THE UTILIZATION OF INSTRUCTIONAL COACHES ON THE IMPACT OF STUDENT

ACHIEVEMENT AND TEACHER INSTRUCTIONAL PRACTICES IN READING AND

MATH IN GRADES THREE THROUGH EIGHT

by

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ABSTRACT

Teachers' utilization of instructional coaches and their reported instructional practices can help school districts and schools more effectively utilize instructional coaches in schools to impact student achievement and teacher practices that impact instructional and student achievement. Instructional coaches can assist teachers in their continual learning by offering embedded professional development in areas of need and follow up on teacher implementation of professional learning by observing and co-teaching with educators. Examining student state achievement test scores in reading and math in schools that implemented instructional coaches can show if there has been an impact in math and reading instruction and if an impact has been sustained during multiple years of implementation.

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CHAPTER I

INTRODUCTION

Background of the Problem

School districts face increased pressure each year to increase student

achievement. Beginning with the publication of *A Nation at Risk* (1983) to the Every

Student Succeeds Act (2015), public schools remain challenged to increase student

achievement and close educational gaps in student subgroups. Today's administrators are

tasked with managing a school building and being an instructional leader. Past solutions

for improving student achievement have been focused on professional development and

teacher evaluation models. Professional development, while intended to be an

opportunity for professional growth, often is designed as one day sessions and is often

"disconnected from deep curriculum and learning, fragmented, and non-cumulative"

(Ball & Cohen, 1999, pp. 3-4). Features included in professional development that have

been identified as areas of deficit are the delivery format and the lack of follow through

to ensure teachers implement learned strategies into classroom practices in order to

increase students' achievement as well as teachers' content knowledge (Knight, 2005).

Teacher evaluation models do not yield higher student achievement scores as desired

after states revamped evaluation models for teachers (Dynarski, 2016). With the growing

high stakes accountability and the desire to deliver quality education, school districts

continue to implement instructional coaches as a means to increase students' achievement

scores. Instructional coaches**,** tasked with increasing teachers' knowledge of best

practices, target the goal to increase students' achievement scores (Knight, 2005).

Instructional Coaching

Instructional coaching**,** developed in the early 1980s, responded to school districts' efforts to meet the on-going demand for support for teachers who "needed to learn how to meet the mandated, more stringent standards for student learning" (Neumerski, 2012, p. 322). With the inception of instructional coaches, the professional development model shifted and transformed. Schools began to hire instructional coaches to support teachers in their classrooms during the school year by creating collaborative cultures wherein teachers had opportunities to grow through requesting on-demand professional development opportunities, participating in co-teaching with content experts, engaging in reflective feedback conversations, and committing to strong collaborative relationships (Cohen & Ball, 1999). Knight (2007) describes collaboration as a necessary component for instructional coaching. In order for reflection to occur on teacher practices, it is essential conversations occur. Collaborative teams, engaged in creating norms in which they operate**,** begin meaningful conversations about student achievement and instructional effectiveness. When this culture exists, instructional coaching becomes impactful.

Sparks (2008) describes non-collaborative teams as not prepared, not focused, and not positive. Sparks further discusses when collaborative teams engage in creating norms, they structure a work environment that is student focused; otherwise it is difficult to resolve issues (2008). Successful teams focus, define roles and responsibilities, structure and set processes, and evidence positive behaviors and relationships (Sparks, 2008). With the creation and implementation of norms, members of collaborative teams help teachers remain focused and engaged and then take risks. Norms are not created as

"rules"; however, they are designed "to ensure that teams develop shared knowledge of how collaboratively developed team norms are an effective tool for enhanced team effectiveness" (Eaker & Keating, 2012, p. 113). The processes of collaborating involve teams deciding norms; these decisions drive teachers' work and provide a chance to negotiate and define particular practices for the ongoing collaboration (DuFour, DuFour, Eaker, & Many, 2006). These norms enable collaborative teams to create the desired work environment. Risks for teachers can be intimidating because a weakness could be exposed. This is when instructional coaching can be impactful. Instructional coaches are seen as proactively becoming partners in school communities and not perceived as evaluators (Knight, 2007). Transparent communication establishes effective partnerships when teachers become aware of vulnerability in their instruction requiring revision. The dialogue in a professional learning community meeting can be the beginning point of a collaboration between a teacher and an instructional coach. Effective communication exists between an instructional coach and a teacher; in this way, the meaning of the message is not distorted because, perceived as a partner, it is more likely the teacher receives the meaning as non-threatening (Knight, 2007). In order for instructional coaches to motivate a positive impact on improving teachers' instructional practices, a trusting relationship is established. As partners, instructional coaches work with teachers and leadership teams to improve instructional practices with the aim to improve student achievement (DuFour et al., 2006).

As instructional coaching increases in practice, it is critical for administrators to identify coaches who exemplify effective teaching as well (Knight, 2005). Effective instructional coaches, as well as effective teachers, understand proven classroom

strategies and work side-by-side with teachers and administrators without evaluation. Knight, (2005, 2007 states that instructional coaches have to truly believe in teachers while working deeply with them, side by side, to improve their teaching and affect student achievement. Research has shown that coaching increases teachers' willingness to implement new teaching strategies and practices (Showers & Joyce, 1996). As teachers improve their knowledge and instructional practices, the desired effect is to increase student achievement.

Educational Reforms Targeting Student Achievement

A Nation at Risk. In April of 1983, the National Commission on Excellence in Education released a report detailing the mediocrity of American schools. This report, *A Nation at Risk*, provided data revealing the "inadequate quality of American education" (Park, 2004**,** para. 1). This report listed seven recommendations for improving American public schools; however, the report failed to encompass K-12 grades and focused mainly on Grades 9-12 learning and the focus was academic-standards, not effective teaching practices (Park, 2004). The recommendations also mentioned reforms such as updated textbooks and tools for learning; however, the report does not describe how school districts will fund the recommendations, nor how to make all districts equitable with respect to resources.

Goals 2000. With the passage of Goals 2000, America's next large-scale educational reform movement, the federal government strengthened their educational role across the nation. Now, for the first time in American public-school education, the federal government intervened significantly with respect to content taught, how it is taught (instruction), and how it is evaluated (assessment) (Usdan, 1994). Local education

officials' thorough understanding of federal government objectives proved a pitfall for Goals 2000. Interpreted differently at federal, state, and local levels, led to disagreements regarding implementation. This national reform movement did include an emphasis in all student learning and, for the first time in educational reform, required states to submit improvement plans to the federal government. These plans outlined how state and local educational agencies targeted the needs of all students as well as describing measures used to define growth and success (Usdan, 1994). Goals 2000 became more comprehensive in reporting and creating goals for increased public school success than the previous framework in *A Nation at Risk*. Specifically, Goals 2000 outlined a more comprehensive plan of correcting issues and did not merely identify learning shortfalls. Furthermore, Goals 2000 encompassed K-12 education, included all student learners, identified parent school partnerships, incorporated school partnerships, and finally, prescribed measurable goals by which school districts, states, and the federal government may measure success.

No Child Left Behind. No Child Left Behind brought effective instructional practices to the attention of school leaders. Now more than ever, an increased focus on how educators instruct occurred. School systems and the public read annual yearly progress reports monitoring students' achievement in all subgroups. Consequently, accountability models evolved around annual yearly progress (AYP) reports (Knight, 2007). Important to the current discussion, the report also described an increased focus to include professional development. Professional development is described as sustained and content focused, as well as improving teachers' content knowledge, increasing

teachers' understanding of instructional strategies, and including structured evaluative procedures (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007).

Race to the Top. As part of the American Recovery and Reinvestment Act, President Barack Obama's administration worked on an educational reform effort that awarded states who applied to receive competitive funding from a grant based on certain stipulations. States revamped educational policies in areas including teacher evaluation, adopting common core standards, improving state data systems, and creating aggressive plans for school turn around (Klein, 2016). States that applied for the competitive grant funding shared in the $6.3 billion provided for state reform initiatives. In particular, states adopting common core standards also implemented state assessments that matched the common core; the assessment results match instruction. Toward this goal, two consortiums were created to provide assessments that matched common core standards: Smarter Balanced and Partnership for the Assessment of Readiness for College and Career (PARCC) (Polikoff, 2016).

Another result of the reform act linked student test results to teacher evaluation scores (Klein, 2016). With respect to kindergarten, first, and second grades, Common Core evaluation became intensely criticized because of inappropriate standards (Strauss, 2014). For example, a kindergarten standard refers to reading for a purpose. There is no research evidence to support 5-year-olds learning how to read and furthermore, no research evidence indicating reading at 5 years of age allows students to progress at higher levels in later years of schooling (Almon, 2013).

Every Student Succeeds Act. In December of 2015, the Every Student Succeeds Act (ESSA) replaced No Child Left Behind as the new educational reform. Several

provisions in the new reform act modified what NCLB had mandated and shifted more control to states to create their plans and submit to the Department of Education. One focus that did not shift was increasing student achievement. ESSA allows states to create plans for student success. Standardized testing is still mandated; however, states maintain the discretion to remove some students' results from teacher evaluation models (Klein, 2016). Now, states control the choice of standards other than Common Core, set consequences for low performing schools, identify how sub-groups perform, name the bottom five percent of schools in the state every three years, and create a plan for increasing student achievement in those schools (Klein, 2016). This focus on ESSA increases student achievement scores for all students as well as monitors and reports data in transparent ways for communities.

Professional Development and Student Achievement

In the past, the traditional approach for professional development is for teachers to enroll in sessions, attend, implement the new practices, and supposedly increase student learning. Yet, data show this traditional professional development model fails to yield higher student achievement scores (Ball & Cohen, 1999). A particular problem with this traditional model is teachers remain restricted to participating only in district sessions and learning remains passive (Ball & Cohen, 1999). Additionally, school districts often fail to equip teachers with the necessary tools and equipment required for effective implementation (Guskey, 2014). Another difficulty is teachers choosing areas in which they truly require revised learning. The traditional professional development model shows a 10% implementation rate (Bush, 1984). With such a low level of implementation of practices learned, the question becomes, **"**why do school systems

continue this ineffective method of professional development?" This traditional "sit and receive" model is no longer an effective practice if the goal is to impact student achievement. With the immense pressure for schools to perform at high levels, school leaders seek to change professional development delivery and support new initiatives in order for teachers to not feel overwhelmed by changes that are poorly planned and not well supported (Knight, 2007). In order to positively affect student achievement, it is critical that professional development programs include job-embedded follow up for a sustained period of time, a specific focus, and active learning by the teachers (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009). Incorporating instructional coaches in schools identifies relevant content, provides support for implementation, and ensures immediate feedback.

Another disparity with the traditional professional development model is frequently, there is no clear and targeted purpose. Those in charge of developing the professional development content often negate the essential element; the process of the session is completed with no focus on the end results (Guskey, 2014). Planners often prepare the necessary scope of the work and provide materials for the session but never touch on or evaluate the desired session outcomes. It is critical professional development focus on student outcomes; designing professional development learning based on student success goals drives professional development decisions (Guskey, 2014).

Another issue with traditional professional development is the lack of follow up after teachers complete sessions. Follow up is rarely a goal of school districts. The problem with this lack of follow-up is there is no school district accountability to ensure student achievement is increasing as a consequence of the professional development

learning. Countries such as Singapore mandated embedded professional development in all schools (Darling-Hammond et al., 2009). Schools identify a teacher who is a trained school staff developer and lead-teacher who designs and delivers professional development in their respective schools (Darling-Hammond et al., 2009). This on-demand and focused professional development is designed based on teachers' requests in particular schools; this approach supports teacher effectiveness which, in turn, influences student achievement.

It is important to acknowledge that not only administrators become instructional leaders. It is the administrator's responsibility to create a culture of trust and collaboration in schools. When this culture of trust and respect is created, embedded follow up of professional development practices further extends educators' experiences.

As a component in an administrator's evaluation, the post conference allows administrators to offer instructional advice and suggest professional development to strengthen teachers' practices. These administrative suggestions may, in reality, create a negative perception of professional development, as teachers perceive it as punishment for performing negatively in areas of performance (Tschannen-Moran & Tschannon-Moran, 2011). In contrast, using the instructional coach model, evaluation and professional development remain apart (Showers & Joyce, 1996). As administrators work to improve classroom instruction and implement instructional coaches to facilitate teachers' understanding of effective instructional practices, the evaluation and coaching cycles for teachers remain as two different processes.

Teacher Evaluation Models and Student Achievement

The desire to increase student achievement prompted states to reevaluate and rewrite teacher evaluation models (Hill & Grossman, 2013). Policy makers encroached upon teacher evaluation models; so, the results do not become a framework for improvement, rather, the feedback becomes a tool used for termination (Hill & Grossman, 2013). The failures of the evaluation models remain embedded into current state and district practices, thus only adding to and unchanging and ineffective process. Administrators who observe teachers may not be knowledgeable in all content areas as well as observing only a few times each evaluation cycle (Hill & Grossman, 2013). How effective is an evaluation model that requires an administrator to observe three hours of the approximately 1,260 hours an educator teaches each school year? Many current evaluation models do not provide for a complete and comprehensive representation of a teacher's effectiveness.

In 2009, 15,000 teachers in 12 school districts in the U.S. completed a survey regarding feedback given from teacher evaluations. Three-quarters of the teachers reported not receiving any areas of identified improvement on their evaluation results; almost half of the teachers who did report their evaluation identified an area of improvement received no subsequent support for improving in the deficit area (Weisberg, Sexton, Mulhern, & Keeling, 2009).

Another evaluation model that researchers describe as ineffective is value added (VAM). The VAM model is based on the belief that, regardless of anything else, the gains students make on standardized tests relate to a teachers' effectiveness. This measure is based on a given assessment and that no other influences affect the student's

performance (Darling-Hammond, Amrein-Beardsley, Haertel, & Rothstein, 2012). VAM models do not consider curriculum, adequate instructional time and materials, home life, individual student needs, prior teachers and schools, and specific tests used to generate the score. (Darling-Hammond et al., 2012).

In the past decade, many states revamped the teacher evaluation systems with the purpose to create a more rigorous evaluation model with the intent to increase student achievement (Dynarski, 2016). However, when National Assessment of Educational Progress (NAEP) student scores from 10 years ago compare with current student scores, the test results do not match the effectiveness level scores teachers receive which generate from the revamped evaluation models. For example, in 2009, teacher effectiveness scores, based on state teacher evaluation models, included: Florida 98% percent of teachers identified effective, New York 95% of teachers identified effective, and Michigan 98% of teachers identified effective (Dynarski, 2016). In 2016, the Department of Education websites for Florida, New York, and Michigan, reported the following percentages for teachers identified as effective based on the evaluation models: Florida 97%, New York 97%, and Michigan 98%: however, the proficiency scores for the three states include: Florida, Grades 3-8, 52.6% proficient; New York, Grades 3-8, 38% proficient; and Michigan, Grades 3-8, 45% proficient (Dynarski, 2016). Evaluation models include checklists for what is observed in the classroom; however, most models fail to examine students' learning (Dynarski, 2016). This approach is a stark contrast to teacher evaluation models used in China. Chinese teachers engage in teaching competitions where they conduct a lesson in front of judges who score using an observation protocol (Darling-Hammond et al., 2017). Judges look for and score lessons

based on high levels of student thinking, student exploration, cooperation, presentation, and communication (Darling-Hammond et al., 2017).

Another difference in teacher evaluation models in the United States as compared to other countries is peer feedback. Only 27% of teachers in the United States reported receiving feedback regarding their instruction from their colleagues. Feedback from peers is much higher in other countries. Finland, Singapore, and Australia reported peer feedback to be between 43% and 51% (Darling-Hammond et al., 2017). Comparing U.S. student achievement levels on PISA to the Finland, Singapore reveals a significant gap. The PISA scores for 2015 show that the United States lags behind Finland in math, reading, and science. See Appendix 1. Due to federally mandated educational reform acts and state accountability reforms, school districts have utilized instructional coaches as a tool to help teachers improve instructional practices to positively impact student achievement. This study will examine the effects of the utilization of instructional coaches.

Purpose of Study

The purpose of the current study is to determine if teacher instructional practices and utilization of instructional coaches support districts and schools to increase student achievement scores. While in the past, professional development and teacher evaluation models intended to increase student achievement, the field is currently studying the impact of embedded follow up with the utilization of instructional coaches. The research remains limited on what constitutes, "high quality coaching professional development" (Cobb & Jackson, 2011, p. 9).

Instructional coaches who help classroom teachers engage them in high-quality, embedded feedback as well as guide in reflective feedback; so, teachers begin to utilize best practices in their classrooms (Cobb & Jackson, 2011). Research shows that professional learning from sessions is more likely to be sustained overtime when instructional coaches and instructional leaders work with teachers to ensure that investigative pedagogies and enactment pedagogies become active in teachers' practices to ensure content knowledge growth and increased student achievement (Cobb & Jackson, 2011).

Significance of the Study

School districts and individual schools continue to struggle with accountability and the demand for increasing student achievement for all students. In order to support professional development and provide embedded follow up with teachers to ensure effective implementation of school and district initiatives, the instructional coach model shows promise. With professional coaches as support, teachers use effective and research-based instructional practices to improve delivery. The utilization of the instructional coaches also allows for the professional development and evaluation processes to remain separate. This alleviates the negative connotation of professional development highlighted in the teacher evaluation's post observation. This current study examines the effects of teachers' instructional practices and utilization of instructional coaches on student achievement scores. This study contributes to the literature in describing how teachers' utilization of instructional coaches can assist schools in creating effective instructional coaching programs with the intent to improve student achievement.

Research Questions

1. Does the frequency of interactions with an instructional coach increase the instructional practices in reading in third through eighth grades?

2. Does the frequency of interactions with an instructional coach increase instructional practices in math in third through eighth grades?

3. Does instructional coaching impact student TNReady achievement in math in third through eighth grades?

4. Does instructional coaching impact student TNReady achievement in reading in third through eighth grades?

Hypotheses

The following null hypotheses derived from the research questions:

1. There is no statistical significance in the frequency of interactions with an instructional coach and the increase of instructional practices in math in third through eighth grade.

2. There is no statistical significance in the frequency of interactions with an instructional coach and the increase of instructional practices in reading in third through eighth grade.

Theoretical Framework

Situated learning theory connects how learning occurs in school communities with effective implementations of instructional coaches (Smith, 2003/2009). Knight describes instructional coaches as "a partnership," with teachers, "built around the core principles of equality, choice, voice, dialogue, reflection, praxis, and reciprocity"

(Knight, 2007, p. 24). The foundational beliefs framing instructional coaching become what Lave and Wenger describe as, "communities of practice" (as cited in Smith, 2003/2009, para. 5).

Lave and Wenger believe learning is social and occurs in daily life. The use of embedded professional development by instructional coaches illustrates the point of situated learning theory. Relationships with one another that nurture within schools when the community works together as a whole for things that matter have a positive culture (as cited in Smith, 2003/2009). Communities of practice begin when the school community engages together with the instructional coach facilitating their learning. This journey of learning together builds trust and binds the community (Smith, 2003/2009; Tschannen-Moran &Tschannen-Moran, 2011). Lave and Wenger believe learning is based on relationships between people and the relationships help create meaningful exchanges (as cited in Smith, 2003/2009). Situated learning theory is rooted in the belief that learning is both personal and social. For educators, learning is social, taking place in their classroom communities and school communities (Borko, 2004). Guskey (1986) explains the need for a new model for professional development in education. He believes a new pathway reflecting on instructional practices would support teachers' understanding of their students' ongoing learning. In order to promote student achievement, feedback on instruction would also support teachers' understanding. Furthermore, change can be challenging for teachers, and to ensure teachers receive regular feedback on student learning, provide continual support and follow up after initial trainings (Guskey, 1986). Situated learning, making learning a community partnership

with the direction of an instructional coach, allows these necessary changes to occur in a safe and supportive environment.

Communities of practice allow teacher learning to continue daily; learning is an ongoing process together with colleagues.   When changes occur in teacher practices, teachers grow together as a community. The changes are trustful, community-based, and relevant, and positively impact school's effectiveness (Smith, 2003/2009).

Assumptions

Researcher assumptions:

1. The instructional coaches were highly effective math teachers.

2. The instructional coaches were highly effective reading teachers.

3. The instructional coaches demonstrated no connection to teacher evaluations.

4. The instructional coaches all received the same training from the school district.

5. The coaches were highly engaged with their faculty.

6. Teachers would respond honestly on the survey.

Limitations

Multiple factors affected the validity of the current study:

The study was limited to six schools.

1. None of the instructional coaches' formal evaluations were examined to reveal their own classroom effectiveness.

2. Administrators' post observation conversations were not revealed, so the researcher does not know if the administrator required work with instructional coaches.

3. The professional training the instructional coaches received is unknown.

4. Some teachers may not have utilized an instructional coach to help their instruction.

5. Some students in the grade cohorts may have left the school system.

6. Instructional coaches may not have been in the schools each year that data were analyzed.

7. Faculty may have been new at schools and a relationship with the coach may not have been established.

Delimitations

Delimitations of the study include:

The population was limited to six schools.

1. This study only identified schools with instructional coaches.

2. This study was limited to schools who use their instructional coaches for professional development.

3. This study was limited to students who completed TNReady math and reading assessments for the 2009-2010, 2010-2011, 2011-2012, and 2016-2017 school years.

Definition of Terms

Annual Yearly Progress:

> Is a measurement defined by the United States federal No Child Left Behind Act
> that allows the U.S. Department of Education to determine how every public
> school and school district in the country is performing academically according to
> results on standardized tests.

Common Core Standards:

> Is an educational initiative from 2010 that details what K–12 students throughout
> the United States should know in English language arts and mathematics at the
> conclusion of each school grade.

Council of Chief School Officers (CCSSO):

> Is a non-partisan, non-profit organization of public officials who head
> departments of elementary and secondary education in the U.S. states, the District
> of Columbia, the Department of Defense Education Activity, and five U.S.
> territories.

Embedded professional development:

> Is 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

Every Student Succeeds Act (ESSA):

> Was enacted in December 2015 and reauthorizes the Elementary and Secondary
> Education Act.

Evaluation:

Is the act in which a teacher's effectiveness is measured.

Goals 2000:

Is a framework established to identify world-class academic standards, to measure student progress, and to provide the support that students may need to help meet the standards.

Instructional coaches:

Is someone whose chief professional responsibility is to bring evidence-based practices into classrooms by working with teachers and other school leaders.

Math Practices:

Are the following as adopted for high quality, research-based instruction and defined by the National Council of Teachers of Mathematics (NCTM): Establish mathematical goals to focus learning, Implement tasks that promote reasoning and problem solving, Use and connect mathematical representations, Facilitate meaningful mathematical discourse, Pose purposeful questions, Build procedural fluency from conceptual understanding, Support productive struggle in learning mathematics, Elicit and use evidence of student thinking (NCTM, 2014).

No Child Left Behind Educational Act of 2001(NCLB):

Is a U.S. Act of Congress that reauthorized the Elementary and Secondary Education Act; it included Title I provisions applying to disadvantaged students. The bill passed in the Congress with bipartisan support.

Professional development:

> Is a reference to a wide variety of specialized training, formal education, or advanced professional learning intended to help administrators, teachers, and other educators improve their professional knowledge, competence, skill, and effectiveness.

Professional Learning Communities:

> Are groups of educators that meet regularly, share expertise, and work collaboratively to improve teaching skills and the academic performance of students.

Proficiency Levels:

> Are the state assessment system's four levels of proficiency. Prior to the 2016 school year, the proficiency bands identified advanced, proficient, basic, and below basic. After the state of Tennessee revamped the assessment system, the proficiency bands renamed to describe mastered, on-track, approaching, and below.

Race to the Top:

> Is a $6.3 billion United States Department of Education competitive grant created to spur and reward innovation and reforms in state and local district K-12 education.

Reading Practices:

> Are instructional practices as defined by the Florida Center for Reading Research that include the following: A reading program that is used to help guide both

initial and differentiated instruction in the regular classroom. It supports

instruction in the broad range of reading skills (phonemic awareness, phonics,

fluency, vocabulary, and comprehension) required to become a skilled reader

(FCRR, n.d.)

Tennessee Comprehensive Assessment Program (TCAP):

Is the State of Tennessee's assessment program. All state assessments reside

within this program.

Tennessee Educator Acceleration Model (TEAM):

Is Tennessee's state teacher evaluation model.

TNReady:

Is the State of Tennessee's annual achievement test for Grades 3-8 public school

students.

Value Added Model:

Is the measure of student growth year over year, regardless of whether the student

is proficient on the state assessment.

Summary

Not only do administrators face the current high demand of increased

accountability, but they also must serve as building managers and models for leadership

in instruction. Instructional coaches enable administrators to separate evaluations and

professional development/growth from the evaluation process. By creating an

environment of learning opportunities for teachers in a professional learning community,

instructional coaches allow teachers to assume the courage to collaborate without the fear

of failure. Observation scores do not represent their instruction (Tschannen-Moran &

Tschannen-Moran, 2011).

Finding instructional coaches who exhibit highly effective, skilled, and

empathetic qualities and who invest in establishing relationships with teachers in the

building will help build a culture of continuous learning without fear of failure (Knight,

2005). Teachers' vulnerability and fear of failure often prohibits their new learning. This

fear of failing, coupled with the professional development model of providing no follow

up to check if teachers effectively implement new learning, inhibit teachers changing

their instructional practices, even if results of student achievement stay low or unchanged

(Knight, 2005). Using instructional coaches in schools is a way to increase student

achievement.

CHAPTER II

LITERATURE REVIEW

Instructional Leaders' Roles to Impact Student Achievement

Instructional coaches are hired in schools to help teachers with professional development and model effective teaching practices. Instructional leaders in schools do not merely include administrators. Coaches support administrators' impact on schools' professional growth and innovative pedagogy. The school principal has to provide leadership capacity to build from within. Administrators have to foster a culture of support and learning in a school in order for teachers to feel compelled to grow professionally (Madsen, Schroeder, & Irby, 2014). Administrators must be effective instructional leaders for coaching programs to be effective in schools, administrators provide instructional modeling (Fullan & Knight, 2011). The Kansas Coaching Project at the University of Kansas Center for Research on Learning describes how if administrators do not fully understand how to focus and target the relevant school improvements, in order to increase student achievement, the role of instructional coach is ineffective. In order to be effective, coaches become responsible for the correct work, target clear goals, and receive appropriate training (Fullan & Knight, 2011).

Administrators accept responsibility of creating a school culture of trust and collaboration. When created, this culture of trust ensures embedded follow through of professional development practices to deepen educators' experiences. When administrators work to create these goals and vision of high expectations of professional growth with support from instructional leaders, teacher effectiveness increases and that impacts student learning (Supovitz, Sirinides, & May, 2009). In order for improvement

to occur at schools, principals frame the movement, set the expectations for all stakeholders, and monitor progress (Nidus & Sadder, 2011).

Coaching Models

Several models for coaching employees to high levels of production and success exist. Different models emphasize a range of outcomes between the coach and the coached person. Executive coaching is a practice of improvement that business utilizes to improve areas of production and working relationships (Knight, 2007). Kilburg (1996) defines executive coaching as, "a helping relationship formed between a client who has managerial authority…in an organization and a consultant who uses a wide variety of behavioral techniques and methods to help clients achieve a mutually identified set of goals." (p. 142). This type of coaching has allowed businesses to work on performance, goal setting, project management, and interpersonal skills (Thach, 2002). Thach (2002) concludes that executive coaching, when tied to an organization goal, and used with effective feedback, and involving top leadership, leads to leaders being developed in organizations. In school settings, there are three styles of instructional coaching that are implemented: relationship-driven, teacher-centered, and student-centered. Relationship-driven coaching emphasizes providing support for teachers and removes the focus to use data to make changes in instruction (Sweeney & Harris, 2017). Teacher-centered coaching highlights identifying teachers' strengths and weaknesses and, in turn, follows through to their accountability to make changes. This coaching model is used to guarantee teachers follow through program implementation with fidelity in schools (Sweeney & Harris, 2017). Student-centered coaching is the most focused model of instructional coaching that is centered on student achievement. In student-centered

coaching, teachers and instructional coaches become tasked with analyzing student work and data to make instructional decisions and changes. All levels of assessments undergo analyses and these findings frame classroom changes. This style of instructional coaching is perceived as a partnership approach to coaching with the instructional coach shifting the focus of the work from what teachers are doing to what students are learning (Sweeney & Harris, 2017). This shift allows the focus to center on student achievement.

Goals of Instructional Coaches

Past instructional coaching practices have focused on whether or not teachers benefited from the implementation; in particular, the benefits refer to areas of professional knowledge and feeling supported in the classroom, but did not consider the impact on student achievement (Guskey & Huberman, 1995). A goal of instructional coaching is to increase student achievement. Recently, in order to help teachers' increase their content knowledge, integrate more research-based strategies in instruction, and increase student achievement, school districts and individual schools have turned to instructional coaches. The Kansas University Center for Research on Learning describes the implementation of instructional coaches' impact on student achievement (Knight, 2005). However, if administrators do not fully understand what superior coaching entails, the instructional coaching model may result in no positive impact on student achievement (Knight, 2005). Therefore, it is critical for administrators to possess a clear understanding of what effective instructional coaching involves.

School administrators have to be able to maximize effectiveness and work beside school instructional coaches and assume a partnership role; this partnership increases teacher capacity and student achievement. When instructional leaders focus on

improving teacher practice, teachers can become more effective and increase student achievement. Shidler (2008) found a positive correlation between the number of teacher interaction with an instructional coach and improved student achievement in alphabet letter identification. When implementing instructional coaching programs with fidelity, following best practices in instructional coaching daily, student achievement scores increase.

Another goal of instructional coaching is to create the culture necessary for this level of collaboration to be successful (Knight, 2011). Instructional coaches remain charged with creating relationships with school administrators and teachers. This relationship is vital for the success of the program. An instructional coach can represent research-based strategies to increase student achievement; yet, without relationship among the instructional coach, administrator, and teachers, the coaching will not impact student achievement (Knight, 2011). Schools reflecting professional learning communities build time necessary for this collaboration to occur. Tschannen-Moran and Tschannen-Moran (2011) discuss successful coaching requires an acceptance of teacher-centered, no-fault, and strengths-based assessments. Instructional coaches build partnerships with educators, listen to teachers, ask questions, explain effective practices, and provide feedback (Knight, 2011). In order for instructional coaches to impact student achievement, they work with teachers to support their implementing instructional practices grounded in research (Sweeney, 2011). When the Obama administration designed Race to the Top, one of the requirements of the competitive grant mandated the creation of student data systems to track student performance across over time (Klein, 2016). These data systems provide schools and districts the ability to disaggregate

student data into sub-groups. These data systems allow instructional coaches to

collaborate with teachers and create targeted instructional plans to support all learners.

This ability to disaggregate data allows schools to identify groups of students who

demonstrate under-performing scores. Even though these data systems originally resided

within Race to the Top funding, NAEP data show student achievement failing to increase

(Dynarski, 2016). With school accountability at an all-time high, schools and districts

continue to focus on student achievement and increasing proficiency rates of all students

(Jacob, 2017).

Benefits of Instructional Coaching Programs

As accountability increases for school districts and schools and data systems

allow schools to monitor and track students' data, schools utilize instructional coaches to

build teacher capacities in areas such as: instruction, content knowledge, and data

analysis (Foltos, 2014). Master teachers become coaches and support teachers with on

demand professional development, feedback, and instructional support (Marsh,

McCombs, & Martorell, 2010).

A benefit instructional coaches provide to educators is teaching them about data

and using data to improve instruction (Marsh et al., 2010). Educational reform

movements continue increasing the focus on student achievement, so it becomes

necessary teachers to know how to analyze data and to implement changes to increase

student achievement. Kohler, McCullough, Shearer, & Good (1997) found teachers more

likely to implement changes and sustain those changes when teachers engaged in

coaching sessions. Foltos (2014) describes the relationships necessary to foster this

collaborate on as supportive and guided in self-reflection. To support this relationship,

coaches become charged with creating norms for collaboration in order for all teachers to know roles and responsibilities.   Teachers perceive instructional coaches as facilitators (Foltos, 2014).

Another benefit of instructional coaches is they allow for the creation of "communities of teachers," who inquire into teaching, "with the assistance of support personnel rather than teachers who work as isolated individuals and are judged by supervisors and administrators who visit and observe" (Showers, 1985, p. 48).

Lockwood, McCombs, and Marsh (2010) analyze the impact of instructional coaches on middle school achievement scores. The population included 987 schools in Florida with Grades 6-8. Data targeted state achievement scores in math and reading from the 1998 through 2005 school year. Data only collected from schools with a state funded instructional coach. Findings described how schools with instructional coaches demonstrated statistically significant annual gains on state achievement tests in reading, but not for math, except for the lowest performing cohort at the beginning of the study. Their first scores compared to the last scores analyzed -indicated statistical significance in annual growth on the state achievement test in math.

A three-year study (Campbell & Malkus, 2013) with a population including 36 schools in groups of three (One school - instructional coach all three years, one school - instructional coach for one year, and one school - no instructional coach) reported math state achievement test scores for the three-year study and the schools that had an instructional coach all three years evidenced statistically significant higher math test scores than the other two schools. Schools that had an instructional coach for one year indicated no statistically significant math test scores. Campbell and Malkus believed the

higher test scores in the schools that had an instructional coach for three years contributed to the professional knowledge of the instructional coaches, time they spent with teachers through the course of three years, and the non-evaluative collaboration established at the schools (2013).

Shidler (2008) investigated how many hours instructional coaches visited in classrooms as compared with an improvement in instructional practices as well as an increase on student achievement in alphabet letter identification. The population included 360 students in Head Start classes in Central Florida. Each classroom received an instructional coach for the three-year study. Shidler (2008) found a significant correlation in Year 1 of the study surrounding the time instructional coaches spent on, "instructional efficacy and teaching methods when analyzing student outcomes, while Years 2 and 3 showed a decline in letter identification scores as the instructional coaching focus shifted away from student outcomes." (Shildler, 2008 p. 459). Shildler (2008) found that instructional coaches became more effective when focusing on student outcomes through collaborative work.

Instructional Coaching and Student Achievement

Instructional coaching is a tool that school districts and schools are using to help strengthen teachers' instructional practices. School districts are hiring instructional coaches at high rates (Knight, 2006). Knight (2006) suggests that districts that hire instructional coaches aimed at increasing student achievement, have to be willing to wait for implementation to be effective before districts expect to see increased results in student achievement. School districts and schools need to set specific academic goals and tasks they desire for the role of instructional coaching (Knight, 2006). Too often, schools

use instructional coaches for other jobs that arise other than instructional coaching. This hinders or limits any impact instructional coaches can have on student achievement (Knight, 2006 & L'Allier, Elish-Piper & Bean 2010). In order for instructional coaches to impact student achievement, there must be a focus on their work that makes them content specialists (L'Allier et al, 2010). In particular, L'Allier et al, (2010) found that effective literacy coaches needed to possess, "knowledge of literacy processes, acquisition, assessment, and instruction," in order to impact student achievement in reading (page, 545). Because instructional coaches have the responsibility of improving teacher practices and providing professional development, it is critical that instructional coaches have the content background to impact literacy in classrooms (Frost & Bean, 2006).

L'Allier and Elish-Piper (2006) found that when an instructional coach has content training, their coaching in classrooms positively impacted student achievement. Elish-Piper and L'Allier (2007) studied two different school systems, grades kindergarten through third, and examined the impact on student achievement when instructional coaches were utilized in reading instruction. Instructional coaches spent their time coaching teachers on the five components of reading. In this coaching time, it was reported that 10.79% of the time was focusing on comprehension and the other for components of reading received 3% of the coaches' time (Elish-Piper & L-Allier, 2007). Their study found classes that utilized an instructional coach that had formal training in teaching reading, scored higher on reading assessments than classes that did not utilize an instructional coach (Elish-Piper, L'Allier, 2007). In another study, Elish-Piper and L'Allier (2010) examined the effects of coaches in kindergarten and first grade

classrooms. The results indicated in classes where coaches were utilized, there was a positive relationship with student gains and the number of times an instructional coach was in the classroom coaching (Elish-Piper & L'Allier, 2010).

Garcia, Jones, Holland & Mundy (2013) studied the impact of instructional coaching on content areas in two Texas school districts and found mixed results. There was no significant difference between schools that utilized instructional coaches in math than in schools that did not utilize instructional coaches (Garcia et al, 2013). This study, however, did not include any research on specialized training received by instructional coaches nor on any specialized degrees or certifications.

While there has been research to support impacts of instructional coaching on student achievement, there are conflicting results which need to be examined. Hill (2018) found that math coaches helping teachers needed to be trained in the current standards and learn more in the content area to be able to have meaningful conversations with teachers about better math instruction. Examining the focus of the studies and what was tested can help researches to identify impacts of instructional coaches with specialized training, degrees, and certifications versus those without.

Impacts of Professional Development on Student Achievement

Traditional professional development delivery methods tend to be passive experiences for teachers that do not involve much activity from teachers (Shaha & Ellsworth, 2013). The model is lacking many key factors essential to strengthen teachers' professional practices. Guskey (2014) describes, "professional learning for educators has a mixed history at best" (p. 12). Teachers seek opportunities to professionally grow in practices and pedagogy and intend to impact student learning and

school districts need to provide teachers with the most effective professional development (Guskey, 2014; Shala & Ellsworth, 2013).

It is critical professional development focus on results and expected student-outcomes. If professional development occurs for the sake of receiving training hours, teacher effectiveness will be minimal (Brill & McCartney, 2008). Guskey (2002) developed five levels for evaluating the effectiveness of professional development: participants' reactions, participants' learning, organizational support and change, participants' use of new knowledge and skills, and student learning outcomes. Guskey (2002) suggests that traditionally, school districts and schools evaluated professional development based on participants' reactions and not on the true purpose of it, student-learning outcomes. The ultimate goal of professional development is to increase student learning; therefore, in order to be most effective, all professional development is evaluated on student learning progression. When teachers, school districts, and schools evaluate the success of professional development from this lens, it forces educators to examine student work, test scores, and data to identify increases in student learning (Guskey, 2002).

Recent studies show that on demand professional development has a positive impact on teacher effectiveness (Shaha & Ellsworth, 2013). This on demand approach allows instructional leaders to differentiate professional development to meet the individual needs of teachers in a school. This proactive approach allows for teachers to grow professionally while impacting students, instead of waiting for school districts to offer sessions that may or may not be in areas of need.

No Child Left Behind brought effective instructional practices to the attention of school leaders. Now, more than ever, there is an intense focus on how teachers instruct students. School systems and the public closely watch annual yearly progress of students and monitor if students from all subgroups achieved. Accountability models were designed around AYP as schools began their focus on improving instruction within schools (Knight, 2007). Professional development began to generate a focus at schools as it was evaluated at levels that never happened before. Traditional professional development indicates a 10% implementation rate (Bush, 1984). This traditional professional format is no longer considered an effective practice to use to deliver if school leaders wanted to positively affect classroom instruction. With the immense pressure for schools to perform at high levels, school leaders looked to change professional development delivery and intended to support new initiatives in order that teachers did not feel overwhelmed by changes that are poorly planned and woefully supported (Knight, 2007).

Darling-Hammond, Wei, Andree, Richardson & Orphanos (2009) offer that many types of job embedded professional practices can increase teacher effectiveness. Peer observations, videotaping and reflection, and analysis of student work describe some ways embedded professional development can happen in schools. The key to effectiveness of these practices is including reflection and feedback for peers and school instructional leaders. Professional development demonstrates a strong impact in teacher retention. Shaha and Ellsworth (2013) find professional development can lead to increased student achievement. The use of on-line professional development can help provide on demand information when teachers need it. Professional development can be

sought after based on teacher needs. Based on a study of on-line professional development, student achievement was measured against teacher engagement of professional development. Schools that were highly engaged in professional development had higher achievement scores in math and reading, and teachers who engaged in the professional development in a school where participation was high felt, positive and liked their jobs, thus it led to higher teacher retention (Shaha & Ellsworth, 2013).

Professional Learning Communities

Knight (2007) describes collaboration as a necessary component for instructional coaching. In order for reflection to occur on teacher practices, conversations occur. Collaborative teams, who engaged in creating norms in which they operate, begin meaningful conversations about student achievement and instructional effectiveness. When this culture exists, instructional coaching is impactful.

Designing norms as "shared commitment" and not created as rules, is critical (Eaker & Keating, 2012, p. 113). The process of teams to decide upon norms which will drive their work provides teachers with a chance to define what practices will be allowed or not in collaborative teams (DuFour et al., 2006). These norms enable collaborative teams to create the desired work environments. Sparks (2008) describes non-collaborative teams who are not prepared, not focused, and not positive. Sparks further describes that when collaborative teams engage in creating norms, they create a work environment that is student focused and teachers begin to tackle otherwise difficult issues because it is student centered. Successful teams exhibit focused efforts, defined roles,

and assumed responsibilities, structured and established processes, and engaged positive behaviors and relationships (Sparks, 2008).

With the creation and implementation of norms, members of collaborative teams help teachers stay focused and engaged and support their taking risks. Risks for teachers can be intimidating because a weakness could be exposed. This is when instructional coaching can be impactful. Instructional coaches are perceived as partners and not as evaluators in school communities (Knight, 2007).

Communication can help establish partnerships when teachers become aware of a weakness that requires additional support within their instruction. The dialogue in a professional learning community meeting may serve as the beginning point of a collaboration between a teacher and an instructional coach. It is critical effective communication exists between an instructional coach and a teacher; when an instructional coach is perceived as a partner, it is more likely the message will remain clear and not distorted (Knight, 2007). In order for instructional coaches to support positive impact on improving instructional practices of a teacher, a trusting relationship is established. When perceiving instructional coaches as partners, they demonstrate the ability to work with teachers and leadership teams to improve the instructional practices of staff with the intent to improve student achievement (Knight, 2007).

Instructional coaching is utilized by many public-school districts and schools throughout the United States to positively impact teachers' instructional practices and student achievement. When implementing instructional coaches, it is important to place effective teachers in those positions. In this study, the researcher examined the relationship of math and reading instructional practices in Grades 3 through 8 and student

achievement on the state achievement tests and the utilization of instructional coaches in

Grades 3 through 8.

CHAPTER III

METHODOLOGY

Introduction

With on-going accountability reforms, schools and school districts continue to implement different programs to increase student assessment scores. Utilization of instructional coaches is a strategy implemented in schools to improve teachers' instructional practices. This study is designed to examine whether or not instructional coaching improved teachers' instructional practices and additionally, to describe the relationship between instructional coaches and improvements in state assessment scores during the course of implementation and years after in Grades 3 through 8 in math and reading.

Problem

This chapter outlines the methods and procedures used in this research study of teachers' instructional practices and the utilization of instructional coaches on the impact of student achievement in third through eighth grades. This chapter includes a description of the instrument used to collect data on teacher instructional practices and the utilization of instructional coaches on student scores on the state achievement test in Grades 3 through 8 from the participating schools. This non-experimental causal-comparative and correlational study examines the relationship of the utilization of instructional coaches and student achievement on state assessments.

Purpose of the Study

The purpose of this study is to determine the effects of instructional coaching on student achievement test scores as measured by Tennessee Comprehensive Assessment

Program (TCAP). In order to examine these effects, a quantitative study examined instructional coaches activity and state achievement test scores of reading and math.

In order to describe this relationship, a comparative study examined the utilization of instructional coaches as compared to state achievement test scores in reading and math in Grades 3 through 8.   A correlational study also determined the relationship between teachers' instructional practices and student achievement in third through eighth grades on the state achievement test in math and reading.

This chapter outlines the methods and procedures used in this research study of teachers' instructional practices and the utilization of instructional coaches on the impact of student achievement in third through eighth grades. This chapter includes a description of the instrument used to collect data on teacher instructional practices and the utilization of instructional coaches on student scores on the state achievement test in Grades 3 through 8 from the participating schools.

Participants

The population is defined as six schools in the school system serving 3,579 students in grades pre-school through eighth in a small-size urban school district in the Southeastern U.S. The participants include all of the 91 teachers, Grades 3 through 8, in the six schools. Two middle schools serve 1,143 students and four elementary schools include pre-k through fifth grades with 2,436 students. Most of the students in the school system represent by sub-groups identified by the state of Tennessee Department of Education. Based on the subgroups identified by the state, 91.8% of the students are in an identified subgroup. See Table 1, *Student Ethnic Groups*, Table 2, *Specific Student Groups*, and Table 3, *Gender*.

Table 1

Student Ethnic Groups

Student Ethnic Groups	Percent Enrolled
Asian	1.6
Black or African American	18.8
Hispanic or Latino	14.4
Native American or Alaskan	0.3
Native Hawaiian or Pacific Islander	0.3
White	64.6

Table 2

Specific Student Groups

Specific Student Groups	Percent Enrolled
Black, Hispanic, Native American	33.5
Economically Disadvantaged	37.2
Students with Disabilities	5.3
English Language Learners	13
Students in Foster Care	0.1
Homeless	1.3
Migrant	0.2
Parent in Active Duty Military	1.2

Table 3

Student Gender

Student Gender	Percent Enrolled
Male	50.7
Female	49.3

The instrument used in this study was survey adapted from the Wisconsin Center for Educational Research's Survey of Instructional Practices Teacher Survey Grades K-12 Mathematics and English (Blank, 2009). The survey, in its entirety, includes 412 questions and covers Grades K-12. The survey is divided into different sections such as demographics of the classroom to instructional practices. One of the researchers of the survey, John Smithson, was contacted and permission provided to conduct the current project (Appendix B). Tables 4 through 7 describe the teacher demographics asked in the survey. (See Table 4 *Teacher Gender*, Table 5 *Teacher Ethnicity*, Table 6 *Years of Experience*, Table 7 *Pathway to Licensure*).

Table 4

Teacher Gender

Gender	Percent	Cumulative Percent
Female	80	89
Male	8.8	97.8
Other (No data reported)	2	100

Table 5

Teacher Ethnicity

Ethnicity	Percent	Cumulative Percent
American Indian or Alaskan Native	1.1	3.3
Black or African American	1.1	4.4
White	95.6	100
Other (No data given)	2.2	2.2

Table 6

Years of Experience

Years of Experience	Percent	Cumulative Percent
0-3 years	11	13.2
4-6 years	16.5	87.9
7-10 years	12.1	100
11-15 years	17.6	30.8
16 + years	40.7	71.4

Table 7

Pathway to Licensure

Pathway to Licensure	Percent	Cumulative Percent
Master's in Education Undergraduate degree in non-education field	22	27.5
Traditional Undergraduate degree in education	66	100
Alternative Licensure	4.4	5.5

Experimental Design

This study used a non-experimental, quantitative causal-comparative design and uses the Tennessee Comprehensive Assessment Program (TCAP) scores of students in Grades 3 through 8 to examine if the use of instructional coaches shows effect on student math and reading achievement scores. Causal-comparative studies are done when no manipulation to a variable occurs and when no experimental designs become implemented. A comparative study approach is appropriate (Van Dalen, 1979). In this non-experimental study design, the researcher is not manipulating any variables that may alter the findings. The study is analyzing student proficiency rates a year prior to the implementation of instructional coaches and three years after the implementation to explain the effects on the proficiency rates across time on TCAP test scores in math and reading and also to determine if gains were maintained after implementation. The researcher was looking for a rate of change between the percentages of proficient students on TCAP math and reading tests for four years. Examining the rate of change of proficiency allowed the researcher to identify increases or decreases of proficiency levels

during the implementation of instructional coaches and years following implementation. The rate of change is the percentage change at which a variable changes over time. Proficiency is defined at which a student is meeting the target projection of grade level or above mastery. Prior to the 2016 school year in Tennessee, the proficiency bands included: advanced, proficient, basic, and below basic. After assessment formats and standards changed, the new proficiency bands renamed to include: mastered, on-track, approaching, and below.

A correlational study was conducted with the survey administered to teachers in third through eighth grades. The correlation was to examine the instructional practices implemented in classrooms by teachers to the number of times a teacher utilized an instructional coach in their school. The purpose of this study is to determine any correlations to the increase of instructional practices used by teachers and the frequency of utilization of instructional coaches in Grades 3 through 8.

Procedure

Student data in this study were gathered from the Tennessee Comprehensive Program (TCAP). Student data consisted of TCAP results from the state achievement test administrations from the following years: 2009-2010, year of implementation of instructional coaches, 2010-2011, year after implementation of instructional coaches, and the 2011-2012, and 2016-2017, school years. Test administrations were based on the state allowable accommodations for students. The survey on teachers' instructional practices was sent to every third through eighth grade teacher in the school district. The survey was created in Qualtrics by copying and pasting the selected survey questions from the Wisconsin Center for Educational Research survey, and forwarded to teachers

via email with an anonymous link. Upon completion, the researcher was able to retrieve

the survey data on Qualtrics.

Data Collection

   TCAP assessment. State archived student data for TCAP math and reading were

collected for the following school years: 2009-2010, 2010-2011, 2011-2012, and 2016-

2017. Archived data files of the scores from those test administrations was used.

   Teacher survey data. This project utilized a survey from the Council of Chief

State School Officers (CCSSO) and the Wisconsin Center for Educational Research. In

the modified survey, the aggregated areas questions were taken from was: Teacher

Opinion and Beliefs, Professional Development, Experience, Instructional influence,

Classroom Instructional Readiness.   The survey includes 27 survey questions and uses a

Likert scale. The survey was created in Qualtrics, an online computer- based survey

program, and forwarded to participants via email using an anonymous link. All survey

questions included in this current study remain in their original format without alteration.

Due to the focus of this particular study, some of the original questions did not appear.

   The Wisconsin Center for Educational Research secured funding from the

National Science Foundation and the U.S. Department of Education to create and study

the Surveys of Enacted Curriculum for the purpose of collecting consistent data on

teaching practices in classrooms (Blank, 2009). The analysis of the survey allows school

districts and schools to analyze the data to ensure teachers use appropriate, researched-

based instructional practices in classrooms. The survey design is based on prior research

by the CCSSO (Blank, Porter, & Smithson, 2001). Eleven states participated in the

survey development by allowing state curriculum specialists to collaborate with the

Wisconsin Center for Educational Research. A comparative analysis using observational logs and daily logs to describe the difference between survey reports and survey observations was performed. This analysis occurred to check for survey validity (Blank et al., 2001). Participants (123 classrooms) in 11 states, tested for validity. Participating students completed surveys regarding instructional practices. Then, a correlational analysis compared the data between the teacher responses to the daily and observational logs and students' responses to instructional practices. Results showed a significant positive correlation between the teacher and student responses (Blank et al., 2001).

For the current study, the teacher instructional practices survey was used to collect teacher perception data on utilizing instructional coaches and instructional practices. The survey was sent via email with an anonymous link to the third through eighth grade teachers in the school district. The survey was created by The Wisconsin Center for Educational Research and is used to gather data on instructional practices for school districts and schools to describe practices taught in classrooms (Blank, 2009). The analysis of the survey results allows schools and districts to align professional development on a needs-base.

Data Analysis

Data for this study was analysis for the current study used a PC computer version of IBM's SPSS statistical software and Excel. A correlational test on the teacher survey and a percent of change test will be performed to determine if there is an increase or a decrease in state assessment scores. Tests checked for statistically significant results at the $p=.05$ level for the research questions. In the percent of change tests, utilizing proficiency data from Grades 3 through 8 in reading and math, data show the percentages

in terms of student proficiency. The percentages reported represent the percent of students scoring in the proficient bands of advanced and proficient, and mastered and on-track. Used in this study, beginning in the school year of 2016, the state renamed the proficiency bands based on the new assessment format.

Hypotheses

The following null hypotheses were tested to check for statistical significance at the .05 alpha level:

1. There is no statistical significance in the frequency of interactions with an instructional coach and the increase of instructional practices in math in third through eighth grade.

2. There is no statistical significance in the frequency of interactions with an instructional coach and the increase of instructional practices in reading in third through eighth grade.

Summary

Chapter I describes the introduction and background to the problem.   Chapter I also includes the Research problem and the justification for the study, terms, procedures, and limitations. Chapter II includes the review of literature. Chapter III describes the research procedures, measurement instruments, and the hypothesis that will be tested in this study. Chapter IV includes descriptions for the statistical analysis, the procedures used in the research, the measurement instrument, and the list of hypotheses tested in this research study. Chapter V provides a data summary and conceptualizes the findings. Furthermore, this chapter describes the implications of these findings for future research.

CHAPTER IV

RESULTS

Introduction

Chapter IV reports the research results from this non-experimental causal-comparative and correlational study. This section details the instructional strategies used by teachers for math and reading and identifies how many times teachers utilized an instructional coach to help them with their instruction. Also, this chapter provides student proficiency rates on math and reading TCAP scores from the first year of the implementation of instructional coaches across a period of three years. These data determine an increase or decrease in test scores across time. The population for this study consisted of 91 teachers in the school district. That is the number of teachers currently working in third through eighth grades.

Data Analysis

The SPSS software program analyzed the quantitative data as represented in Table 5. A Spearman Rho correlation test analyzed for the number of times teachers used Instructional Coach Question 38 (How many times did you work with the instructional coach last school year with classroom instructional practices? 0, 1-5, 6-10, 11-15, more than 15 times) with each question on the survey. The Spearman Rho correlation is appropriate because Question 38 is ordinal, reported in number ranges, and does not represent an exact number of times.

RQ 1. Instructional Coaching and Reading Practices. Does the frequency of interactions with an instructional coach increase instructional practices in reading in Grades 3 through 8?

When analyzing the data from correlations from the survey for questions regarding reading, approximately half of the questions show a positive correlation and half indicate a negative correlation. No questions regarding reading and the number of times using an instructional coach resulted in a significant correlation due to the answer choices being in ranges and not exact number of times utilized. The following reading instructional practices show negative correlations: supporting arguments with evidence r=(-.005), n=88, p=(.966), exploring language arts content r=(-.040), n=90, p=(.709), responding creatively to texts r=(-.042), n=91, p=(.689), and making predictions and hypothesis r=(-.008), n=90, p=(.942). These instructional strategies indicate direct links to Tennessee state standards on which students' assessment occur. The survey questions link to reading multiple texts, analyzing multiple texts, and generating a written text based on the texts read and analyzed. These are all higher order levels of thinking and analyzing for students to perform. These negative correlations could be the result of the instructional coach only providing surface levels coaching; it is desirable to implement a more rigorous form of a teaching model or of a co-teaching approach with teachers. There could also be a resistance to coaching from the teachers, or the particular instructional coach is not as effective to -facilitate teachers how to instruct on a more rigorous level to move students to higher levels of learning.

The instructional practices that revealed negative correlations indicate practices-that remain essential to teach many of the Tennessee state content standards set forth by the Department of Education that create the proficiency standards for students r=(-.138), n 88, p=(.195) as shown in Table 8. In order for students to be proficient (on grade level) students demonstrate mastery of the content standards on the state assessment. There is

no statistical significance in the frequency of interactions with an instructional coach and the increase of instructional practices in reading in third through eighth grade. The null hypothesis is accounted to be true.

RQ 2. Instructional Practices and Math Practices. Does the frequency of interactions with an instructional coach increase instructional practices in math in third through eighth grade?

When analyzing the data from the correlations from the survey, data demonstrate seven negative correlations between math practices and number of times an instructional coach utilized by a teacher, but findings evidenced no statistical significance. Integration of math $r=(-.070)$, $n=89$, $p=(.508)$, teaching with manipulatives $r=(-.012)$, $n=87$, $p=(.914)$, reasoning mathematically $r=(-.126)$, $n=84$, $p=(.246)$, applying mathematical concepts to the real world $r=(-.034)$, $n=86$, $p=(.755)$, making predictions or hypothesis $r=(-.022)$, $n=89$, $p=(.834)$, and assessing credibility and relevance of mathematical precision $r=(-.053)$, $n=85$, $p=(.624)$. These math practices represent high level instructional strategies recognized by the National Council of Teachers of Mathematics. It is essential students master these practices in order to demonstrate proficiency on the state assessment.

The positive correlations, shown in Table 8, include instructional strategies, but not higher order levels of math practices. Again, it is important to analyze instructional coaches' effectiveness and interactions with teachers in order to determine coaching effectiveness in classrooms. There is no statistical significance in the frequency of interactions with an instructional coach and the increase of instructional practices in math in third through eighth grade.

Table 8

Correlations for Number of Times Teachers Used an Instructional Coach

Question	r_s	Df	p
I integrate math with other subjects	-.070	89	.508
I integrate reading with other subjects	.205	89	.051
I teach my students problem solving strategies	.004	89	.943
I teach math with manipulatives	-.012	87	.914
I develop students; communication skills in expressing mathematical concepts and procedures	-.096	84	.378
I teach students to reason mathematically and to evaluate mathematical claims	-.126	84	.246
My students solve word problems from a textbook or worksheet	.003	86	.977
My students explain their reasoning or thinking in solving a problem by using several sentences orally or in writing	.063	88	.556
My students apply mathematical concepts to real-world problems	-.034	86	.755
My students make predictions and/or generate hypotheses	-.022	89	.834
My students analyze data to make inferences or draw conclusions	.073	88	.491
My students assess the accuracy, credibility, and/or relevance of mathematical precision	-.053	85	.624
My students work with manipulatives to understand mathematical concepts	.009	84	.937
My students collect, summarize, and/or analyze information or data from multiple sources	-.026	89	.803
My students listen to the teacher explain or observe the demonstration of modeling of English, language arts, the reading and writing process	.011	87	.922
My students present or demonstrate to others	.109	88	.305

(table continues)

Table 8 (cont.)

Correlations for Number of Times Teachers Used an Instructional Coach

Question	r_s	Df	p
My students work individually on language arts and reading assignments	.033	87	.755
My students participate in whole group discussion about language arts and literature	.033	86	.701
My students engage in a writing process to support arguments with evidence	-.005	86	.966
My students use computers or other technology to learn, practice, or explore language arts content	-.040	88	.709
My students work on a project in which group members engage in peer revision and editing	.093	88	.382
My students explain their reasoning or thinking in solving a problem by using several sentences orally or in writing	.009	89	.933
My students respond creatively to texts	-.042	89	.689
My students make predictions and can generate hypotheses	-.008	88	.942
My students can analyze text information to make inferences or draw conclusion	.043	87	.687
My state content standards influence my instruction	-.138	88	.195
My district's pacing guide influences my instruction	.022	88	.839
The district textbook and instructional materials influence my instruction	.162	88	.128
State test results influence my instruction	-.201	88	.057
District test results influence my instruction	-.121	88	.258
I have many opportunities to learn new instructional practices with mathematics	.049	83	.654
I have many opportunities to learn new instructional practices for reading	.246	86	.021
How many years have you taught	-.117	87	.275

When analyzing the data from correlations from the survey questions regarding reading, half the questions demonstrate a positive correlation and half of the questions show a negative correlation. No questions regarding reading and the number of times an instructional coach identified utilization revealed a significant correlation. The following reading instructional practices indicated negative correlations: supporting arguments with evidence r=(-.005), n=86, p=(.966), exploring language arts content with technology r=(-.040), n=88, p=(.709), responding creatively to texts r=(-.042), n=89, p=(.689), and making predictions and hypothesis r=(-.008), n=88, p=(.942). These instructional strategies directly link to Tennessee state standards which frame students' assessment. There is no statistical significance in the frequency of interactions with an instructional coach and the increase of instructional practices in reading in third through eighth grade. When analyzing the data from the correlations from the survey, data evidences negative correlations between math practices and number of times a teacher utilized an instructional coach. There is no statistical significance in the frequency of interactions with an instructional coach and the increase of instructional practices in math in third through eighth grade. The null hypothesis is accounted to be true.

Changes to statistical models used to generate test scores. The 2009-2010 school year is the year prior to the school system implementing instructional coaches. For a list of the 2009-2010 achievement percentages, see Table 6. The percentages represent the number of students who scored proficient, as set by the Department of Education of Tennessee. Prior to the 2014-2015 school year, TCAP scores continued to compare to the 2008 baseline year on TCAP. The proficiency bands described below basic, basic, proficient, and advanced. Set in the 2008 school year, these score bands

represent all scores on TCAP after that 2008 date. The score ranges in those bands never changed. Every school year, district leaders, administrators, and teachers knew what score band a student would fall into based on their score. In 2015, the state changed how to determine cut scores for proficiency bands. They set new bands described as: basic, approaching, on-track, and advanced. However, the state also changed the formula to determine the cut scores; more recently, the state uses a multivariate response model to describe student growth each year. Scores after 2015 are now based on how well each current cohort performed and not on the performance of a past cohort. Additionally, the scores now distribute and line up on a normal curve. With this approach, value added is based on growth expectations every year and not on past cohorts of students' scores. Cohorts of students now compare to one another every year and continue year after year of testing beginning in the third grade and ending in specific high school end of course state exams.

RQ 3. Does instructional coaching have an impact on student TNReady achievement in math in third through eighth grades? Examining the proficiency scores of math in Grades 3 through 8 shows increases and declines in scores in particular subgroups. See Table 9. The largest increase in proficiency gains show for the English Language Learner subgroup and the students with disabilities versus non-disabilities. Both sub-groups evidenced gains in proficiency levels in math. In the 2011-2012 school year, the second year of implementation of instructional coaches, data reveal an increase in proficiency in ethnic subgroups versus all, economically disadvantaged versus non-economically disadvantaged students, and students with disabilities versus non-

disabilities. Data indicated a decline that year in the English Language Learner subgroup.

In 2016, data showed an increase in ethnic groups versus all and English Language Learners versus non-English Language Learners, and students with disabilities versus non-disabilities. These scores represent the test years (2010-2011, 2011-2012, and 2016-2017) versus the year before implementation (2009-2010).

When analyzing the proficiency percentages from year to year, decreases in proficiency rates become evident. In the 2010-2011 versus 2011-2012 school years, English Language Learners versus non-English Language Learner indicated the only subgroup to decline in proficiency. In the 2011-2012 versus 2016-2017 school years, English Language Learners versus Non-English Language Learners subgroup demonstrated the only subgroup to increase. All other subgroups evidenced drastic declines in proficiency levels. When analyzing the proficiency percentages from year to year, decreases in proficiency rates become evident. In the 2010-2011 versus 2011-2012 school years, English Language Learners versus non-English Language Learner indicated the only subgroup to decline in proficiency. In the 2011-2012 vs 2016-2917 school years, English Language Learners versus Non-English Language Learners subgroup demonstrated the only subgroup to increase. All other subgroups evidenced drastic declines in proficiency levels.   It appears that the independent variable, instructional coaches, did not have an impact on student math achievement in Grades 3 through 8 as measured by the TCAP.

Table 9
Math Proficiency Rates on TCAP

Student Sub Groups	2009/2010 school year implementation	2010/ 2011	% of Change	2011/ 2012	% of Change	2016/ 2017	% of Change
Ethnic subgroup vs all	21.7	28	29.03%	43.7	101.38%	30.6	40.78%
Economically Disadvantaged vs non	24	31.3	30.42%	45.6	90.00%	28.7	19.58%
ELL vs non ELL	15.4	23.5	52.60%	21.4	38.96%	26.1	69.16%
Students with disabilities vs non	16.1	33.2	106.21%	36.7	127.95%	23.1	43.17%

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RQ 4. Does instructional coaching have an impact on student TNReady achievement in reading in third through eighth grades? The reading proficiency percentages fluctuate in sub-groups from 2009-2010 to 2016-2017. See Table 10. Every subgroup realized increases from the 2009-2010 school year except English Language Learners versus Non-English Language Learners until the 2016-2017 school year; and all sub-groups declined in proficiency percentages. From the 2010-2011 to 2011-2012 school years, English Language Learners versus Non-English Language Learners declined in proficiency. All other subgroups increased in proficiency levels. From the 2011-2012 to 2016-2017 school years, all subgroups saw significant declines in proficiency except the English Language Learner versus Non-English Language Learner

sub-group.   It appears that the independent variable, instructional coaches, did not have

an impact on student reading achievement in Grades 3 through 8 as measured by the

TCAP.

Table 10
Reading Proficiency Rates on TCAP

Student Sub-Groups	2009/2010	2010/2011	% of change	2011/2012	% of change	2016/2017	% of change
Ethnic subgroup vs all	39.5	42	6.33%	50.5	27.85%	24.9	-37.09%
Economically Disadvantaged vs non	38.5	46	19.48%	49.6	28.83%	24.1	-37.53%
ELL vs non-ELL	10.3	29.4	185.44%	8	-22.33%	7.45	-27.67%
Students with disabilities vs non	23.3	41.9	79.83%	37.8	62.23%	19.1	-18.03%

Summary

Most sub-groups in the school district realized increases in proficiency levels in

math and reading after the implementation of instructional coaches. Some sub-groups

showed significant rates of improvement; however, English Language Learners showed

lower levels of achievement in both math and reading throughout the year. Both math

and reading proficiency levels remain still low and even with instructional coaches in all

schools, student achievement did not reach 50%. This chapter reviewed the findings and

led the researcher to the conclusion that the implementation of instructional coaches did

not significantly impact student achievement scores, nor did the implementation of

instructional coaches improve teachers' instructional practices.

CHAPTER V

DISCUSSION

Introduction

This final chapter provides a summary of the conclusions and describes future research regarding the implementation and utilization of instructional coaches in schools and the impact on student academic performance. The beginning of this chapter reviews the problem statement for this study and discusses the reasoning framing this particular research design. The following narrative provides a summary of the results and describes the implications related to the theoretical framework and future research on instructional coaching.

Summary

Many schools and school districts continue struggling with increasing student achievement on state level assessments. Proficiency levels in math and reading remain low throughout the United States. These current data are congruent with NAEP results. National reform movements failed to significantly improve proficiency levels for students in math and reading in US schools. One strategy schools' indicate using to impact teacher instruction to impact student achievement is the utilization of instructional coaches. This study was to examine the effectiveness of instructional coaching in Grade 3 through 8 in math and reading. Student achievement scores were examined over three different academic years after implementation of instructional coaches in all schools. Also, teacher instructional practices and the number of times teachers utilized instructional coaches was examined. Instructional coaching, when implemented and utilized effectively, can impact best practices teachers use in instruction; thus, their

practices impacting student achievement. Instructional coaches can build trusting

relationships with teachers and demonstrate the capacity to provide clear, concise, and

effective feedback about instructional practices to teachers. This immediate feedback

facilitates students to gain higher levels of achievement. One important goal for

instructional coaches is to create trusting relationships with teachers. Teachers cannot

view instructional coaches as evaluative or as leaders who represent the capacity to enact

punitive measures when teachers indicate vulnerability as they attempt to learn new

practices. Instructional coaches must be viewed as a tool for teachers to use to better

their practices and build their capacity as instructional leaders in their school building.

Limitations

This study evidenced several limitations. First, the study is limited to six schools.

The targeted school district is small and only 91 teachers participated in completing the

survey. Also, this is not a large district with respect to student enrollment; student

demographics demonstrate limitations with respect to different ethnic and socio-

economic groups. Second, none of the current instructional coaches received their formal

evaluation. This review provides information regarding their effectiveness as teachers in

the classroom. There is an assumption that these instructional coaches are also effective

classroom teachers. These evaluation data and additional findings describing teacher

effect scores not made available to the researcher. The third limitation is administrators'

post observation feedback was not reviewed; the researcher did not know if

administrators recommended particular teachers seek help from instructional coaches for

specific instructional practices. Also, there was no set procedure for administrators to

follow through on any collaboration between the teacher and the instructional coach

based on the post observation feedback conversation. If this observation happens at the end of a school year, months may pass before the teacher and instructional coach could show increased practices based on the recommendations identified in the administrator's post observation conversation. The fourth limitation refers to the professional training of instructional coaches in this district. This professional training is unknown. New to the school district, some instructional coaches' previous training remains unknown. This means some instructional coaches may evidence more knowledge of best practices and represent a greater ability to grow teacher capacity in their building at a higher rate than instructional coaches in other schools. The fifth limitation is some teachers do not utilize the instructional coach as often as they may require. Teachers who are struggling are not required to meet with the instructional coach a specific number of times. This allows for some teachers to not ask the instructional coach for help. Because of this, some ineffective teachers may remain vulnerable until the school creates a plan of improvement for the teacher. If school leaders do not act quickly with intervening with an ineffective teacher, students may develop academic learning gaps difficult to remedy in future years of instruction. The sixth limitation is attrition; some students in the different grade cohorts left the school system. This results in disparities in the analysis for proficiency rates. Because the researcher does not know who left, different demographics may be affected more than others due to lower cohort numbers. For example, if one year several English Language Learners left the school system, their departure could affect the proficiency rate of the next school year's data.

The seventh limitation is different instructional coaches service different schools. For example, when a new instructional coach is hired, did the scores decrease because

teachers lacked a trusting relationship with the new instructional coach? How long did it take for the new instructional coach to build those relationships necessary to create a culture of collaboration and learning with teachers? The last limitation is the faculty because they may be new to the school and not yet trusting of the instructional coach. As teachers move to different schools or retire, new teachers join the district.   When schools see a large teacher loss, hiring several new teachers for the next school year require time to become a part of the school culture. New teachers, in addition to learning new curriculum and assessments, begin to build and develop a relationship with the instructional coach toward developing a collaborative culture. This process takes time and effort and can affect student scores.

Research Questions

1. Does the frequency of interactions with an instructional coach increase the instructional practices in reading in third through eighth grade?

2. Does the frequency of interactions with an instructional coach increase instructional practices in math in third through eighth grade?

3. Does instructional coaching impact student TNReady achievement in math in third through eighth grade?

4. Does instructional coaching impact student TNReady achievement in reading in third through eighth grade?

Findings

RQ 1. Does the frequency of interactions with an instructional coach increase the instructional practices in reading in third through eighth grade? This school district utilizes both district-created pacing guides and benchmark assessments. The benchmark

assessments are given every four and a half weeks in the school year. Based on survey results of the third through eighth grade teachers, those two teaching tools did not indicate any statistically significant relationships and had small negative correlations. The other survey questions which demonstrated negative correlations include all teaching strategies that require writing or higher order thinking skills for students. Written engagement with texts, responding to text creatively, and making predictions and generating hypotheses with a text all revealed negative correlations with utilization of instructional coaches. Whole group discussion, group work, oral responses to texts, and teacher modeling writing did not demonstrate any statistically significant relationships and consistently had small positive correlations. The findings generate questions such as, do instructional coaches help teachers with writing instruction, choosing appropriate leveled text for students, engaging higher order thinking strategies for students, and responding deeply to texts? These survey data describe only lower level teaching strategies show positive correlations with instructional coaches' utilization. This poses the question, how do school leaders ensure instructional coaches work with all teachers to instruct with research-based strategies, using appropriate text, and engaging all learners in the writing process? These practices represent all major goals of the grade in reading content standards in the state of Tennessee. This survey result matches the teachers' responses describing content standards do not influence their instruction; nor do district and state assessments influence their instruction. This is an area for the district to examine to consider changing instructional coaches' impact on teacher instruction. Another finding in this research is there is a positive correlation with the utilization of instructional coaches and teachers feeling many opportunities remain available to learn

new instructional practices for reading. These negative correlations could be the result of the instructional coach only providing surface levels coaching; it is desirable to implement a more rigorous form of a teaching model or of a co-teaching approach with teachers. There could also be a resistance to coaching from the teachers, or the particular instructional coach is not as effective to facilitate teachers how to instruct on a more rigorous level to move students to higher levels of learning. L'Allier and Elish-Piper (2006) found that when an instructional coach has content training, their coaching in classrooms positively impacted student achievement. Negative correlations could be the effect of teachers not understanding their content standards and not teaching to the rigor of the standard to enable students to demonstrate proficiency on the state assessment. Therefore, the negative correlations could be due to instructional coaches not being content experts in different subjects, thus not being able to coach teachers on research-based best practices (L'Allier & Elish-Piper, 2006). Elish-Piper and L'Allier (2007) found that classrooms that utilized instructional coaches who had specialized training in specific content areas had higher student achievement scores than in classrooms that didn't utilize a specially trained instructional coach.

Importantly, referring to the survey data, the opportunities for new learning do not reflect the level of rigor necessary for students to evidence proficiency on the state assessment. There is also a negative correlation with the utilization of instructional coaches and the number of years teaching experience.

RQ 2. Does the frequency of interactions with an instructional coach increase instructional practices in math in third through eighth grades? In the survey of instructional practices, teachers' responses to questions that demonstrated positive

correlations with utilization of instructional coaches included problem solving strategies, using the math textbooks or worksheets, allowing students to explain their reasoning, ensuring students analyze and draw conclusions. These all refer to teaching strategies that do not involve higher order thinking for students, nor do they represent the rigor of work students require to achieve proficiency on the state assessment. Will (2018) found that before math coaches could coach teachers, they needed to learn more about math content and understand the rigor of the standards before they could have coaching and feedback conversations with teachers. This is the same finding as L'Allier & Elish-Piper (2006) in that coaches had to had specific content knowledge in order to coach teachers and impact student achievement. The responses indicating negative correlations with utilization of instructional coaches included no math integration with other subjects, no use of manipulatives, no real-world connections with the math content, no student requirement of generating predictions, no accuracy to mathematical precision, and no analyzing data from multiple sources. Garcia, Jones, Holland & Mundy (2013) found similar results in a study between two school districts in Texas in that there were no statistical differences between classes that utilized an instructional coach versus classes that did not utilize instructional coaches. As similarly stated in the reading instructional practices, data indicated that lower level teaching strategies became the ones with positive correlations with instructional coach utilization. The district needs to examine how instructional coaches are utilized. Gibbons, Kazemi & Lewis (2017) found that little impact in student achievement would be made if coaches had to wait for teachers to invite them into their classrooms, rather instructional coaches and teachers needed to focus their work on needs of the school to impact student achievement. Findings

indicated these higher-level teaching strategies that require integration and higher order thinking and problem-solving skills did not occur as strategies that teachers and instructional coaches collaborated. These higher order skills remain essential for students to acquire proficiency on the state assessment. These include math practices adopted from the National Council of Teachers of Mathematics in order to provide students in Tennessee the opportunity to receive mathematics instruction at high levels. Findings also describe negative correlations with the utilization of instructional coaches and the state content standards influencing Teachers' Instruction, Survey Question 28 (My state content standards influence my instruction r=(-.138), n=88, p=(.195), as well as negative correlations with state and district test results influencing teacher's instructions, survey questions 31 and 32 (State test results influence my instruction r=(-.201), n=88, p=057) District test results influence my instruction r=(-.121), n=88), p=(.258).

Another finding is that there is a positive correlation with the utilization of instructional coaches and teachers feeling open to receive many opportunities to learn new instructional practices for math. These instructional practices, according to the survey results, do not represent the level of rigor necessary for students to attain proficiency on the state assessment. There is also a negative correlation with the utilization of instructional coaches and the number of years of teaching experience.

RQ 3. Does instructional coaching have an impact on student TNReady achievement in math in third through eighth grades? The student state data, prior to implementing instructional coaches, evidenced minimal scores. No sub-group approximated close to 50% proficient in math. The year after implementation, scores did increase in all sub-groups. However, this growth did not maintain for all sub-groups. In

the 2011-2012 school year, English Language learners scores fell compared with their non-ELL peers. What is unknown is the number of newcomers to the school system that year and what educational backgrounds did those students bring? Also, it is unknown whether a large number of ELL students enrolled prior to testing, therefore, they did not receive the same instruction as their non-ELL peers. When examining sub-group scores in the 2016-2017 school year, the researcher looked at sustained improvement of scores after the implementation of instructional coaches. In the 2016-2017 year, the scores fell significantly. Economically disadvantaged vs non-economically disadvantaged students and students with disabilities vs students with no disabilities test scores fell almost to the levels of the year prior to implementation of instructional coaches. A year of new state standards in 2016 led to a decline in test scores. A decline in test scores may attribute to new standards; however, the state implemented the standards one full school year prior to assessing students. This provided schools time to learn the changes in the standards and prepare for the instructional shifts required to support students for the differences. However, if instructional coaches were not utilized during this time, there could have been minimal student achievement impacts. According to Gibbons et al. (2017) instructional coaches cannot impact student achievement if instructional coaches have to wait to be invited into classrooms and have no set academic goals for specific improvement. could These results however, generate questions such as, what did the school system do to prepare for these instructional shifts, how did instructional coaches support teachers during these changes, what professional development did schools offer, did district assessments align with the new standards to provide teachers with data to inform their instruction, and did instructional coaches receive any specialized training in

specific content areas to help teachers increase student achievement? Elish-Piper &

L'Allier, (2007) found that instructional coaches who received specialized degrees or

training in content areas and coached teachers in instruction impacted student

achievement scores versus coaches who did not have specialized degrees or training in

content areas. It is important to note what training is offered by districts and school to

instructional coaches and how often it is offered. What can be detrimental to coaching

and impacting student achievement is when instructional coaches are asked to do work

other than coaching as well as expecting significant achievement results without waiting

for the program to be effectively established (Knight, 2006).

RQ 4. Does instructional coaching impact on student TNReady achievement

in reading in third through eighth grades? Findings showed the student state data

prior to implementing instructional coaches as low. No sub-group approximated close to

50% proficient in math. The year after implementation, scores did increase in all sub-

groups. This growth however, did not maintain by all sub-groups. In the 2011-2012

school year, scores for both English Language Learners and students with disabilities

decreased. ELL diminished significantly to a level that was lower than the year before

implementation of instructional coaches. This trend continued for the next few years. In

the 2016-2017 school year, every sub-group decreased significantly to percentages lower

than the year before implementation of instructional coaches.   A year of new state

standards resulted in a failed year of state testing; the decline in test scores represented

significance.   The test score decline may be a consequence of new standards; however,

the state implemented the standards one full school year prior to assessing students. This

provided schools time to learn the changes in the standards and prepare for the instructional shifts essential to prepare students for the changes. How instructional coaches were utilized during this period needs to be examined. Gibbons, Kazemi & Lewis (2017) found that student achievement was not impacted if instructional coaches had to be invited into classrooms instead of working collaboratively with teachers on set academic goals. These results also generate questions such as, what did the school system do to prepare for these instructional shifts, did teachers know how to choose appropriate texts with Lexiles appropriately matched, how did instructional coaches support teachers during these changes, what writing instruction professional development did the district offered to teachers, what reading professional development did the district offer teachers, did the district assessments align with the new standards to provide teachers with data to inform their instruction? One recommendation Knight (2007) had for professional development was it be developed to support new initiatives so teachers are supported during transitional periods. Darling-Hammond, Wei, Andree, Richardson & Orphanos (2009) found that many types of job embedded professional practices can increase teacher effectiveness.

Implications

In Tennessee, the Department of Education initiated many shifts in standards and assessment formats in the last several years. In 2016, the state decided to abandon the Common Core standards in favor of Tennessee State standards. Implemented in the 2017/2018 school year, the State of Tennessee adopted the new standards. In conjunction with the changes in standards, assessment formats also reflected change.

During the transition to Common Core and then to Tennessee State standards,

assessments changed. This instability in instruction and assessment practices is

undermining; fluctuation in proficiency percentages evidenced in students in Grades 3

through 8. Assessment formats changed before teachers became fully trained on new

standards and in the new assessment formats. As teachers and instructional coaches work

to create learning progressions for teaching, educators engaged in backward analyses to

determine students' needs (Popham, 2011). This proves a difficult task if standards and

assessment formats remain in transition; grade levels of teachers indicated different

understanding of mastery of standards.

Instructional coaches impact instruction; this is cause for schools and school

districts to train and equip coaches with best practices for success. Perceived as tools for

improvement and not evaluative, instructional coaches remain as partners with teachers.

Instructional coaches build trusting relationships with teachers. Research indicates

establishing teacher capacity is developed through building collaborations among

teachers (Fullan & Hargreaves, 2012). Teachers require coaches who demonstrate

supportive, friendly, and relational interactions (Foltos, 2014). In order for coaches to

build a collaborative culture, they develop norms for collaboration in order for all

involved to know roles and responsibilities. Teachers learn and grow during the coaching

process and coaches become facilitators in the process (Foltos, 2014).

Another important factor in the effectiveness of instructional coaching is hiring

coaches who demonstrate effective communication. In order to build relationships with

teachers and gain their trust to become better instructional practitioners, instructional

Coaches demonstrate clarity with respect to their message. They know their teachers'

vulnerabilities, practice quality listening skills, and deliver effective feedback to productively frame ongoing conversations (Knight, 2007). Knight (2007) describes, "Respect, equality, and openness are good starting points for learners" (p. 60).

Recommendations

Integral to effective instructional coaching is effective communication strategies. Trained in effective communication strategies, their work with teachers remains authentic and meaningful. Administrators cannot hire teachers who are effective in the classroom, but evidence ineffective communication skills. Instructional coaches build relationships and create a clear message with teachers. Instructional coaches understand their teachers and create and share information in ways the suggestions will be accepted by teacher. Instructional coaches create a partnership approach in working with classroom teachers; they develop relationships with colleagues (Knight, 2007).

Inconsistent test scores remain another area in which instructional coaches can support teachers. Two areas this impacts include knowledge of standards classroom teachers require in order to instruct and knowledge required to analyzing data. First, in order to utilize instructional coaches effectively, schools establish specific criteria for teachers to collaborate with instructional coaches. Even if there is an emphasis to build relationships with teachers, more is required. Identifying specific work to complete is integral to improving teacher practices. Setting expectations for teachers based on identified improvements with instruction, schools establish criteria for teachers and instructional coaches, so all participants become responsible for the work involved toward increasing student achievement.

Schools and school districts identify refinements or areas of improvement on evaluation systems; Linking these identified areas with targeted work to complete with the instructional coach remains important. A trustful and respectful culture allows teachers to utilize evaluative feedback. Using the evaluative feedback, instructional coaches create action plans to improve the identified areas for improvement. Evaluation systems using a growth model allow for this type of work to occur with success. As the year progresses, schools want both student and teacher growth. This is beneficial work between the teacher and the instructional coach. Teachers create action plans using the help of an instructional coach and, in doing so, show artifacts such as, lesson plans, student work, assessments, and test scores. Teachers evidence their professional growth and describe how it is impacting student achievement.

Another recommendation emerging from this study is describing the intentional work required when states adopt new academic standards. Schools require time to learn and unpack standards before they are implemented and assessed. This is collaborative work shared -between the instructional coach and teachers.   It is imperative teachers understand the content knowledge as well as the depth of presentation. This work allows teachers to create learning progressions that provide for students to progress to the mastery level.

This instructional focus leads schools and districts to target students' assessment needs. By fully understanding the standards, teachers design assessments allowing them to examine student mastery, misconceptions, or misunderstandings. These assessment practices allow teachers to adjust their instruction before students receive formal testing.

Another recommendation generating from the current study is for schools to assume the responsibility to develop deliberate professional development sessions based on specific needs of teachers. For example, it is important for teachers to learn how to analyze classroom, district, and state data. From the analysis, teachers identify instructional strengths and weaknesses and work as teams to develop plans of improvement. This collaborative work reflects back to the situated learning theory and the importance of schools representing communities of practice. Communities of practice begin when the school community engages together with the instructional coach facilitating teachers' learning. This journey of learning together builds trust and binds the community (Smith, 2003/2009; Tschannen-Moran & Tschannen-Moran, 2011). This type of collaboration, using professional development, improves teacher practices and impacts student achievement.

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APPENDICES

Appendix A

Organization for Economic Cooperation and Development (OECD)
Program for International Student Assessment (PISA)
This report was generated using the PISA International Data Explorer. http://piaacdataexplorer.oecd.org/ide/idepisa http://nces.ed.gov/surveys/pisa/idepisa/

Report 1: Table

Averages for PISA mathematics scale: overall mathematics, age 15 years by All students [TOTAL], year and jurisdiction: 2015

Year	Jurisdiction	All students	
		Average	Standard Error
2015	**Australia**		
	Finland	511	(2.3)
	United States	470	(3.2)

NOTE: The Reading, Mathematics and Science scale ranges from 0 to 1000. Some apparent differences between estimates may not be statistically significant.
SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2015 Reading, Mathematics and Science Assessment.

Report 2: Table

Averages for PISA reading scale: overall reading, age 15 years by All students [TOTAL], year and jurisdiction: 2015

Year	Jurisdiction	All students	
		Average	Standard Error
2015	**Australia**		
	Finland	526	(2.5)
	United States	497	(3.4)

NOTE: The Reading, Mathematics and Science scale ranges from 0 to 1000. Some apparent differences between estimates may not be statistically significant.
SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2015 Reading, Mathematics and Science Assessment.

Report 3: Table

Averages for PISA science scale: overall science, age 15 years by All students [TOTAL], year and jurisdiction: 2015

Year	Jurisdiction	All students	
		Average	Standard Error
2015	**Australia**		
	Finland	531	(2.4)
	United States	496	(3.2)

NOTE: The Reading, Mathematics and Science scale ranges from 0 to 1000. Some apparent differences between estimates may not be statistically significant.
SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2015 Reading, Mathematics and Science Assessment.

Appendix B

RE: permission to use survey

John Smithson <john.smithson@wisc.edu>

Mon 12/5/2016 4:54 PM

To:Laurie Offutt <Laurie.Offutt@cityschools.net>;

Laurie,

Thank you for your interest in the SEC instruments.

I am happy to provide permission for you to use the survey in whole or in part, and modified however suits your needs for your graduate work.

The instrument you attached is a little dated. You can find the most recent version in the Resources section at the following web-site:
www.seconline.org

As for your question about using parts of the survey, the only issue would be if you wanted to employ any of our scale measures but did not include all of the scale items in your version of the survey.

FYI, it is a long-standing policy of mine to support graduate work wherever it occurs. Toward that end I offer graduate students free use of the website for data collection and processing if they are not changing actual survey items (it's OK to use a sub-set of questions, but if you want to revise items, that's fine, but you're on your own. I'm also happy to respond to questions about the SEC data related to particular research questions or the analysis of SEC data for one or another purpose.

Regards,
John

John Smithson, Ph.D.
Director, Surveys of Enacted Curriculum Project
Wisconsin Center for Education Research
1025 W. Johnson St., Madison WI 53706

Appendix C

Instructional Practice Survey

Q1 Informed Consent
 Purpose of this study: To analyze instructional practices in math and reading and the utilization of learning leaders in the classroom.
 Classification procedures: Educational tests: study involves standard educational practices which consist of educational testing and such studies expose the participants to lower than minimal risk.
 What are procedures in this study? Teachers in third through eighth grade will be sent a survey link via email from their principal. I will attend a faculty meeting and explain the purpose of the study to the faculty. The email link will be sent to the teachers after I present to the faculty. The survey is on Qualtrics
 What will you be asked to do in this study? Complete a survey on math and reading instructional practices and work utilizing learning leaders.
 What are we planning to do with the data collected using your participation? The researcher is looking for any correlations between math and reading instructional practices and the number of interactions teachers have with their learning leaders in school in grades third through eighth.
 What are your expected costs? There are no costs involved with participation in this study.
 What are the potential discomforts, inconveniences and/or possible risks that can be reasonably expected as a result of the participation? There are no potential discomforts, inconveniences, or risks in this study.
 How will you be compensated for participation? There is no compensation in this study.
 What are the anticipated benefits from this study? The anticipated benefits of this study is for the researcher to analyze and identify an effect of the utilization of learning leaders on instructional practices in math and reading that are taught by instructional coaches and learned and implemented by teachers into their classroom instruction to increase student achievement.
 Are there any alternatives to this study such that you could receive the same benefits? No.
 Will you be compensated for any study-related injuries? There are no anticipated injuries related to this study that would need to be compensated.
 Circumstances under which the researcher may withdraw from this study: You may withdraw from this study by choosing not to participate in the survey once the link has been opened and you choose not to participate in the study.
 What happens if you choose to withdraw your participation? Your survey will not be

used in the data analysis of this study.

Can you stop participation any time after initially agreeing to give consent/assent? You may stop participating in the survey at any time.

Contact information: If you should have questions about this research study or possible injury, please feel free to contact Laurie Offutt 615-491-5479 or by email laoffutt@mtmail.mtsu.edu OR my faculty advisor Dr. Donald Snead at donald.snead@mtsu.edu or 615-898-5755.

Confidentiality: All efforts, within reason, will be made to keep the personal information in your research record private but total privacy cannot be promised. Your information may be shared with MTSU or the government, such as Middle Tennessee State University Institutional Review Board, Federal Government Office of Human Research Protections, if you or someone else is in danger or if we are required to do so by law.

Please answer two questions below to determine participation in the survey:

○ I will take the survey (77)

○ I will not take the survey (78)

Skip To: End of Survey If Informed Consent Purpose of this study: To analyze instructional practices in math and reading an... = I will not take the survey

Q2 I am 18 years of age

○ yes (1)

○ No (4)

Skip To: End of Survey If I am 18 years of age = No

Q3 I integrate math with other subjects

○ Never (1)

○ Rarely (2)

○ Sometimes (3)

○ Most of the time (4)

○ Always (5)

Q4 I integrate reading with other subjects

○ Never (1)

○ Rarely (3)

○ Sometimes (5)

○ Most of the time (4)

○ Always (6)

Q5 I teach my students problem solving strategies

○ Never (1)

○ Rarely (2)

○ Sometimes (3)

○ Most of the time (4)

○ Always (5)

Q6 I teach math with manipulatives, such as counting blocks or geometric shapes

○ Never (1)

○ Rarely (2)

○ Sometimes (3)

○ Most of the time (4)

○ Always (5)

Q7 I develop students' communication skills in expressing mathematical concepts and procedures

○ Never (1)

○ Rarely (2)

○ Sometimes (3)

○ Most of the time (4)

○ Always (5)

Q8 I teach students to reason mathematically, and to evaluate mathematical claims

○ Never (1)

○ Rarely (2)

○ Sometimes (3)

○ Most of the time (4)

○ Always (5)

Q9 My students solve word problems from a textbook or worksheet

○ Never (1)

○ Rarely (2)

○ Sometimes (3)

○ Most of the time (4)

○ Always (5)

Q10 My students explain their reasoning or thinking in solving a problem by using several sentences orally or in writing

○ Never (1)

○ Rarely (2)

○ Sometimes (3)

○ Most of the time (4)

○ Always (12)

Q11 My students apply mathematical concepts to real-world problems

○ Never (1)

○ Rarely (2)

○ Sometimes (3)

○ Most of the time (4)

○ Always (5)

Q12 My students make predictions and/or generate hypotheses

○ Never (1)

○ Rarely (2)

○ Sometimes (3)

○ Most of the time (4)

○ Always (5)

Q13 My students analyze data to make inferences or draw conclusions

○ Never (1)

○ Rarely (2)

○ Sometimes (3)

○ Most of the time (4)

○ Always (5)

Q14 My students assess the accuracy, credibility, and/or relevance of mathematical precision

○ Never (1)

○ Rarely (2)

○ Sometimes (3)

○ Most of the time (4)

○ Always (5)

Q15 My students work with manipulatives to understand mathematical concepts

○ Never (1)

○ Rarely (2)

○ Sometimes (3)

○ Most of the time (4)

○ Always (5)

Q16 My students collect, summarize, and/or analyze information or data from multiple sources

○ Never (1)

○ Rarely (2)

○ Sometimes (6)

○ Most of the time (4)

○ Always (5)

Q17 My students listen to the teacher explain or observe the demonstration or modeling of English, language arts, the reading process, and the writing process.

○ Never (1)

○ Rarely (2)

○ Sometimes (4)

○ Most of the time (5)

○ Always (3)

Q18 My students present or demonstrate to others

○ Never (1)

○ Rarely (3)

○ Sometimes (2)

○ Most of the time (4)

○ Always (5)

Q19 My students work individually on language arts and reading assignments

○ Never (1)

○ Rarely (3)

○ Sometimes (2)

○ Most of the time (4)

○ Always (5)

Q20 My students participate in whole group discussion about language arts and literature.

○ Never (1)

○ Rarely (3)

○ Sometimes (2)

○ Most of the time (4)

○ Always (5)

Q21 My students engage in a writing process to support arguments with evidence

○ Never (1)

○ Rarely (2)

○ Sometimes (3)

○ Most of the time (4)

○ Always (5)

Q22 My students use computers or other technology to learn, practice, or explore language arts content

○ Never (1)

○ Rarely (3)

○ Sometimes (2)

○ Most of the time (4)

○ Always (5)

Q23 My students work on a project in which group members engage in peer revision and editing

○ Never (1)

○ Rarely (3)

○ Sometimes (2)

○ Most of the time (4)

○ Always (5)

Q24 My students explain their reasoning or thinking in solving problems, using several sentences orally or in writing

○ Never (1)

○ Rarely (3)

○ Sometimes (2)

○ Most of the time (4)

○ Always (5)

Q25 My students respond creatively to texts

○ Never (1)

○ Rarely (3)

○ Sometimes (2)

○ Most of the time (4)

○ Always (5)

Q26 My students make predictions and can generate hypotheses

○ Never (1)

○ Rarely (3)

○ Sometimes (2)

○ Most of the time (4)

○ Always (5)

Q27 My students can analyze text information to make inferences or draw conclusions

○ Never (1)

○ Rarely (3)

○ Sometimes (2)

○ Most of the time (4)

○ Always (5)

Q28 My state content standards influence my instruction

○ Strongly agree (1)

○ Somewhat agree (2)

○ Neither agree nor disagree (3)

○ Somewhat disagree (4)

○ Strongly disagree (5)

Q29 My district's pacing guides influence my instruction

○ Strongly agree (1)

○ Somewhat agree (2)

○ Neither agree nor disagree (3)

○ Somewhat disagree (4)

○ Strongly disagree (5)

Q30 The district textbook and instructional materials influence my instruction

○ Strongly agree (1)

○ Somewhat agree (2)

○ Neither agree nor disagree (3)

○ Somewhat disagree (4)

○ Strongly disagree (5)

Q31 State test results influence my instruction

○ Strongly agree (1)

○ Somewhat agree (2)

○ Neither agree nor disagree (3)

○ Somewhat disagree (4)

○ Strongly disagree (5)

Q32 District test results influence my instruction

○ Strongly agree (1)

○ Somewhat agree (2)

○ Neither agree nor disagree (3)

○ Somewhat disagree (4)

○ Strongly disagree (5)

Q33 I have many opportunities to learn new instructional practices with mathematics.

○ Strongly agree (1)

○ Somewhat agree (2)

○ Neither agree nor disagree (3)

○ Somewhat disagree (4)

○ Strongly disagree (5)

Q34 I have many opportunities to learn new instructional practices for reading.

○ Strongly agree (1)

○ Somewhat agree (2)

○ Neither agree or disagree (3)

○ Somewhat disagree (4)

○ Strongly disagree (5)

Q35 What is your gender?

○ Male (1)

○ Female (2)

○ other (3)

Q36 How many years have you taught?

○ 0-3 (1)

○ 4-6 (2)

○ 7-10 (3)

○ 11-15 (4)

○ 16 + (5)

Q37 What was your pathway to licensure?

○ Traditional (undergraduate degree in education) (1)

○ Alternative licensure (2)

○ Masters in Education (undergraduate degree in something other than education) (3)

Q38 How many times did you work with the instructional coach last school year with classroom instructional practices?

○ 0 (1)

○ 1-5 (2)

○ 6-10 (3)

○ 11-15 (4)

○ more than 15 times (5)

Q39 Please indicate your race

○ American Indian or Alaskan Native (1)

○ Asian (2)

○ Black or African American (3)

○ Hispanic (4)

○ Native Hawaiian or other Pacific Islander (5)

○ White (6)

End of Block: Default Question Block

Appendix D

IRB
INSTITUTIONAL REVIEW BOARD
Office of Research Compliance,
010A Sam Ingram Building,
2269 Middle Tennessee Blvd
Murfreesboro, TN 37129

MIDDLE TENNESSEE STATE UNIVERSITY

IRBN001 - EXPEDITED PROTOCOL APPROVAL NOTICE

Tuesday, August 21, 2018

Principal Investigator	**Laurie Offutt** (Student)
Faculty Advisor	Donald Snead
Co-Investigators	NONE
Investigator Email(s)	*laurieoffutt@comcast.net; donald.snead@mtsu.edu*
Department	Educational Leadership
Protocol Title	***The utilization of instructional coaches on the impact of a student achievement and teacher instructional practices in reading and math in grades three through eight***
Protocol ID	**18-2289**

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **EXPEDITED** mechanism under 45 CFR 46.110 and 21 CFR 56.110 within the category *(7) Research on individual or group characteristics or behavior*. A summary of the IRB action and other particulars in regard to this protocol application is tabulated below:

IRB Action	APPROVED for ONE YEAR		
Date of Expiration	8/31/2019	Date of Approval	8/21/18
Sample Size	110 (ONE HUNDRED AND TEN)		
Participant Pool	Primary Classification: **Healthy Adults**		
	Specific Classification: **Certified teachers (3rd through 8th grade)**		
Exceptions	Online consent and data collection permitted		
Restrictions	**1. Mandatory active informed consent; the participants must have access to a copy of the informed consent document signed by the PI.** **2. No identifiable data**		
Comments	NONE		

This protocol can be continued for up to THREE years (8/31/2021) by obtaining a continuation approval prior to 8/31/2019. Refer to the following schedule to plan your annual project reports and be aware that you may not receive a separate reminder to complete your continuing reviews. Failure in obtaining an approval for continuation will automatically result in cancellation of this protocol. Moreover, the completion of this study MUST be notified to the Office of Compliance by filing a final report in order to close-out the protocol.