity as they reflect on their teaching practice in light of standards (Gearhart & Osmundson, 2009).

Professional learning communities. Teachers collaborate to analyze their practice and discuss new strategies and tactics, testing them in the classroom and reporting the results to each other. Hord (1997) lists five attributes of effective professional learning communities: supportive and shared leadership, collective creativity, shared values and vision, supportive conditions, and shared personal practice. Professional learning communities redress teacher isolation, create shared teacher responsibility for all students, and expose teachers to instructional strategies or

knowledge they did not have access to previously. Such communities can be a venue for JEPD as well as other forms of reform-based professional development.

Study groups. In small groups or as a faculty, teachers generate topics for study related to school improvement goals or student data and then read and react to educational research or other literature on teaching and student learning. They engage in structured dialogue or discussion that explores issues deeply and considers the implications for school or classroom practices.

In a 2014 *Teacher Beat* blog hosted on Education Week's website, author Stephen Sawchuk reviewed findings from research conducted by the Boston Consulting Group (2014) for the Bill and Melinda Gates Foundation examining the execution of job-embedded professional development through interviews and surveys of teachers and professional development leaders. Their findings showed a dis-satisfaction with current professional development offerings experienced by teachers. In the same study, those responsible for providing professional development were asked if they would provide more or less of different formats of job-embedded professional development given the opportunity to decide themselves. The data proved quite a few differences in opinion. Some formats of job-embedded professional development showed the least satisfaction as experienced by teachers, meanwhile, those responsible for planning and providing professional development identified the same formats as areas to increase efforts and funding in the future. The report recognized past research supporting the effectiveness of the formats of job-embedded professional development, but points to the execution of the activities that may be lacking (Sawchuk, 2014).

Researchers who have studied professional development delivery models have offered several strategies to provide teacher learning that will enable them to effectively change their practice and impact student achievement. Dylan Wiliam (2010) suggested offering teachers development opportunities that allow choice, flexibility, accountability, and support. Darling-Hammond et al. (2009) offered five "critical elements" of an effective professional development program, collaborative learning, links between curriculum assessment, and professional-learning decisions in the context of teaching specific content, active learning, deeper knowledge of content and how to teach it, sustained learning over multiple days and weeks. Susan Moore-Johnson (2012) included encouraging teachers to work as members of teams, and creating differentiated roles for expert teachers to assist and lead colleagues as strategies to increase instructional capacity. According to the National Comprehensive Center for Teacher Quality (2010), teachers need to be afforded the time, space, structures and support to engage in a variety of job-embedded professional development activities. In their review of teacher and leader perceptions of job-embedded professional development, the Boston Consulting Group (2014) concluded that in order to be effective in the next-generation of professional development, activities must be relevant, hands-on, and sustained over time.

Job-embedded professional development has been positively associated with changes in teacher practice in both mathematics and science instruction to develop content-specific knowledge as well as pedagogical techniques that lead to more effective instruction (Blank, de las Alas, & Smith, 2008). Increased teacher learning leads to change in practice that results in greater learning gains for students (Parise & Spillane,

2010). Teachers who have experienced success and changed their practices in the past continue to hold their changed attitudes and beliefs about student learning even if they move from one building to another (Xu, Ozek, & Corritore, 2012). According to Guskey (2002), there are three major outcomes associated with professional development; change in teachers' classroom practices, change in student learning outcomes and change in teachers' beliefs and attitudes. It is the experience of successful implementation of a change in practice made evident through the improved learning outcomes of their students that result in a change in teachers' beliefs and attitudes (Guskey, 2002).

Chapter 3

Research Method and Procedures

Research Design

A qualitative case study design was used to examine the effects of job-embedded professional development on beginning teachers who were new to the case study school in the third and final year of a School Improvement Grant. According to Creswell and Miller (1995) a case study is:

> A tradition of inquiry where researchers study a "bounded system" or case over an extended period of time and collect detailed data from numerous sources. From these sources, researchers develop a substantive, complex picture of the case, rich in detail about the context of the case. (p. 37)

The qualitative design will allow beginning teachers in the study to describe how they experienced job-embedded professional development in the case study school, the effect this had on their ability to assimilate into a community of educators that was experienced and committed to a set of standards for effective instruction, and the impact this had on student achievement.

According to Yin (2003) a case study design should be considered when: (a) the focus of the study is to answer "how" and "why" questions; (b) you cannot manipulate the behavior of those involved in the study; (c) you want to cover contextual conditions because you believe they are relevant to the phenomenon under study; (d) the boundaries are not clear between the phenomenon and context.

The first reason Yin (2003) suggested to use a case study design was to answer "how" and "why" questions. The incremental increase in student achievement over the

term of the school improvement project has been established. According to the requirements of the School Improvement Grant, a system of job-embedded professional development was implemented. The job-embedded professional development provided to teachers focused on the areas of "the Big Four" (Knight, 2009a) to create a measurable standard of effective teaching practices that would be implemented by the teachers in the case study school. Qualitative interview data from five beginning teachers who worked at the case study school in the 2012-2013 school year, the third and final year of the school improvement project, will provide useful information to answer the question "how did job-embedded professional development help beginning teachers implement effective teaching practices and increase student achievement?" Descriptions provided through the individual interviews will give insight into "why" each teacher found the different formats of job-embedded professional development to be more useful to their professional needs.

Yin's (2003) second reason for considering a case study design was when you cannot manipulate the behavior of those involved in the study. In this study, the beginning teachers who were asked to participate are being asked to recall their experience in the 2012-13 school year, being interviewed in the 2015-16 school year. It is important to point out that the researcher has "prolonged engagement" (Creswell & Miller, 1995) with this case study, having served as the project manager for the School Improvement Project. The project manager was responsible for monitoring the school improvement intervention and to research and recommend professional development that aligned with the requirements of the School Improvement Grant. In a paper discussing

Validity in Qualitative Research, Creswell and Miller (1995), spoke of the importance of clarifying researcher bias in their review of Merriam (1988). They also described prolonged engagement as allowing the researcher to "make decisions about what is salient to the study, to understand what is most relevant to the purpose of the study; and to focus on those aspects in depth" (Creswell & Miller, 1995, p. 21).

The third and fourth reasons to use a case study design, according to Yin (2003) are when you want to cover contextual conditions because you believe they are relevant to the phenomenon under study and the boundaries are not clear between the phenomenon and context. The phenomenon that is examined in this study is job-embedded professional development. It is the hope of the researcher to establish a link between the requirements set forth by the School Improvement Grant, the implementation of job-embedded professional development to meet that requirement, the Instructional Coaching Group data showing the increase in effective teaching practices, and the increase in student achievement. The contextual conditions that will describe the phenomenon, job-embedded professional development, are the different formats, presented in the findings as themes, that were experienced by beginning teachers: working with an instructional coach, working in a Professional Learning Community, working with an administrator through the appraisal process, attending building-based professional development, attending conferences, trainings and workshops.
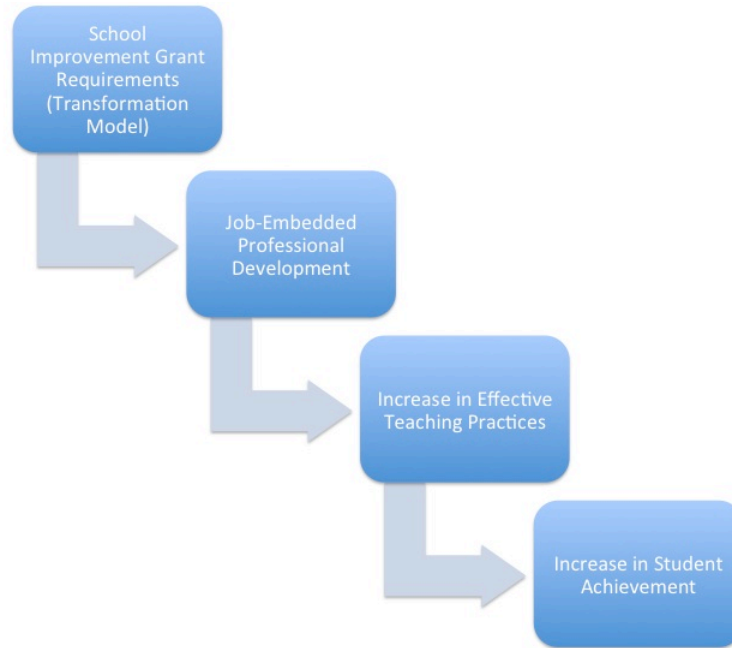
Figure 9. Connections between program implementation and program effects.

This study used a variety of data sources: student achievement data based on state assessment of student proficiency in reading for four consecutive years (Table 1.2) and math for three consecutive years (Table 3), Instructional Coaching Group observation of effective teaching practices (Figures 1-8) and interview data from five beginning teachers who worked in the case study school in the 2012-13 school year (Chapter 4). Bringing data together from a variety of sources "ensures that the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood" (Baxter & Jack, 2008, p. 544). Citing the work of several experts in qualitative research, Creswell and Miller (1995) suggested triangulation as a means of establishing verification of findings. In this process, researchers used a variety of sources to provide evidence of the findings. They discussed the work of Denzin (1978)

which identified types of triangulation, in which this study would consider multiple sources of data across time and space. In this study, the first findings from the observations of effective teaching practices conducted by the Instructional Coaching Group in January, 2011 were shared in comparison to the final findings, nearly two years later in October, 2012. Following the original observations in January, 2011, job-embedded professional development was planned to increase the use of effective teaching practices. The beginning teachers who participated in the interviews, who were in their first year as classroom teachers in the 2012-13 school year, were subjected to the second observation in October, 2012 to determine growth in the areas of effective teaching practices that had been experienced through the term of the school improvement project. There has also been a space of time between the 2012-13 school year and the time when the interviews were conducted in November, 2015.

Baxter and Jack (2008), indicated that once it has been determined that a case study is the best way to answer the research question(s), the boundaries should be defined. In this case, the boundaries were defined by place and time. The place of the study was a Title I Needs Improvement Elementary School in a mid-western state. The school had also been designated as a "Persistently Low Achieving School," thus making it eligible for a federally funded School Improvement Grant (SIG), which was received to implement the SIG Transformation Model through the improvement project. The grant had a term of three years beginning in the 2010-2011 school year. The third year of the grant was 2012-2013 when the beginning teachers in this study first started the school year as a regular classroom teacher in the case study school.

According to Baxter and Jack (2008), it is also necessary to determine the type of case study that should be used. The explanatory case study as described by Yin (2003) cited in Baxter & Jack (2008), best described the type of single case study that fit the needs of this study.

> This type of case study would be used if you were seeking to answer a question that sought to explain the presumed causal-links in real-life interventions that are too complex for the survey or experimental strategies. In evaluation language, the explanations would link program implementation with program effects. (p. 547)

In a 2015 Education Week article, author Steven Sawchuk (2014), commented on the findings of the Boston Consulting Group study of Job-embedded Professional Development, funded by the Bill & Melinda Gates Foundation. In his review, he stated, "the missing link is how these activities (job-embedded professional development) are structured and carried out at schools." This case study provides valuable information from the perspective of beginning teachers who were the recipients of job-embedded professional development that will give some insight into how job-embedded professional development was structured and carried out in this particular setting.

Purpose of the Study

The purpose of this qualitative case study was to examine formats of job-embedded professional development and the extent to which they helped beginning teachers to implement effective teaching practices and to increase student achievement at a Title I Needs Improvement Elementary School.

Research Questions

Central research question. What formats of job-embedded professional development did beginning teachers experience, and which of the formats were most useful to beginning teachers to help them assimilate into the established school improvement project and support gains in effective teaching practices and student achievement?

Sub-questions.

1. How did working with an Instructional Coach help beginning teachers implement effective teaching practices and increase student achievement?

2. How did working with a Professional Learning Community help beginning teachers implement effective teaching practices and increase student achievement?

3. How did working with an Administrator through the appraisal process help beginning teachers implement effective teaching practices and increase student achievement?

4. How did attending building-based professional development help beginning teachers implement effective teaching practices and increase student achievement?

5. How did attending conferences, trainings and workshops help beginning teachers implement effective teaching practices and increase student achievement?

6. How did taking higher education courses with content aligned to school goals help beginning teachers implement effective teaching practices and increase student achievement?

Target Sample

All teachers who were new to the school in the third year, 2012-2013, of the School Improvement Grant are not included in the study. Some came to the school as experienced teachers, having the benefit of some of the traditional measures of teacher quality, advanced degrees, and years of experience. Beginning teachers with fewer than three years of experience were selected to participate in the study because they lack the traditional attributes that are used to define teacher quality, higher education, and years of experience. Of the grade level classroom teachers (N = 20) in the final year, one-fourth were beginning teachers (n = 5), with fewer than three years of experience in teaching.

Beginning teachers who came to work at the case study school in the third year, 2012-2013, of the School Improvement Grant had to quickly assimilate to the building's focus on effective teaching practices that would have an impact on student achievement. The new teachers would have the same expectations to use effective teaching practices as identified by "the Big Four;" community building, instruction, content planning, and assessment for learning (Knight, 2009a), that other teachers in the building had previously. They offer a unique perspective on the types of job-embedded professional development that contributed to their ability to assimilate into the culture of school improvement and meet the school's standards for effective teaching practices and student achievement. Creswell (2013) stated that case study research should include "multiple

sources of information." Interviews of beginning teachers were used to develop case themes to develop an understanding of the job-embedded professional development that beginning teachers experienced at the case study school. This effectiveness of the professional development implementation is supported by archived data from state achievement data and observations of effective teaching practices collected by the Instructional Coaching Group (2011).

Data Sources

1. Historical student achievement data: state assessment, percentage of students proficient in reading, state assessment, percentage of students proficient in math.

2. Observation: Effective Teacher Practices results from Instructional Coaching Group (2011) using the 20-Minute High-Impact Survey.

3. Interview: Job-embedded professional development

Interview Procedures

1. Contact interview participants through email (Appendix C).

2. Correspond with participants to agree on a date, time and place to conduct the interview.

3. Send email reminder to participants (Appendix C – part B).

    a. Include Background Information for Interview Participants (Appendix D).

    b. Include Interview Protocol (Appendix E).

4. Meet with participants at designated time and place.

    a. Obtain Informed Consent (Appendix B).

    b.   Conduct the Interview from the Interview Protocol (Appendix E).

5.   Transcribe interviews, coding responses and developing themes.

Study Procedures

The study consisted of five classroom teachers who participated in job-embedded professional development at the case study school in the 2012-2013 school year. This was the third and final year of a School Improvement Grant implementation. The study examined the impact of job-embedded professional development on student achievement in a Title I Needs Improvement School.

Five interviews were conducted. Each interview lasted between 45 and 60 minutes. Three were completed in a public building that was neutral to the interviewer and participant, one was held in the interviewer's office at an elementary school, and one was completed through online collaboration. The interview protocol asked teachers to recall the types of job-embedded professional development they were involved in as they worked in the case-study school in the 2012-13 school year.

The interview protocol focused on six of the formats of job embedded professional development introduced by the National Staff Development Council in an April, 2010 Issue Brief titled, "Job-Embedded Professional Development: What it is, Who is Responsible, and How to Get it Done"(Croft et. al., 2010).

- Working with an instructional coach
- Working in a Professional Learning Community
- Working with an administrator through the appraisal process
- Attending building-based professional development
- Attending conferences, trainings and workshops

Each of the interviews were recorded and later transcribed. The interviewer took notes while the interview was taking place. Transcriptions were analyzed and themes were identified. For the purpose of this qualitative study, data collection and analysis occurred concurrently using Stake's (1995) method of categorical aggregation and direct interpretation for analysis. "Two strategic ways that researchers reach new meanings about cases are through direct interpretation of the individual instance and through aggregation of instances until something can be said about them as a class" (Stake, 1995, p. 74). The purpose of this research was to develop an aggregate sense from each of the participants of effective methods of job-embedded professional development for beginning teachers. The application of categorical aggregation assists in isolating and generalizing the most effective practices so that they can be further explored and replicated.

It is important to note that the researcher also participated in the job-embedded professional development experiences at the case study school during the period that the research project covers. The researcher has knowledge of the implementation of the project that informs the isolation and discovery of categories and themes.

Chapter 4

Findings

The case study school represented in this research project was a high-poverty, high-mobility elementary school in the third year of a School Improvement Grant in the 2012-13 school year. It was also noted in the statement of the problem that the staff did not remain constant throughout the term of the grant. In the 2010-2011 school year, 76% of the staff returned to the school to take part in the first year of the School Improvement Grant's interventions. In the second year, 2011-2012, 73% of the staff returned from the previous year. In the final year, 2012-2013, 59% of the staff returned. Only one-third of the staff remained at the school consecutively from 2009-2010, the year prior to the start of the grant and the 2012-2013 school year, the final year of the School Improvement Grant.

The school made gains in the traditional measures of teacher quality, rising from an average of 9.49 years of experience in 2009-2010 prior to the start of the grant to 13.06 years of experience in 2012. However, one-fourth of the teachers in the final year were beginning teachers, with fewer than three years of experience in the school district. They also did not have advanced degrees. Having an advanced degree, along with years of teaching experience are commonly used as measures of teacher quality.

The 2012-13 school year started with great anticipation. It was the final year of a School Improvement Grant that had impacted nearly every aspect of the school's programming. This was the year that it all had to come together. There had to be something to show for the great amount of effort and financial resources that had been

invested in this intervention. The school year started with twenty homeroom classrooms from kindergarten through fifth grade, eleven at the primary level, and nine at the intermediate level. Teaching those homeroom classes were five teachers who taught a homeroom class at the school prior to the school improvement grant, two teachers who had taught at the school in support roles and then became homeroom teachers, two teachers who started in the 2011-12 school year, six experienced teachers who started at the case study school in the 2012-13 school year and five beginning teachers who started their first year as homeroom teachers at the case study school.

Five beginning teachers, some of whom have said they didn't know what they were getting into, they were just thankful to have a job. Two were hired to teach primary grades, three to teach intermediate. Pseudonyms have been assigned to each of the teachers. Alex and Jordan taught in the primary grades, Chris, Taylor and Sam taught in the intermediate grades. They spent a good portion of their summer attending workshops and meetings, putting together pieces of information that would help them figure out how they would become a part of this system that had learned a lot together in the past two years. They repeatedly heard terms like "time on task," "opportunities to respond," "ratio of interactions." Some have since said they had not heard of these things prior to coming to the case study school. All have said that they have not, and will never forget them.

The interviews took place two and a half years after the school improvement grant ended. Three were conducted over coffee at local coffee shops, one in the researcher's office and one was completed online due to conflicting schedules. The researcher has strong connections to the school improvement grant, having served as the school's

"Intervention Project Manager" for the three-year term of the grant. I have not worked at the case study school since the grant ended, and have not had very close contact with the interview participants in the time that has passed. As the project manager, I researched and helped to implement many of the improvement initiatives that were part of the grant. I had a lot of personal and professional investment riding on the success of the case study school, it's students, teachers and programs and I had a great desire for the changes that were made to be lasting and fruitful. I can talk about the programs we tried and the gains that were made all day long. I knew every requirement and could tell you exactly what was done to meet that requirement. But, I wasn't sure that the teachers would remember or that they would be able to talk about it almost three years later. They're on their third set of students since the grant ended. I knew they were all still teaching. I am still in the same district, and have heard good things about all of them. The school has continued to make gains. I didn't know if they would look back on those years favorably or unfavorably. I was more than a little bit anxious about the interviews. I was about to find out if something that I had been so deeply invested in had any impact at all on those five beginning teachers, and if the things that they learned made a lasting impression. I could not have anticipated the amount of delight and satisfaction that would fill my heart and my mind and give me a renewed sense of hope and commitment for the work I continue to do, just in a different place. The work not only continues with me, but it continues with these five incredible teachers who are no longer "beginning."

The interviews were organized around five major sources of professional development I knew had been provided to all teachers at the case study school. Four of

the types of programs provided to teachers in the case study school fit the description of job-embedded professional development. It was my aim to connect the data on the increase in use of effective teaching practices to the professional development that was provided. The interviews were organized in sections relating to "the Big Four," which are; community building, instruction, content planning, and assessment for learning (Knight, 2009a, 2011, 2013). In each of the four areas, participants were asked to describe how the job-embedded professional development that was provided for them, in the 2012-13 school year, helped them to support the gains that the school made in the data showing an increase in the use of effective teaching practices. They were also asked if the job-embedded professional development they received in each of the areas increased their ability to affect student achievement.

There are 12 defined formats of job-embedded professional development (Cochran-Smith & Lytle, 1990; Croft et al., 2010). Parts of each of the formats were incorporated into the school's implementation through instructional coaching, professional learning communities, appraisal process with an administrator, building-based professional development and conferences, and conferences, trainings and workshops. Table 4 shows the alignment of professional development at the case study school to the components of the formats of JEPD suggested by Croft et al. (2010). The findings section is organized into 5 case themes according to the types of professional development that were part of the school improvement grant implementation at the case study school in the 2012-13 school year.

Table 4

Case Themes

Formats of JEPD	1. Instructional Coaching	2. Professional Learning Communities	3. Appraisal Process with Administrator	4. Building-Based Professional Development	5. Conferences, Trainings and Workshops
Action Research	yes	yes	yes		
Case Discussions		yes		yes	
Instructional Coaching	yes			yes	
Critical Friends Groups	yes	yes		yes	
Data Teams/Assessment Development		yes		yes	
Examining Student Work/ Tuning Protocol	yes	yes		yes	
Individual Professional Growth Plans	yes		yes		
Lesson Study	yes	yes			
Mentoring	yes	yes		yes	
Portfolios			yes		
Professional Learning Communities		yes			
Study Groups	yes	yes		yes	

Note: Aligned with Formats of Job-Embedded Professional Development (Cochran-Smith & Lytle, 1990; Croft et al., 2010)

Instructional Coaching

The instructional coaches were directly involved in job-embedded professional development for experienced and un-experienced teachers alike. The instructional coaches provided information, data, feedback, modeling and mentoring in the areas of classroom management, instruction, content planning and assessment for learning. These areas are known as "the Big Four" as established by consultant, Dr. Jim Knight (2009a), as a way to help coaches focus on the essentials to improve teacher quality and increase student achievement. Dr. Knight was one of the on-site professional development consultants who worked with the administration and teachers at the case study school. He helped to develop a "Target Design Plan" (Knight, 2011) for establishing standards of effective teaching practices. Data was collected, independently, by members of Dr. Knight's staff at the beginning of the grant period and again in the final year. The work with Dr. Knight to provide professional development for the instructional coaches to be able to support "the Big Four" (Knight, 2009a) made it an often referred-to format of job-embedded professional development among teachers during interviews. Instructional Coaches were mentioned often as valuable experiences that led to improvement of practice.

The beginning teachers who participated in the interviews described the support they received from instructional coaches as extremely valuable. The types of interactions they had with instructional coaches that were mentioned most were observation, data collection, feedback, modeling lessons, co-planning, and providing resources and strategies. Sam had much to say about working with instructional coaches:

> I think every school needs instructional coaches. I don't think you can grow if you don't get that constructive feedback to help you grow. When you work with coaches, they are your advocate. They're there to help you. Administrators are willing to help, but they're just not as available as coaches can be. I think I would be a very different teacher if I didn't have coaches.

Coaches supported all areas of "the Big Four" (Knight, 2009a), Community Building, Instruction, Content Planning and Assessment for Learning (see Table 5).

Instructional Coaching and Community Building

Community building encompasses the effort that teachers make to create a positive and productive working environment. This does not only include the relationship between teacher and student, but also the positive working relationship between and among the students themselves. The distinguished level of Domain 2a, Creating an Environment of Respect and Rapport in Charlotte Danielson's Framework for Teaching Evaluation Instrument (Danielson, 2014) stated:

> Classroom interactions between the teacher and students and among students are highly respectful, reflecting genuine warmth, caring, and sensitivity to students as individuals. Students exhibit respect for the teacher and contribute to high levels of civility among all members of the class. The net result is an environment where all students feel valued and are comfortable taking intellectual risks (p. 35).

In addition, a positive classroom environment will have students who attend to instruction and show a high level of engagement, which is frequently measured by time on task. All classrooms in the case study school were frequently monitored for ratio of interactions and time on task. Instructional coaches specifically taught strategies to beginning teachers to assist in their assimilation into the school community that had attained a high ratio of reinforcing to correcting actions and had a high percentage of

Table 5

Case Themes

"The Big Four"	1. Instructional Coaching	2. Professional Learning Communities	3. Appraisal Process with Administrator	4. Building-Based Professional Development	5. Conferences, Trainings and Workshops
1.a. Community Building: Time on task	Direct Impact	Indirect Impact	Monitoring Feedback Goal Setting	Direct Impact Planned by Instructional Coaches	Not Directly Related
1.b. Community Building: Ratio of Interactions	Direct Impact	Indirect Impact	Monitoring Feedback Goal Setting	Direct Impact Planned by Instructional Coaches	Not Directly Related
II. Instruction: Instructional Time	Direct Impact	Indirect Impact	Monitoring Feedback Goal Setting	Direct Impact Planned by Instructional Coaches	Not Directly Related
III. Content Planning	Direct Impact	Direct Impact	Monitoring Feedback Goal Setting	Direct Impact with Consultants	Not Directly Related
IV. Assessment for Learning	Direct Impact	Direct Impact	Monitoring Feedback Goal Setting	Direct Impact with Consultants	Not Directly Related

Note: Impact on measures of effective teaching practices in "The Big Four," Knight (2009a) according to interview participants.

students exhibiting on task behaviors in the classroom. Alex, a primary teacher, shared

that one benefit received from instructional coaches was that they had the time to review

research that supported best practices in these areas and could share that information with

classroom teachers to implement. The instructional coaches would provide resources and

tools that would help teachers increase their effective practices in the classroom. Alex

recalled an instructional coach giving her a list of sentence stems that could be used to

support positive, reinforcing interactions with students. "You feel better when you're

teaching and you have tools to work with." An intermediate teacher, Taylor, said,

> I had never thought about giving attention to students who were doing the right thing, and how much that would do for students who were not, and that they might notice and change. It was something really simple that we could do.

Some of the interview participants talked about the benefit of having an

instructional coach model a lesson or a teaching skill for beginning teachers. Sam, an

intermediate teacher, talked about the value of watching an instructional coach teach

while Sam collected data for ratio of interactions and time on task. "It was good to see

how someone else kept my class engaged." Another intermediate teacher, Jordan,

believed it was extremely helpful to have the instructional coach come into the classroom

often to gather data on ratio of interactions and time on task and to provide feedback

about how the teacher was doing in these areas. A primary teacher, Jordan, liked how the

school community celebrated the gains they made in these areas. "Kids pick up on the

morale, everyone's positive and learning from each other."

> If you change the classroom community at all into a positive community, it becomes more of an "I can," rather than "I can't." The more positive you make anything, always gives hope. If it is a fun environment that kids want to be in, they're going to try. Kids shouldn't come to school to get negativity and stress. (Sam, an intermediate teacher)

Instructional Coaching and Instruction

One of the findings from the February 2011 data collected by the Instructional Coaching Group (Figure 3) was that 22% of classroom time was spent in transition between learning activities. This was time in which the observer did not see teachers teaching or students learning. That was a major concern. Instructional coaches were tasked with finding solutions to this problem so that the school could have a greater impact and increase achievement with the time they had. In October 2012, when the beginning teachers were teaching at the case study school, transition time decreased to less than 4% of instructional time (Figure 4). This was a big improvement. Beginning teachers had much to say about the role of instructional coaches in supporting them as they worked to support the gains that had been made by the school community to increase effective teaching practices and student achievement.

All of the teachers interviewed mentioned the use of timers. This was a strategy that instructional coaches used to increase awareness of how teachers use time and to establish routines and procedures that supported efficient use of instructional time. Coaches gathered baseline data about use of instructional time, worked with teachers to set goals, helped develop strategies to use time productively and continued to monitor as teachers progressed in their implementation of effective teaching practices. Taylor, an intermediate teacher, talked about how time gets away from your when you're teaching,

and if you're not mindful of this possibility, you can easily lose track of time. Taylor also recalled having the instructional coach in the classroom to time transitions. "Instructional coaches are good at giving facts. They help with different strategies to help you fix the issue."

A primary teacher, Jordan, said that it seemed like "someone was always standing with a timer running." This teacher has continued using a timer as a common daily practice. A countdown timer is projected using classroom technology. "My kids do better when I show a timer on my Apple TV."

Sam, who taught an intermediate grade, talked about the need to maintain awareness of the passing of time while you are teaching, but also spoke of the importance of routines and procedures in decreasing transition times. "My Instructional Coaches helped me to set up my classroom so that students could get supplies quickly. Kids needed a plan for when they came into the room so that they could get what they needed quickly." This teacher recalled that Instructional Coaches provided feedback to teachers when they would observe by leaving a sticky note on the teacher's desk to show their findings.

Alex recalled the urgency that was felt by teachers. There was a great deal of pressure to improve student achievement. It was a serious task to decrease the amount of time spent in transitions because that indicated a loss of instructional time. This would be counterproductive to the improvement initiative. Alex noted that the use of instructional time, and transition time in particular, are things that are not often discussed in other schools where the need for improvement is not as prevalent. "It was the norm in our

building that we just helped each other in this." Teachers wanted feedback and relied on Instructional Coaches to provide support and direction as teachers worked on developing practices that would maximize time for learning.

The staff that continued at the case study school throughout the school improvement grant worked very hard to decrease the amount of transition time for students. One of the greatest victories of the school improvement project was the change in transition time, from 22% in February, 2011 to less than 4% in October, 2012. It was a concern to have so many new teachers in the final year. The staff members who continued at the school wondered if the addition of new teachers would allow them to see the improvement in transition time that they had worked to improve. When the aggregate data was made available to the staff for review in 2012, this was one of the first pieces of data staff celebrated. This change gave them hope to continue to work toward implementing other improvement strategies that would have a positive impact on student achievement.

Instructional Coaching and Content Planning

Collaborative planning was one of the major functions of the professional learning communities. In the 2012-2013 school year, beginning teachers were part of a grade level instructional team, and would need to be able to continue the success that their grade level had experienced in prior years. They would have to learn all of this quickly as the team was continuing to move forward and advance their effective teaching practices. Alex credited the Instructional Coach for providing resources that would "catch me up with what was just expected from everyone in the building."

A key concept in content planning is to be thorough in sharing the learning objective for each lesson with your students. Teachers need to explain what will be learned and taught, why the lesson is important and how students will use it, what the expectations are of students as they participate, how this lesson fits with the previous lesson and lessons to come, and that it is clear to students that this lesson is part of a larger unit. Jordan found this approach appealing and said it brought together the teacher's own experiences.

> The reason I got into teaching was that as a student, it just seemed like I did things just because the teacher told me to. It wasn't about mastery, it wasn't about my future. I really wanted kids to see why we were doing this. Some lesson don't seem important. Working with an Instructional Coach helped me explain to kids why the little things were important and why we were spending time on them.

Jordan said that this was a practice that was demonstrated by the Instructional Coaches during professional development sessions that they provided. "They would always go over the learning objectives and talk about the importance of what we were learning as teachers and what we're going to do in the future."

One of the most mentioned methods employed by Instructional Coaches was modeling lessons. This provided an opportunity for the classroom teacher to observe someone else teaching their class, using strategies that they would like to incorporate in their own teaching practice. Chris said, "Having a coach come to my classroom, demonstrate a lesson, plan with me, observe me teaching, then give me feedback helped me improve my practice in content planning."

Instructional Coaching and Assessment for Learning

Similar to responses about content planning, beginning teachers appreciated having lessons modeled for them with their own class as a way to increase the use of informal assessments and to get all students to respond. Teachers mentioned specific strategies that were modeled for them by the instructional coaches. They mentioned the use of "exit tickets," a simple strategy to get information from students that would indicate how much they understood from the day's lesson in written form that teachers could review before planning future lessons. This would allow teachers to use this information to plan a lesson that would respond to student misconceptions and fill gaps in student understanding. Taylor said,

> I had never heard of an exit slip. I didn't really even know what an informal assessment was before I got to (the case study school). It helped me to understand why it was important and the instructional coach could show me how it could be done.

Other specific strategies mentioned were; four corners, where students would physically move in the room to one of the corners that would represent their understanding of a question that was posed by the teacher, thumbs up or thumbs down as a non-verbal way to indicate agreement or disagreement, individual white boards so that students can record their answers for teachers to see who is understanding and who is not. Sam talked about a strategy that quickly became her favorite. The instructional coach shared this strategy through a video from the Teaching Channel (n.d.) website. "I still use 'My Favorite No' strategy in my class. It helps ideas click with kids when they can see their own mistakes."

Teachers also talked about the importance of feedback they received from instructional coaches. "When the coach observed the lesson and collected data, I could see where I needed to improve or if I was on the right track," Chris said. Alex agreed, "(Instructional Coaches) gave us feedback, which was the biggest thing for me. I'm a learner. I wanted them to tell me everything they knew. Feedback was the most important thing for me." Sam remembered a specific instance when the Instructional Coach helped to develop good assessment practices. "I remember the first time that I had to grade my constructed responses. My instructional coach took them home and graded them too. It helped me not make bad habits. I had someone to support me."

Professional Learning Communities

The case study school started to implement Professional Learning Communities prior to the School Improvement Grant. The School Improvement Grant allowed for Professional Learning Communities (PLCs) to have paid team leaders. The team leaders were responsible for facilitation of team meetings and accountable for following team processes. One of the processes used by PLCs in the case study school was Data Teams (Leadership and Learning Center, 2010). Team members were all trained in the process during the summer prior to the final year of the grant term. The beginning teachers expressed unique experiences with their PLCs. All of the PLCs were committed to the work of grade level teams that focused their work together to answer four main questions: (a) What is it we expect our students to learn? (b) How will we know when they have learned it? (c) How will we respond when some students do not learn? (d) How will we respond when some students already know it? (DuFour & Eaker, 1998).

Jordan's experience in PLC was mostly related to co-planning and sharing data from common assessments that teachers on the team would give to students so that they would be able to find answers to the PLC questions above. They would assess before instruction and after. Much of the planning the team did together would focus on new strategies or practices that would increase the likelihood that students would be successful on the second assessment. In this teacher's description, there was a formal process to the work of the Professional Learning Community and there was another less formal side to the work they did together that created a partnership between teachers to share strategies and resources.

Taylor described the work of the PLC as powerful and focused. "We always focused on how we were going to help all kids learn." Taylor described a friendly competition that arose from the relationship with the other team members. They held each other accountable. The work of the PLC was to compare instructional data and uncover effective practices that would make a difference in one teacher's data that could be replicated in the other classrooms so that all students could get the best instruction. Taylor laughed when thinking back on these experiences, "when it was a rough day and everything seemed hard, I would think, 'this is hard, but I need to beat (my team member).'" An insightful observation that Taylor made was that PLCs "helped to reduce the variability between classrooms." As a beginning teacher, Taylor found comfort in this. "Having a veteran in my PLC, I could tap into what they knew. I could see where they were being successful and I wanted to do the same thing." Taylor expressed that without the opportunity to explore common data through the PLC process, this is

information that may never have been clear to a new teacher. Taylor said, "there are strategies that I learned that I still use. I will in turn, share that information someday with someone else." In summary, Taylor expressed,

> Work in PLC helps you design your road. You had a way to check in along the way. Talking about that in the PLC helped you get more ideas about how to do it. Teammates might suggest something that has a higher effect size. We talked a lot about having students track their own data. It helped us to know that students were progressing and to see what their needs were. As a new teacher, tracking data is one of the things I might not have thought of. You're too busy with classroom management and getting through the curriculum. It was helpful to know what my team was going to do about it.

Chris appreciated the collaboration that took place when the PLC met. This group of peers provided opportunities to observe their instruction so that Chris could apply some of the things they were doing in Chris's own classroom. Collaborative planning was very important to Chris, particularly planning for formative assessments.

Sam often mentioned the informal opportunities there were to learn by observing PLC team members. Not only observing them in their classrooms, but watching how they manage their class in the hallway, listening to the things they would say and the manner in which they said them. For Sam, so many of the things that were "just an expectation" at the case study school were completely new. They were things that were not covered in Sam's undergraduate program. Sam's PLC team leader was very supportive in helping Sam plan all of the details. Learning a new curriculum and using the resources that were provided was a difficult thing to accomplish. It was encouraging to Sam to know that all of the PLC teams in the building were doing the same kind of work. There was evidence of their focus and their progress in the hallways. The PLC that Sam worked with was

committed to finding high-quality research-based instructional strategies and refining

their skill in implementing them.

For Alex, the success of the PLC was connected to the work of the Instructional

Coach, who also participated in Alex's grade level PLC. "She worked well at making us

work together." Most of the work in Alex's PLC was the formal work of planning

instruction and reviewing the results through the Data Teams Process.

> We always set up results indicators through Data Teams. If/Then statements were
> naturally set up through part of the Data Teams process. We wanted kids to know
> this, so we told them this. We shared our goals. This made a big difference and
> brought kids on board. It showed up embedded in our data for our PLC. (personal
> communication, November 21, 2015)

Appraisal Process with an Administrator

The interview participants expressed appreciation for the appraisal process. The

appraisers were noted for taking time to explain the process well to each of the

participants. The use of specific data and feedback pertaining to the data was

acknowledged as the greatest contribution to increasing effective teaching practices.

Appraisers conducted time on task, ratio of interactions and transition evaluations so that

they could help teachers improve practices in each of these areas. Community Building

data measuring student engagement through time on task and positive reinforcement

through ratio of interactions were seen as the most powerful feedback given to teachers to

influence change in effective teaching practices.

All of the teachers who participated in interviews were well aware of the

expectations that are part of the appraisal process. Teachers were familiar with the four

Domains that are part of the Danielson Framework for Teaching (Danielson, 1996). The

2012-2013 school year was the first year for the school to use a new appraisal system based on the work of Charlotte Danielson (1996). Teachers were appraised using Danielson's four domains: Planning and Preparation, The Classroom Environment, Instruction, and Professional Responsibilities. In each of the Domains, there are more specific elements that appraisers used in observations to provide feedback based on performance that is unsatisfactory, basic, proficient or distinguished. The teachers wanted to be at least proficient, if not distinguished in their performance. They were thankful to have clear expectations about what was required. Clear expectations for their performance as beginning teachers made a big difference to them. Sam appreciated the pre-observation process with the appraiser. "In the pre-observation conference, it asks how you will know that the kids are learning. It gives me a nice reminder to plan for it. If you plan for it, you're more likely to do it."

Building-Based Professional Development

Building-Based Professional Development consisted of trainings offered by Instructional Coaches as well as nationally known consultants. These consultants were sought by the school administration to lead trainings in their areas of expertise. Consultants were among the more appreciated job-embedded professional development activities the school participated in.

Because of the inclusion of instructional coaching as a means to support teachers through the school improvement process, Dr. Jim Knight was consulted to provide training to the instructional coaches. Dr. Knight introduced the school to the concept of developing a building Target Design Plan, as outlined in his book, Unmistakable Impact,

2011. This process led the school personnel through defining four areas of instruction,

known as "The Big Four" (Knight, 2009a), developed by the Kansas University Center

for Research in Learning. The areas of "the Big Four" (Knight, 2009a) are Instruction,

Community Building, Content Planning and Assessment For Learning. Each of these

areas has coordinating observations and inventories that can be observed in the classroom

to develop a baseline of present performance and then set goals for future performance.

This information was useful to coaches to support improvement in each of the four areas.

Dr. Knight consulted with the school personnel throughout the three years of the grant.

> I never had an opportunity to meet Dr. Knight, but learning the school goals and seeing the graphs of the data helped me. I would wonder how it was even possible to waste that much time. It was an eye-opener seeing the graphs of the data. Everyone was working toward it. It was just an expectation. It was everyone's goal. (Sam)

> Cassandra Erkens (2013), an Associate with Solution-Tree, consulted with the

school to develop teacher-leadership in the Professional Learning Communities and to

support teams in the work of creating common formative assessments. Each of the

interview participants recalled the work their team did with Cassandra to develop a strong

learning community. Taylor said, "She helped me realize all of the things I had to think

about ahead of time in order to deliver effective instruction." Alex recalled a session with

Cassandra Erkens:

> She would give us ideas that helped us determine if what we were assessing was really what we needed students to know. I liked the process of thinking about what your goal was, what you wanted students to learn and how you were going to go about it. We would bring student work and artifacts. She would help us evaluate our questions to see if we were asking students questions that were getting at what we really needed to know. It helped us make our assessments more effective. She helped us to be more professionally reflective and not judgment based. It helped us work as a team. We took out the guessing.

An associate with the Leadership and Learning Center worked with the staff to train the Data Teams Process (Leadership and Learning Center, 2010) and to assist and observe teams as they continued to practice the process. Sam appreciated the Data Teams process because,

> we knew how kids were learning along the way. It helped us catch things earlier. We didn't get a false understanding of what kids know when the summative came along. This gave us a chance to switch the way we were teaching if it was not working.

Alex had this to say of the professional development that was provided at the case study school, "it set me apart from people who have been teaching for 20 years. The Data Teams training (Leadership and Learning Center, 2010) in particular, set me apart from many of the teachers I now work with."

Visits from consultants often provided time for teachers to meet individually or in grade level teams with the consultant to work on areas that were specific to the needs of their team. Teachers liked this time because it was another way of gathering feedback about their performance and giving them ideas about the next steps they needed to take personally or as a team. "It showed how committed our school was to growing us as teachers. If it was worth the consultant's time, it was definitely worth mine."

Instructional coaches offered sessions to teach specific skills and strategies for teachers to use in their classrooms. The teachers who participated in the interviews appreciated these sessions because it gave them an opportunity to see things from a different perspective. They could gather knowledge from the Instructional Coaches who had a lot of experience to draw from, and they could also learn from other staff members

as the shared ideas they had or strategies that they had tried and the success they had experienced. In response to these sessions, Alex said, "I just knew who to go to if I needed help. That felt so good."

Conferences and Workshops

Some of the participants attended conferences and workshops. These were not directly tied to the job-embedded professional development offered through the case study school. They did provide support for the research and philosophy that informed the school improvement initiative that was adopted by the case study school. Conferences and workshops attended were in alignment with the goals of the school and provided background related to the pedagogy and strategies that job-embedded professional development would focus on. Participants who attended conferences or workshops spoke of the valuable resources they received through these experiences that helped them to assimilate into the staff that had taken part in the school improvement project in years prior to 2012-2013.

Higher Education Classes

Taking higher education classes is a way for teachers to establish individual professional growth plans, one of the formats of job-embedded professional development (Cochran-Smith & Lytle, 1990; Croft et al., 2010). Participants were asked about the role of higher education classes in their first year of employment at the case study school. Only one of the teachers had involvement in this initiative from the School Improvement Grant. Since the 2012-13 school year, three of the five interview participants have

pursued higher education and have completed programs in the field of education. Alex, who recently graduated from an education administration program said,

> I don't think I would have pursued my administration degree if not for what I learned at (the case study school). It changed my perspective on everything. I didn't know what I was doing when I started teaching. I thought I would just love on kids. I was in shock about all of the components that go into teaching. I wanted to continue (my education) to just keep learning. Now that I'm no longer getting all of that support, I had to go and get it myself, so that's why I pursued my leadership degree. I realized that not everyone gets those opportunities that I had, it's a once in a lifetime opportunity, so I'm going to continue to grow from it. That's what I've been doing.

Job-Embedded Professional Development and Student Achievement

"The Big Four" (Knight, 2009a) data about effective teaching practices was important, but it was only a means to an end. The ultimate goal was to increase student achievement. The interviewed teachers agreed that the increase in their understanding of effective teaching practices allowed them to be able to meet the needs of their students better and this increased their achievement. Creating a positive community helped increase student achievement because there was a strong relationship between students and their teachers. Positivity became something they had in common. Jordan said, "the kids pick up on it when everyone is positive. We're learning from each other and we celebrate it." Taylor credits Job-Embedded Professional Development (JEPD) for the case study school's increase in student achievement:

> Through JEPD, you got an opportunity to learn something and to grow as a professional. You got to recognize how important it is to grow as a teacher and how important it is to be a community. You can see the look on a kid's face, knowing that you helped them to make two grade levels' growth. And that it was partly through their engagement that made that happen. If more teachers knew what this could do, not many of them would say "no" to it.

Teachers at the case study school worked together to develop strategies that would help them use their instructional time efficiently and effectively. Jordan said these changes "gave me more time. More time to work in small groups, use cooperative learning strategies, more time to teach my kids. When you have more time to teach, your students have more time to learn. Alex had this to say:

> Everything I did was intentional. I expected it to have an impact on student achievement. It took away the time wasted. It made it more impactful when you realized that the loss of 20 minutes could make the difference between kids getting a (failing grade and a passing grade) on a test. I had so much support to pull good research-based strategies together to make it happen.

Focusing on content planning led teams of teachers to be purposeful about their instructional decisions. Often these decisions were guided by data that teacher teams collected in previous lessons. This information helped them understand the needs of their students and to collectively design instruction that would meet those needs. Jordan said, "as you teach students their learning targets and tell them what they're going to be learning and why, they just soak that in and are anxious to learn more." Sam's comments also supported the metacognitive notion that it is helpful for students to have some accountability in the process of learning:

> Kids are able to know what they are learning that day and how it is going to affect them in their life or in future lessons. It is going to give them a path. If I say, "today we're doing this, but tomorrow, we'll go here." It gives the man idea about the accountability they will have and security knowing there is a plan for them.

Recalling the focus on content planning at the case study school, Alex said:

> There was a lot of planning going on. Everything that was done was strategic. It was intentional. There was a plan for it, in the building, out of the building, with the coach, with your teammates. Everything was working toward the same goal. I loved that. It did increase my ability to affect student achievement because I had

tools to use that I didn't have before. When I started teaching, I had no idea that it was so complex. I didn't think about things like learning targets and time on task behind the scenes. Having something that makes sense and has a purpose is important to me. Everything I learned set me up for my future.

Alex said that when other teachers in her building need help with any of these areas related to content planning, her principal sends them to her to get help.

At the conclusion of the interviews, teachers were asked if there was anything else they would add about their experience with Job-Embedded Professional Development.

I will never forget my first year. I think it made me the teacher I am today, and I think I'm pretty good. It brought me to another professional level. (Jordan)

I can't imagine not having it. I feel really privileged. My friends in other places don't even know what I'm talking about when I talk about the kinds of data we collected about effective teaching practices. It helped me jump into a professional role right away. It was nice to come out of college into the real world where everything was laid out, clear and set up for you. I came into a situation with coaches, a team leader. I had all of this help at my fingertips. (Sam)

It was the best thing that could have happened to me as a teacher. It's one of those things that you look back on, and you couldn't have planned things better. I learned so much from the professional development in my school. The things that we did were light years ahead of other teachers. It made me think that I wished other teachers were being given the same opportunities. (Taylor)

I feel like I am more up to date in my knowledge. Buildings need to have teachers who are well prepared in order to be successful. They need to be able to provide good professional development. It is hard to retain teachers if they are not well prepared for the situation. If I hadn't had good quality professional development at (the case study school), I would have struggled. (Alex)

These talented beginning teachers got off to a great start in their teaching careers. The ability to activate learning for students, impact student achievement, and to participate in a collaborative community of professionals makes them valuable assets to any school that would be fortunate enough to employ them. Job-embedded professional

development was the common experience the beginning teachers had to put them on the path to continue to be effective educators and for some of them to seek leadership positions in education. Their stories give hope to the education profession and advise practices that we would be wise to learn from.

Chapter 5

Discussion and Recommendations

Discussion

Five beginning teachers, all of whom said they wouldn't be the teacher they are today, had it not been for this experience. Three still teach at the case study school, two have taken positions at other elementary schools in the same district. All feel as though they are respected as leaders by the principals they now work for. All still teaching, and if you ask them, they're good at it. This researcher would have to agree.

The central phenomenon in this research project was job-embedded professional development (JEPD). Teachers in the school experienced JEPD in the forms of; instructional coaching, professional learning communities, appraisal process and building-based professional development. Each of these categories consisted of various professional development formats and activities that teachers at the case study school experienced during the term of the school improvement grant. The purpose of this study was to examine which of the JEPD formats were perceived as the most beneficial to beginning teachers who were new to the building the final year of the grant.

Data collected from the interviews showed a positive response to instructional coaching as a way to provide JEPD to teachers who were new to the building. Instructional coaches could provide additional training and support to teachers as they implemented the improvement initiatives that the building was adopting. Interview participants directly addressed improvement in student engagement and ratio of

interactions from teachers to students as specific areas in which instructional coaching supported their improvement efforts.

Much work was done through the vehicle of professional learning communities. The teams attended closely to student data and responded to what they learned from it. Teams were able to work together to create formative assessments that would support the work they did in their classrooms. Through this work, teams are more likely to carry their collaborative work over from year to year. In a report titled, "Who Leaves? Teacher Attrition and Student Achievement," authors discuss the instability experienced by schools with high rates of teacher turnover. "The instability may be particularly problematic in schools trying to implement reforms, as new teachers coming in each year are likely to repeat mistakes, rather than improve upon reform implementation" (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2008).

The appraisal system was new during the term of the school improvement grant. The new system required one formal observation for each teacher during the school year and provided two informal observations. Beginning teachers were observed twice formally and two times informally as well. Along with observations, teachers worked with their appraiser to establish student-learning goals that were measured and monitored throughout the process. The appraiser could provide feedback so that teachers could continue to improve. When an area needing improvement was noticed by the appraiser, resources were provided to the teachers to help them improve. One thing that was offered was to work with an instructional coach.

One of the greatest benefits of the school improvement grant was that funding was available to provide common professional development to all staff members. Nationally known consultants representing different areas of education were brought to the school, or teachers traveled to conferences where they were speaking. This direct professional development that was available to teachers was seen as beneficial to all. A majority, if not all, of the staff could be trained in a particular strategy rather than just a few people at a time. It was powerful for the staff to learn together. Job-embedded professional development helped teachers develop effective teaching practices through consistent expectations for specified areas of instruction. These were represented as "the Big Four" (Knight, 2009a, 2011). The school's target design plan described what was expected from each teacher in the areas of classroom management, instruction, content planning and assessment for learning. Clearly defined expectations in these areas helped to increase student achievement by increasing the amount of time that students were in class, attending to the teacher and engaging the content they were learning. The 2015 Report from The New Teacher Project (TNTP), "The Mirage: Confronting the Hard Truth About Our Quest for Teacher Development" calls for school systems to "redefine what it means to help teachers improve" (2015, p. 3). They suggest:

- Define "development clearly, as observable, measurable progress toward an ambitious standard for teaching and student learning.

- Give teachers a clear, deep understanding of their own performance and progress.

Both of these recommendations for redefining improvement were part of the job-embedded professional development that beginning teachers in the case study school experienced.

Recommendations

The findings in this research project are useful to school administrators and teacher teams to develop systems for supporting professional development within a school community. According to John Hattie (2015), variability in the effectiveness of teachers is one of the largest barriers to student learning. He suggests that schools find a way to recognize expertise and to encourage all teachers to have the same impact as our best teachers. Becoming a highly effective teacher "has to be based on dependable measures based on expertise" (Hattie, 2015, p. 2). Dylan Wiliam, (2015, presentation, p. 9) says, "We know that teachers make a difference, but we don't know what makes the difference in teachers." Leaders need to offer a clear set of expectations that define what good teaching is and provide support and resources for teachers to attain it. We must avoid what Richard Elmore calls the "and then a miracle happens" improvement theory (City, Elmore, Fiarman & Teitel, 2010). We must work for improvement and when it happens, we must be able to give an account of exactly what we did to achieve it. In an interview with Tracy Crow (2008), Elmore states that as a profession, educators "haven't developed a clear sense of what it is we do, and what its connection is to the core functions of our organization" (Crow, 2008, p. 42).

> We're at a point now where it's no longer acceptable for superintendents and principals and teacher leaders to say that teaching is a mysterious thing, that it occurs idiosyncratically in every classroom and you have to take what you get.

> We need a much more systematic answer to that question of how we do what we do. Part of our responsibility as leaders in this sector is to create conditions so that teachers can be effective individually and collectively. (Crow, 2008, p. 42)

In an effort to define what good teaching is and how we can support it, this study informs education leaders about the power of instructional coaching as a way to provide support and resources to teachers in their improvement journey. Instructional coaching is a way to heavily support teachers and teams of teachers that need it the most, in a way that will feel safe to teachers because it happens outside of the realm of evaluation. Instructional coaches were able to provide real-time assistance in classrooms to model lessons for teachers and support their specific needs based on data collected from their own classroom. Instructional coaches can also support building-wide efforts based on aggregate data about instruction in the building.

Leaders in education need to support the collaborative power of professional learning communities by providing time and support to these learning teams as much as possible. In a 2015 report of "What Works Best in Education," author John Hattie claims, "the greatest influence on student progression in learning is having highly expert, inspired and passionate teachers and school leaders working together to maximize the effect of their teaching on all students in their care" (Hattie, 2015). Richard Elmore believes:

> Professional development that is likely to have the biggest impact has a reciprocal relationship between the time you spend with your colleagues in classrooms trying to solve instructional problems and then reflective time outside of classrooms to think about what you're going to try next. The corollary to that is the most powerful professional development occurs in real time around real problems in real schools involving real people who actually have to make decisions about what to do on a day-to-day basis. (Crow, 2008, p. 43)

Teachers working together in professional learning communities need to be supported by

leadership that understands the value of this professional time. Hattie (2015) advocates

for teachers to be given "some autonomy" for enabling all students to demonstrate

growth. He suggests that leaders study these teachers to understand why they have been

effective and to "recognize effectiveness among teachers and build a profession that

allows all to join the successful" (Hattie, 2015, p. 22). Erkens and Twadell, (2012), also

discuss the leader's role in creating and sustaining collaborative teams:

> Once teams are in place, leaders need to help them understand the *how* and the
> *what* of teamwork. Effective leaders provide resources, protocols, templates and
> processes to guide team endeavors. In addition, they define their expectations for
> team products up front, setting parameters for outcomes but remaining flexible
> regarding methods. (p. 16)

It is important to provide training for teachers to be able to do the right work in an

efficient manner to support student achievement. Teachers should be specifically trained

in the area of data collection and the use of instructional strategies to support student

needs in the classroom. The development of teacher leaders to act as facilitators of

learning teams is also a valuable use of resources and an investment that will provide a

great amount of support in an improvement initiative.

The value of a systematic, well-developed appraisal process for all teachers can

be seen through this research. The teacher-appraiser relationship has the potential to have

a powerful impact on the classroom environment, instructional methods, content planning

and assessment. Appraisers need to be trained to use data collection tools that can provide

actionable feedback to teachers along with resources to help them develop solid practices

that will lead to gains in student learning. Goal setting is a large part of the partnership

that is created between the appraiser and the teacher. Leaders need to guide teachers to

set goals for student growth in learning. Tucker and Stronge (2005) recommended:

> A more balanced approach to teacher evaluation would involve an assessment of
> the *act* of teaching as well as the *results* of teaching. We don't suggest throwing
> out the use of classroom observation to foster teacher improvement; rather we
> advocate that teacher effectiveness be judged and demonstrated by both classroom
> instruction *and* the learning gains of students. (p. 7)

Eric Hanushek (Haycock & Hanushek, 2010) supports the use of classroom observation

as a component of teacher evaluation, "The best way to identify a teacher's effectiveness

is to observe her classroom performance." In the same article, Katie Haycock, (Haycock

& Hanushek, 2010) supports the idea of consensus on what effective teaching is,

suggesting that "Measures of teacher quality should be based on teachers' effectiveness

in promoting student learning, but should also consider evidence of classroom teaching

practices known to contribute to greater student learning."

Education leaders need to identify necessary training and support that is specific

to the unique needs of their school. It is important to carefully inventory and evaluate the

needs of individual buildings to plan for improvement in areas that need it the most. The

Center on School Turnaround, in partnership with WestEd, funded a review of three

School Improvement Grants. Authors Vince and Dunn (2015) suggested that the findings

show a wide range of improvement strategies and that the context in which the study is

conducted matters. They recommend a needs-assessment to focus on each school's

unique circumstances, rather than "simply emulating strategies that worked somewhere

else" (Vince & Dunn, 2015, p. 1).

Attendance at professional conferences and workshops for all teachers should be a priority. If at all possible, consultants and leaders in education should be brought to a building so that a majority of the staff can hear the same message at the same time. There is great power in this practice as teacher teams can support one another and hold each other accountable to implement strategies and practices that are learned. Administrators have a responsibility to research effective practices and practitioners that are able to teach others how to implement instructional strategies and practices. Professional development is costly, so it is important to know the consultant or company that is providing training to teachers to make sure that the message they will convey is one that you want teachers in your building to hear. It is important for administrators to stay current on best practices and new insights in education.

Dylan Wiliam has advocated for teacher learning that "involves change in practice, which will require new kinds of teacher learning, new models of professional development, and new models of leadership" (Wiliam, 2010, Abstract). He also states that professional development should allow teachers to "exercise choice, to find ideas that suit their personal style, and they also need the flexibility to take other people's ideas and adapt them to work in their own classrooms" (Wiliam, 2010, p. 5). The variability provided through job-embedded professional development creates a powerful tool for schools that are dedicated to student achievement and professional learning. With a focus on high quality professional development, and working to define and increase expectations for the use of effective practices by every teacher, schools can provide high-

quality instruction for every child. This increase in instructional effectiveness can have a great impact on student achievement.

It's what you do with what you've got that pays off in the end.

Future Studies

I believe that with evaluation instruments such as the Framework for Teaching Evaluation Instrument by Charlotte Danielson (2014) is a clear set of guidelines have been established that inform educators about what effective teachers do. It is important for individual schools to reach consensus between administrators and staff to determine specific data that would become evidence of effective teaching that align with the appraisal domains suggested by Danielson (1996). Further research of this process would be warranted to provide direction to schools about how to set specific expectations that describe what effective teachers do. Through consensus on effective teaching, evidence through observation of these practices, along with demonstrating growth in student achievement, a fair system of teacher evaluation can be developed based on the triangulation of these elements.

There needs to be a clear way to correlate efforts to provide systematic job-embedded professional development to gains in student achievement. Through this direct correlation, conclusions can be drawn and replicated or adapted to meet the improvement needs in other schools. One of the best ways to determine if professional development is having an impact is to measure if it is increasing efficacy in the teachers who have experienced it.

I would propose a follow-up study that specifically addresses formats of job-embedded professional development to address identified needs in a system with clearly defined effective teaching expectations. In this study, participants would complete a teacher efficacy scale such as the one suggested by Tschannen-Moran & Woolfolk Hoy, (2001). Teacher efficacy is defined as, "the teacher's belief in his or her capability to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998, p. 233). In 1998, authors Tschannen-Moran, Woolfolk-Hoy and Hoy, discussed the implications of efficacy specifically for beginning teachers. They noticed that novice teachers, who were more confident in the level of support they received and in their preparation, showed higher ratings on efficacy scales than those who felt their support or preparation were less adequate. This had implications for their satisfaction in education and their rate of attrition as well. Those with higher ratings on efficacy scales were more likely to be satisfied in their profession and thus remained longer.

In a study with clearly defined expectations for effective teaching practices and a system for observing and evaluating teacher proficiency in applying these practices, it would be valuable to measure teacher efficacy prior to the implementation compared to teacher efficacy after the implementation. Given a similar situation within a school building, it would be possible to consider changes in teacher efficacy among a variety of bands representing years of experience. After a period of time, evaluated yearly, it would be possible to make a connection between support for the application of effective

teaching practices through job-embedded professional development, teacher efficacy and student achievement.

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Appendix A

IRB Approval

Dear Lynn Fuller and Dr. Jody Isernhagen

Project ID: 15369
Form ID: 24127
Review Type: New project form Exempt Review
Title: The Assimilation of Beginning Teachers into an Established School Improvement
Project: A Qualitative Case Study Examining Formats of Job Embedded Professional
Development

This project has been certified as exempt. You are authorized to begin your research.

The stamped and approved form(s) have been uploaded to NUgrant. Please use the
stamped form(s) to make copies to distribute to participants. If changes need to be made,
please submit the revised form(s) to the IRB for approval prior to use.

This project was certified as Exempt, category 1 & 2.

Please allow sufficient time for the official IRB approval letter to be available within
NUgrant.

Cordially,

Lindsey Arneson
Research Compliance Services
Human Research Protection Program

Appendix B

Interview Participant Informed Consent Form

Participant Informed Consent Form

The Assimilation of Beginning Teachers into an Established School Improvement Project: A Qualitative Case Study Examining Formats of Job Embedded Professional Development

Purpose:
This research project will aim to examine the types of professional learning that increase effective teaching practices and lead to increased student achievement. You must be 19 years of age or older to participate. You are invited to participate in this study because you worked in the case study school and had fewer than three years of teaching experience in the 2012-13 school year, the third year of an established school improvement project.

You will be asked to answer interview questions in these six categories reflecting formats of job-embedded professional development:
- Working with an instructional coach
- Working in a Professional Learning Community
- Working with an administrator through the appraisal process
- Attending building-based professional development
- Attending conferences, trainings and workshops
- Taking higher education courses with content aligned to school goals

Procedures:
The interview will take approximately one hour to complete. It will be conducted in a quiet setting in a public building that is convenient for you. The interview will be audio recorded.

Benefits:
There are no direct benefits to you as a research participant.

Risks and/or Discomforts:
There are no known risks or discomforts associated with this research.

Confidentiality:
Any information obtained during this study, which could identify you, will be kept strictly confidential. The data, including audio recordings and transcription documents from these recordings, will be stored in a locked cabinet in the investigator's office, or in the investigator's password protected laptop, and will only be seen by the investigator during the study and until June, 2016 when the investigator expects to finish writing the research study. After this date, audio recordings and transcriptions will be destroyed in digital and document formats. The information obtained in this study may be published in education journals or presented at education meetings, but the data will be reported as aggregated data. Quotes from participants will be attributed to a pseudonym.

Compensation:
You will receive a $25 gift card for participating in this project.

Opportunity to Ask Questions:
You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. Or you may contact the investigator at the phone numbers below. Please contact the University of Nebraska-Lincoln Institutional Review Board at (402-472-6965 to voice concerns about the research or if you have any questions about your rights as a research participant.
Freedom to Withdraw:
Participation in this study is voluntary. You can refuse to participate or withdraw at any time without harming your relationship with the researcher of the University of Nebraska-Lincoln, or in any other way receive a penalty or loss of benefits to which you are otherwise entitled.

Consent, Right to Receive a Copy:
You are voluntarily making a decision whether or not to participate in this research study. Your signature certifies that you have decided to participate, having read and understood the information presented. You will be given a copy of this consent form to keep.

☐ I agree to be audio recorded during this interview with the knowledge that recordings and transcription documents created from the recordings will be destroyed at the end of the research project which is expected in June, 2016.

Signature of Participant:

_____   _____
Signature of Research Participant   Date

Names and Phone numbers of investigators

Lynn Fuller, M.Ed., Principal Investigator   email: lfuller3421@gmail.comPhone: (402)560-1085
Jody Isernhagen, Ed.D., Secondary Investigator   email: jisernhagen3@unl.edu Phone: (402)472-1088

Appendix C

Email to Interview Participants

Email to Interview Participants

I am writing to ask for your help to gather information about the job-embedded professional development you received as a beginning teacher in a Title I Needs Improvement case study school.

Beginning teachers (1-3 years of teaching experience), who worked in the school during the final year of the school improvement grant (2012-13) are being asked to participate in an interview about their participation in professional activities and their beliefs about how effective practices were influenced.

School Improvement Grants require the allocation of funds for professional development. This interview will help us understand the types of professional learning that increase effective teaching practices. The information you provide will be useful to help other schools replicate professional learning activities that lead to success.

The interview is organized by six main categories reflecting formats of job-embedded professional development:
- Working with an instructional coach
- Working in a Professional Learning Community
- Working with an administrator through the appraisal process
- Attending building-based professional development
- Attending conferences, trainings and workshops
- Taking higher education courses with content aligned to school goals

The questions will be about your experience in increasing effective teaching practices in the areas of community building, content planning, instruction and assessment for learning.

Your answers are completely confidential. Your name will not be used in the final draft of the research to identify you.

This is important information that only a few people can provide. Your participation is greatly appreciated.

I would be happy to come to your classroom to conduct the interview starting at 4:00. Please respond with two dates that would work in your schedule to meet with me at that time, or to suggest other arrangements that would be more beneficial for your schedule. The interview will take approximately one hour.

You may respond via email to lfuller3421@gmail.com, call or text 402-560-1085.

Thank you so much for your assistance.

Lynn Fuller, M.Ed., Principal Investigator
Jody Isernhagen, Ed.D., Secondary Investigator

Email Reminder for Interview Appointment

Dear (Participant),

I look forward to meeting with you (Date) at (Time) at (Location).

Please review the attached background information to help you prepare to answer interview questions in these six categories reflecting formats of job-embedded professional development:

- Working with an instructional coach
- Working in a Professional Learning Community
- Working with an administrator through the appraisal process
- Attending building-based professional development
- Attending conferences, trainings and workshops
- Taking higher education courses with content aligned to school goals

The interview will take approximately one hour to complete. If you need to contact me before the interview, please respond to lfuller3421@gmail.com, call or text me at 402-560-1085.

Thank you,
Lynn Fuller

Appendix D

Background Information for Interview Participants

Background Information
For Interview Participants

The School Improvement Grant required that recipients spend grant funding on specific interventions described in the Transformation Model, such as:

    1. Developing teacher and school leader effectiveness.

        A. Use evaluations that are based in significant measure on student growth to improve teachers' and school leaders' performance;

        B. Identify and reward school leaders, teachers, and other staff who improve student achievement outcomes and identify and remove those who do not;

        C. Replace the principal who led the school prior to commencement of the transformation model;

        D. Provide relevant, ongoing, high-quality job-embedded professional development;

        E. Implement strategies designed to recruit, place, and retain high-quality staff

(Guidance on School Improvement Grants, Under Section 1003(g) of the Elementary and Secondary Education Act of 1965, U.S. Department of Education, Office of Elementary and Secondary Education, December 18, 2009)

Definitions

Beginning Teacher - any teacher who has been employed in the same school district for three successive years or less.

Job-embedded professional development - Teacher learning that is grounded in day-to-day teaching practice and is designed to enhance teachers' content-specific instructional practices with the intent of improving student learning (Darling-Hammond & McLaughlin, 1995; Hirsh, 2009).

In this study, the Job-embedded Professional Development formats considered are:
- Instructional Coaching
- Professional Learning Communities
- Appraisal
- Building-Based Professional Development
- Conferences, Trainings and Workshops
- Higher Education Courses

Research Question:
What formats of job-embedded professional development did beginning teachers experience, how did they experience them, and which of the formats were most useful to beginning teachers to help them assimilate into the established school improvement project and support gains in effective teaching practices and student achievement?

Teacher Turnover

2010-11	2011-12	2012-13
76% returned	73% returned	59% returned

34% on staff consecutively 2009-10 to 2012-13
In 2012-13, of the 20 classroom teachers, 10 were new to the building. Six were beginning teachers with fewer than three years experience as a certified teacher.

Despite the change in staff during the third year of the school improvement grant project, the school continued to make gains in student achievement and in the demonstration of effective teaching practices used by all teachers. The description of data representing an increase in the use of effective teaching practices is included for review along with the interview questions.

State Assessment Percentage of Students Proficient in Reading

	2009-10	2010-11	Change	2011-12	Change	2012-13	Change
All Students	50%	61%	+11	69%	+8	72%	+3

Nebraska Department of Education, (2013).

State Assessment Percentage of Students Proficient in Math

	2010-11	2011-12	Change	2012-13	Change
All Students	56%	68%	+12	74%	+6

Math was not assessed at the State level in the 2009-10 school year.
Nebraska Department of Education, (2013).

Appendix E

**Interview Protocol**

Interview Protocol:
Formats of Job-Embedded Professional Development that Impact Effective Teaching Practices and Student Achievement

Were you a beginning teacher (1-3 years experience) in 2012-13?…yes…no

Did you work at the Title I Needs Improvement Case Study School as a classroom teacher in the 2012-13 school year?...yes…no

Community Building: Student engagement measured by an observation of student Time on Task. An observation of the teacher's clarity in posting and explaining expectations for learning activities and transitions. This also includes the teacher's ability to interact positively with students as measured by their Ratios of Interaction (Knight, 2009a, 2011, 2013).

Assessment: *Time on Task (TOT)* – An observation of the amount of on-task behavior exhibited by students. A gross measure of student engagement (Knight, 2009a, 2011, 2013).
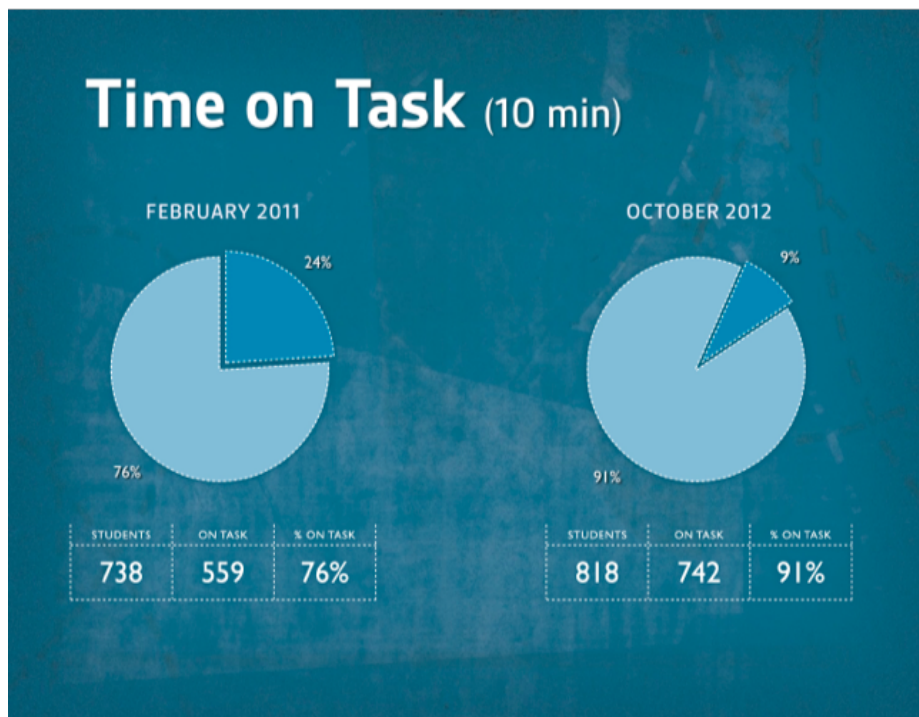
Please provide an answer to the following items related to community building.

1. The school's average Time on Task increased from 76% in February, 2011 to 91% in October, 2012, while you were working at the case study school. To what extent did any of the following formats of job-embedded professional development help you improve student time on task?

a. Did working with an Instructional Coach help you improve student time on task? If so, how?

b. Did working with your Professional Learning Community help you improve student time on task? If so, how?
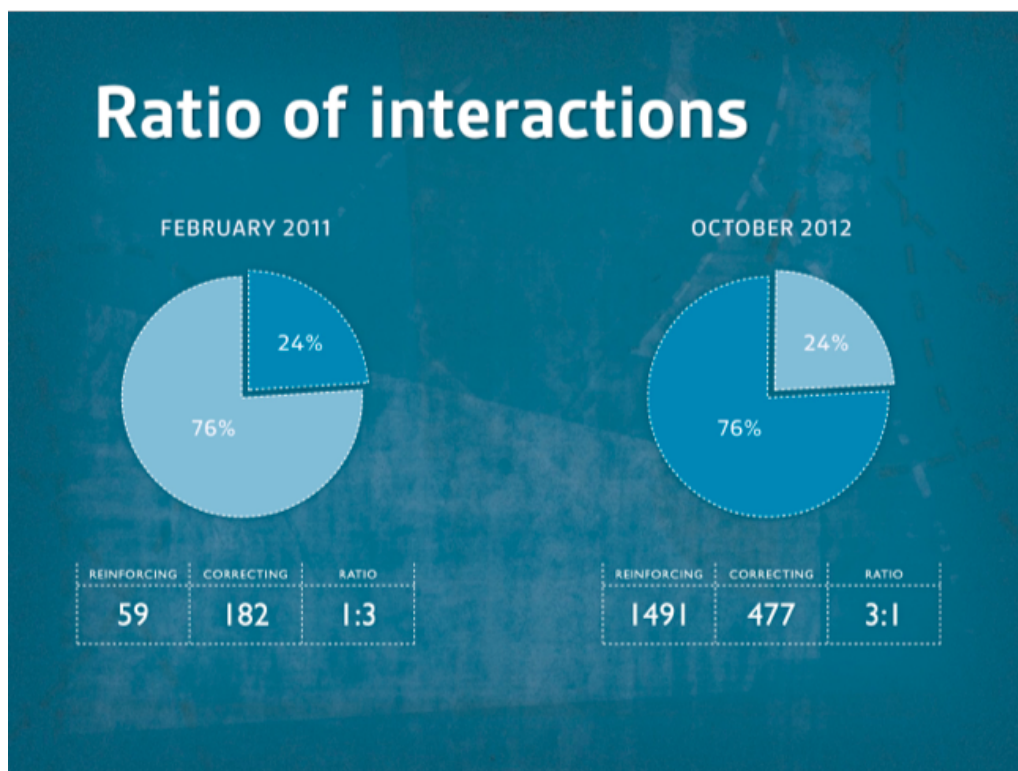
c. Did working with your Administrator through the appraisal process help you improve student time on task? If so, how?

d. Did attending building-based professional development help you improve student time on task? If so, how?

e. Did attending conferences, trainings and workshops help you improve student time on task? If so, how?

f. Did taking higher education courses with content aligned to school goals help you improve student time on task? If so, how?

Assessment: *Ratio of Interactions (ROI)* – An observation of the ratio of reinforcing/positive responses to students compared to corrective/negative interactions between the teacher and students (Knight, 2009a, 2011, 2013).


Ratio of interactions

FEBRUARY 2011

24%

76%

REINFORCING	CORRECTING	RATIO
59	182	1:3

OCTOBER 2012

24%

76%

REINFORCING	CORRECTING	RATIO
1491	477	3:1

Please provide an answer to the following items related to community building.

2. The school's average number of reinforcing to correcting actions taken by the teacher were 1:3 in February, 2011. In October, 2012, while you were working at the case study school, the average number of reinforcing actions increased to 3, while correcting actions decreased to an average of 1. To what extent did any of the following formats of job-embedded professional development help you increase reinforcing interactions with students?

a. Did working with an Instructional Coach help you improve your ratio of reinforcing to correcting actions? If so, how?

b. Did working with your Professional Learning Community help you improve your ratio of reinforcing to correcting actions? If so, how?

c. Did working with your Administrator through the appraisal process help you improve your ratio of reinforcing to correcting actions? If so, how?

d. Did attending building-based professional development help you improve your ratio of reinforcing to correcting actions? If so, how?

e. Did attending conferences, trainings and workshops help you improve your ratio of reinforcing to correcting actions? If so, how?

f. Did taking higher education courses with content aligned to school goals help you improve your ratio of reinforcing to correcting actions? If so, how?

g. Did job-embedded professional development related to **community building** increase your ability to affect student achievement?

Content Planning: An observation of the teacher's use of visual representations of

learning targets, explaining why the learning is important and explaining how lessons are

connected to a larger unit (Knight, 2009a, 2011, 2013).
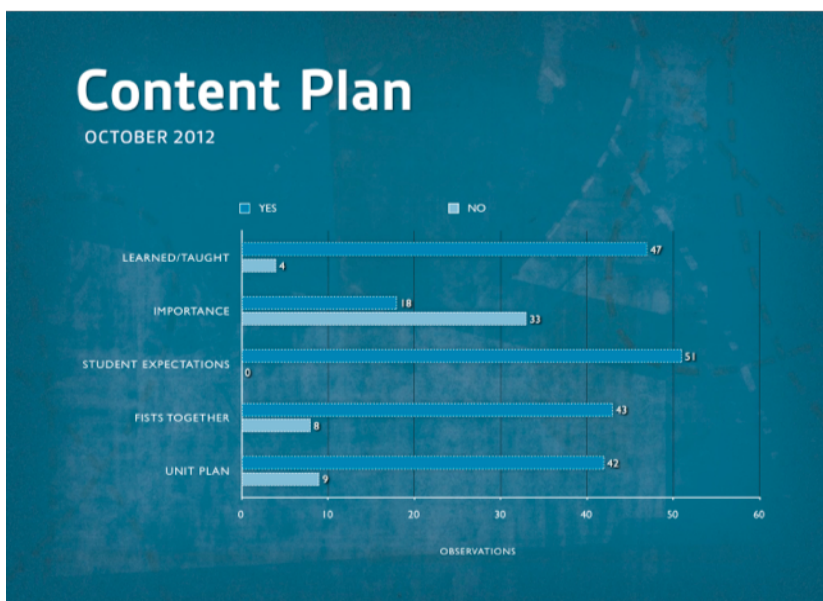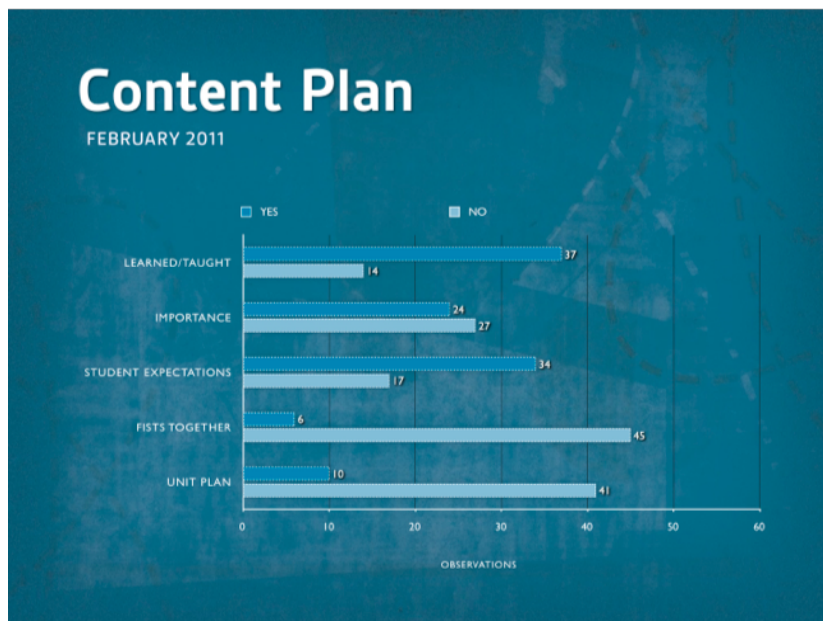
Please provide an answer to the following items related to content planning.

3. The number of times teachers were observed sharing what would be learned or taught to the students, student expectations, how lessons fit together and evidence of unit planning increased from observations in February, 2011 to observations in October, 2012, while you were working at the case study school. To what extent did any of the following formats of job-embedded professional development help you improve your practices in sharing learning objectives?

a. Did working with an Instructional Coach help you improve your practices in content planning? If so, how?

b. Did working with your Professional Learning Community help you improve your practices in content planning? If so, how?

c. Did working with your Administrator through the appraisal process help you improve your practices in content planning? If so, how?

d. Did attending building-based professional development help you improve your practices in content planning? If so, how?

e. Did attending conferences, trainings and workshops help you improve your practices in content planning? If so, how?

f. Did taking higher education courses with content aligned to school goals help you improve your practices in content planning? If so, how?

g. Did job-embedded professional development related to **content planning** increase your ability to affect student achievement?

Instruction: An observation of what is actually happening in the classroom at the time of

the classroom observation (Knight, 2009a, 2011, 2013).
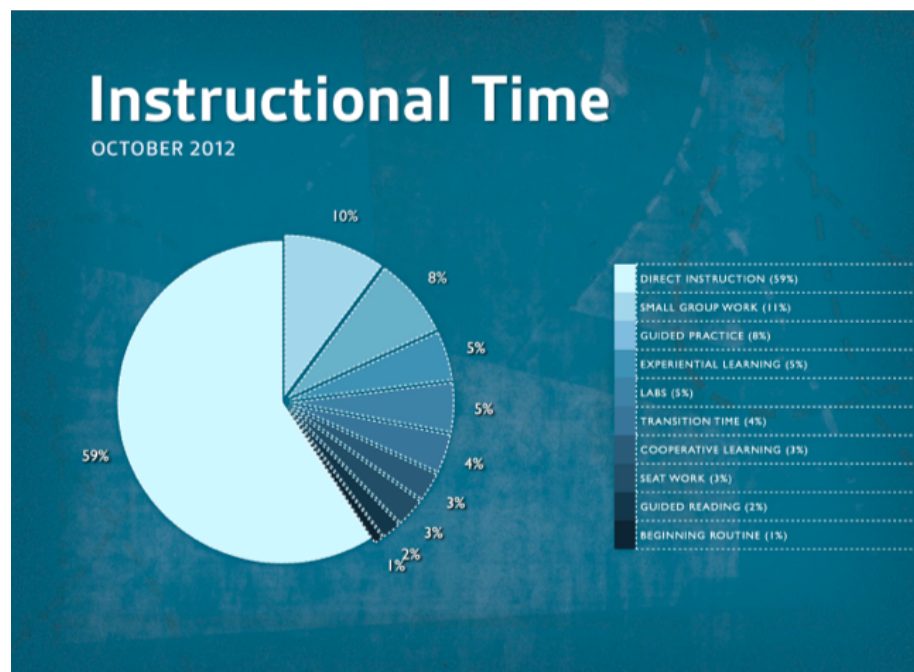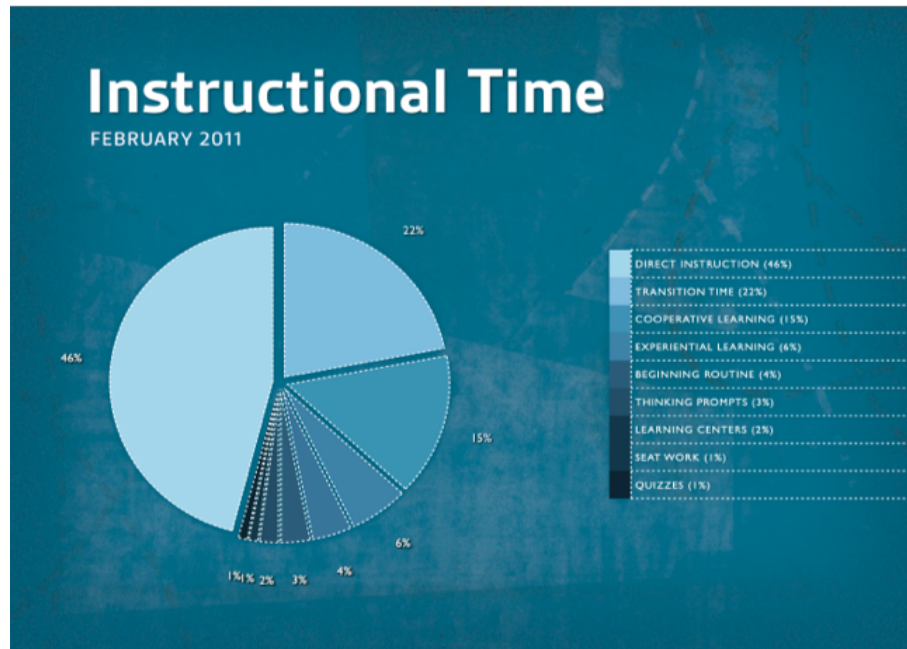
Please provide an answer to the following items related to instruction.

4. An average of 22% of instructional time was spent in transition and 78% spent on instructional activities during observations conducted in February, 2011. In October, 2012, while you were working at the case study school, transition time decreased to 4% and instructional activities increased to an average of 96% of the observed time. To what extent did any of the following formats of job-embedded professional development help you decrease transition time and increase instructional time?

a. Did working with an Instructional Coach help you decrease transition time and increase instructional time? If so, how?

b. Did working with your Professional Learning Community help you decrease transition time and increase instructional time? If so, how?

c. Did working with your Administrator through the appraisal process help you decrease transition time and increase instructional time? If so, how?

d. Did attending building-based professional development help you decrease transition time and increase instructional time? If so, how?

e. Did attending conferences, trainings and workshops help you decrease transition time and increase instructional time? If so, how?

f. Did taking higher education courses with content aligned to school goals help you decrease transition time and increase instructional time? If so, how?

g. Did job-embedded professional development related to **instruction** increase your ability to affect student achievement?

Assessment for Learning: Observable quick, informal activities designed to provide feedback to the teacher regarding the learning of each student in the class. Students also benefit from knowing how well they are doing in their learning. Examples of informal assessments would be the use of white boards, response cards, exit slips, etc (Knight, 2009a, 2011, 2013).
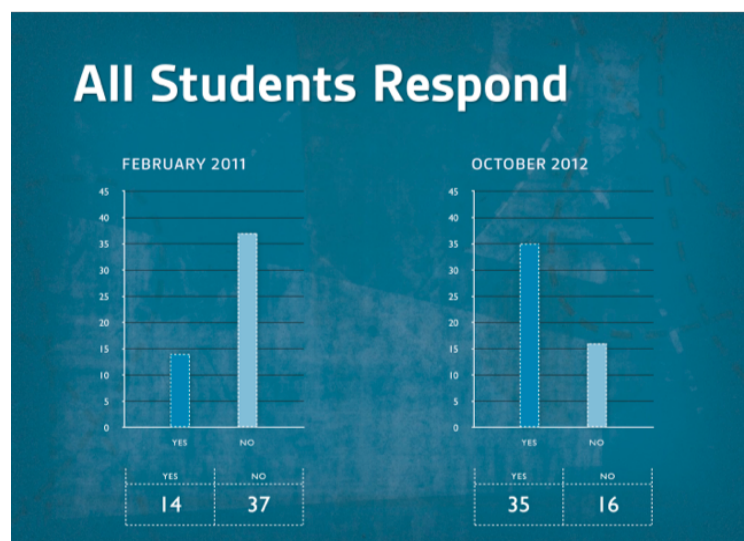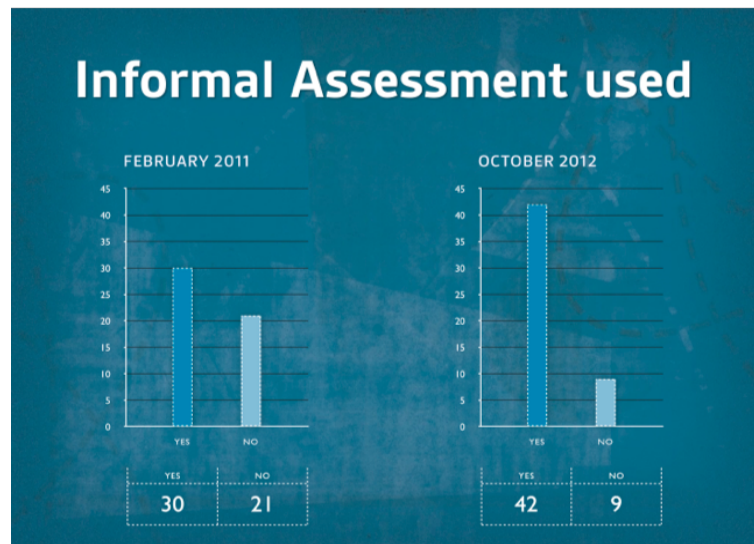
Please provide an answer to the following items related to assessment for learning.

5. The number of times teachers were observed using informal assessments and student response to informal assessments increased from observations in February, 2011 to observations in October, 2012, while you were working at the case study school. To what extent did any of the following formats of job-embedded professional development help you increase your use of informal assessments and increase the number of student responses to informal assessments?

a. Did working with an Instructional Coach help you increase your use of informal assessments and increase the number of student responses? If so, how?

b. Did working with your Professional Learning Community help you increase your use of informal assessments and increase the number of student responses? If so, how?

c. Did working with your Administrator through the appraisal process help you increase your use of informal assessments and increase the number of student responses? If so, how?

d. Did attending building-based professional development help you increase your use of informal assessments and increase the number of student responses? If so, how?

e. Did attending conferences, trainings and workshops help you increase your use of informal assessments and increase the number of student responses? If so, how?

f. Did taking higher education courses with content aligned to school goals help you increase your use of informal assessments and increase the number of student responses? If so, how?

g. Did job-embedded professional development related to **assessment for learning** increase your ability to affect student achievement?

Appendix F

Permission from Dr. Jim Knight, Instructional Coaching Group

PERMISSIONS

Instructional Coaching Group Permission

On Feb 8, 2016, at 2:30 PM, Lynn Fuller <lfuller@lps.org> wrote:

Hi Jim,

The draft of my dissertation is going through the final editing phase. My adviser asked me to reach out to you one more time to make sure that you are aware that your name comes up in the paper in a prominent way. I'm including the link to the paper in google docs. If you would like to search it for your name, you should see all of the times that you are mentioned.

(link omitted)

I know you're busy, and if you don't have time to look through it, I understand. If it's a concern for you, you're welcome to check. If not, I'll just keep moving forward.

If you see anything that doesn't look right, please let me know.

Thanks!
Lynn

From: "jimknight"
To: "lfuller"
Sent: Monday, February 8, 2016 9:50:45 PM
Subject: Re: Fuller - Dissertation

Hi Lynn,

I can tell you right now that I'm sure it is fine, so don't wait for an OK from me, but I do want to look it over soon. Congratulations on making such progress.

Jim

On May 1, 2015, at 8:07 AM, Lynn Fuller wrote:

Hi Jim!

I'm working on the research project for my dissertation. If you could provide me with written permission to use the data from the final report for the school, I would really

appreciate it. My Doctoral committee will be meeting soon to approve the proposal and then I will conduct interviews and surveys over the summer.

Lynn

From: "jimknight"
To: "lfuller"
Sent: Friday, May 1, 2015 8:10:06 AM
Subject: Re: Research

Hi Lynn,

Great to hear from you. You have my permission to use any data from any reports we've written for your School District.

Thanks

Jim

Appendix G

Permission from Center on Great Teachers and Leaders

PERMISSIONS

National Comprehensive Center for Teacher Quality, also operating as, Center on Great Teachers and Leaders

Center on Great Teachers & Leaders,

I am conducting research for my dissertation that focuses on Job-Embedded Professional Development.
I would like to use the definitions for the formats of professional development that are outlined in the April, 2010 Issue Brief, "Job-Embedded Professional Development: What It Is, Who Is Responsible, and How to Get It Done Well."
May I have your permission to cite this work and include the exact wording of the definitions for each format in the literature review for my dissertation?

Thank you,
Lynn Fuller
Graduate Student - University of Nebraska, Lincoln

Hello Lynn Fuller,

You have permission to use our definitions for professional development. We only ask that you cite and give credit to the Center on Great Teachers and Leaders. Please let us know if you have any questions.

Best,

Jessica Giffin
Research Associate
202-403-6225
jgiffin@air.org

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Washington, DC 20007-3835
P: 202-403-5000 | TTY: 877-334-3499
F: 630-649-6700
 www.air.org | **www.gtlcenter.org**

Appendix H

Permission from Cassandra Erkens, Solution-Tree Consultant

PERMISSIONS

From: Lynn Fuller
Reply-To: Lynn Fuller
Date: Monday, February 8, 2016 at 3:28 PM
To: Cassandra Erkens
Subject: Lynn Fuller - My Dissertation

Cassie,

The draft of my dissertation is going through the final editing phase. My adviser asked me to reach out to you one more time to make sure that you are aware that your name comes up in the paper in a prominent way. I'm including the link to the paper in google docs. If you would like to search it for your name, you should see all of the times that you are mentioned.

(link omitted)

If you see anything that doesn't look right, please let me know.

Thanks!
Lynn

On Feb 8, 2016, at 9:30 PM, Cassandra Erkens wrote:

Lynn,

I am honored to be mentioned. The statements are nothing but flattering. Thanks for checking in though.

This is AMAZING! I didn't read it all, but I'm tickled with your work, as always!

Congratulations again!

Cassie

On January 25, 2016, at 7:45 PM, Lynn Fuller wrote:

Hi Cassie!
Congratulations on the new book! I can't wait to read it.

I'm writing my dissertation. Hopefully, I can graduate in May!

My research was very interesting. I was able to interview five of the new teachers that we worked with in the final year of the school improvement grant at *(Case Study School).* The study focuses on their assimilation into the improvement initiative and how they were able to support and sustain the improvement in achievement without having been involved from the beginning. The teachers mentioned your name a lot. They loved the on-site support that you provided.

Here's my question... May I have your permission to include your name in the study? *(personal text omitted)*

Take care!
Lynn

On January 25, 2016 at 8:00 PM, Cassandra Erkens wrote:

Wow! I was just thinking about you today and then your email popped up!

(personal text omitted)

I would be honored to be included in your study. I am surprised that they remember me!

(personal text omitted)

Bibliography:
Erkens, Cassandra. "Customized Onsite Coaching." 20??. Presentation.

Miss seeing you…..best wishes on completing this monumental task.

Cassie

Appendix I

20 – Minute High Impact Survey

COACHING TOOLS

20-minute high-impact survey

COMMUNITY BUILDING

Time on task

MINUTES	STUDENTS	ON TASK	% ON TASK
:10			
:20			

Ratio of Interactions

REINFORCING	CORRECTING

Expectations
CLEARLY POSTED OR STATED
◯ YES   ◯ NO

Respect
SHOWN TOWARD TEACHER
AND OTHER STUDENTS
◯ YES   ◯ NO

INSTRUCTION

Check which of the following teaching practices were present and record the number of minutes for each:

CHECK	PRACTICE/ACTIVITY	MINUTES	CHECK	PRACTICE/ACTIVITY	MINUTES
	Beginning routine			Transition time	
	Stories			Quizzes	
	Thinking prompts				
	Cooperative learning				
	Experiential learning				
	Labs				
	Seat work				
	Direct instruction				

Kinds of questions

OPEN	CLOSED

Levels of questions

KNOWEDGE	SKILL	BIG IDEA

CONTENT PLAN

	YES	NO
Teacher explains what will be learned/taught today		
Teacher explains why the day's learning is important		
Teacher explains what students need to do		
Teacher explains how lesson fits into a larger unit plan		
There is evidence teacher has a plan for the unit		

ASSESSMENT FOR LEARNING

	YES	NO
Teacher uses informal assessment at least twice		
All students respond to informal assessments		

20-Minute High-Impact Survey (Instructional Coaching Group, 2011).
http://www.corwin.com/highimpactinstruction/chapters/20-Minute_High-Impact_Survey.pdf