10-12-2016

The relationship between instructional strategies and teacher evaluation in Michigan public schools

Stephen D. Laatsch

Follow this and additional works at: http://commons.emich.edu/theses

Part of the Educational Assessment, Evaluation, and Research Commons

Recommended Citation
http://commons.emich.edu/theses/683
The Relationship Between Instructional Strategies and Teacher Evaluation in Michigan Public Schools

by

Stephen D. Laatsch

Dissertation

Submitted to the College of Education

Eastern Michigan University

In partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION
Educational Leadership

Dissertation Committee

Ronald Williamson, EdD (Chair)

David Anderson, PhD

Derrick Fries, PhD

Jaclynn Tracy, PhD

October 12, 2016

Ypsilanti, Michigan
Acknowledgments

To be successful with anything you do in life, a strong supporting team is needed to help you along the way. Writing this dissertation was no different. I had a lot of support along the way and for that I am very grateful. I begin by thanking the Saline Area Schools. This organization is very committed to helping all of its teachers and administrators reach for greater heights. In my journey to the doctorate, the school district has supported me financially and given time and encouragement toward completion of my dissertation.

I applaud my entire dissertation committee, Dr. Ronald Williamson, Dr. Derrick Fries, Dr. David Anderson, and Dr. Jaclynn Tracy, who have supported my efforts with significant time and extensive guidance. Dr. Anderson spent countless hours helping me with the statistical analysis section of this dissertation. He was patient and provided excellent guidance about the statistical tests needed to make sense of the data in this study. Dr. Williamson helped me every step of the way. His no-nonsense approach in helping with the technical language required to write a dissertation was critically important to my success. His responsive nature helped simplify a complex process that at times was overwhelming. My editor, Norma Ross was not only able to help wordsmith my dissertation, but also served as a great coach. She helped me see that the finish line wasn’t that far away.

Finally, I thank my family, in particular my wife, Laura, who provided the flexibility for me to take classes and to work on this dissertation. That meant a lot of time when I wasn’t around to help with parenting duties; it was greatly appreciated! Thank you all for helping me through this rewarding process.
Abstract

The purpose of this quantitative study was to determine whether teachers altered instructional strategies based on their local school district’s teacher evaluation framework. Further, if changes were made to their use of instructional strategies, specific factors that influenced the changes were explored. This information is important because school districts across Michigan spend time, energy, and money for new teacher evaluation frameworks. Thus, it is essential to know if these frameworks change the use of instructional strategies in the classroom.

Teachers in 10 southeastern Michigan public school districts were surveyed to determine use of research-based instructional strategies before and after the implementation of new teacher evaluation frameworks. The survey explored the frequency of support teachers received for professional development related to teacher evaluation in their school district and the use of instructional strategies. The following research questions guided this study: Was there a significant relationship between the usage of specific teacher evaluation frameworks and the usage of specific instructional strategies? Was there any significant influence between the reported usage of instructional strategies and any factors that might have influenced this change?

Findings from this study indicated no statistical significance in the use of research-based instructional strategies based on the specific teacher evaluation framework used in local school districts. Although all instructional strategies reported gains in use from the previous to current evaluation frameworks, some variables impacted the increase of use more than others. Data showed that the specific factor of classroom culture, which involved instructional strategies of expectations that all students will achieve the goals of the lesson
and helping students to understand the value of what they are learning, was negatively correlated among Kindergarten, 1st grade, 2nd grade, and elementary special education teachers. Findings suggested that teachers in these early grades and special education have concerns about increased expectations for curriculum standards to be mastered at an early age. Future studies that focus primarily on developmentally appropriate instructional strategies that support early childhood students may have a greater impact on teaching and learning than specific teacher evaluation frameworks used in local school districts.
# Table of Contents

Acknowledgments ........................................................................................................ iii

Abstract ....................................................................................................................... iv

List of Tables ................................................................................................................ ix

Chapter 1–Introduction ............................................................................................... 1

   Background ............................................................................................................... 1

   Statement of the Problem ....................................................................................... 3

   Purpose of Study ..................................................................................................... 7

   Research Questions ................................................................................................. 8

   Data Collection ....................................................................................................... 9

   Definitions and Acronyms ..................................................................................... 9

   Limitations ............................................................................................................. 11

   Delimitations ......................................................................................................... 11

   Significance of the Study ....................................................................................... 12

   Summary ................................................................................................................ 13

Chapter 2–Literature Review ....................................................................................... 14

   History of Michigan’s Teacher Evaluation Reform Efforts .................................. 14

   Teacher Evaluation Agenda Setting ..................................................................... 14

   The Components of an Effective Teacher Evaluation Framework ...................... 15
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary Results</td>
<td>76</td>
</tr>
<tr>
<td>Chapter 5–Discussion, Implications, and Recommendations</td>
<td>79</td>
</tr>
<tr>
<td>Purpose and Research Questions</td>
<td>79</td>
</tr>
<tr>
<td>Discussion of Findings</td>
<td>79</td>
</tr>
<tr>
<td>Factors Influencing Instructional Strategies</td>
<td>81</td>
</tr>
<tr>
<td>Assessment of the Significance of the Findings</td>
<td>85</td>
</tr>
<tr>
<td>Limitations of This Study and Future Research</td>
<td>89</td>
</tr>
<tr>
<td>Conclusion</td>
<td>91</td>
</tr>
<tr>
<td>Summary</td>
<td>92</td>
</tr>
<tr>
<td>References</td>
<td>94</td>
</tr>
<tr>
<td>Appendix</td>
<td>104</td>
</tr>
<tr>
<td>Appendix A–Instructional Strategies and Teacher Evaluation Survey</td>
<td>105</td>
</tr>
<tr>
<td>Appendix B–University Human Subjects Review Committee</td>
<td>110</td>
</tr>
<tr>
<td>Appendix C–Letter from Central Office Administrator to Elementary Teachers</td>
<td>111</td>
</tr>
<tr>
<td>Appendix D–Informed Consent Form</td>
<td>112</td>
</tr>
<tr>
<td>Appendix E–District Location for Completed Surveys</td>
<td>113</td>
</tr>
<tr>
<td>Appendix F–Component Matrix demonstrating various loadings</td>
<td>114</td>
</tr>
<tr>
<td>Table</td>
<td>Title</td>
</tr>
<tr>
<td>-------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Instructional Strategy Connections</td>
</tr>
<tr>
<td>2</td>
<td>Survey Data Relative to the Conceptual Framework</td>
</tr>
<tr>
<td>3</td>
<td>Compiled Participant Demographics and Comparison to All Teachers in Three Counties</td>
</tr>
<tr>
<td>4</td>
<td>Teacher Evaluation Framework Used in School Districts</td>
</tr>
<tr>
<td>5</td>
<td>Professional Development for Teacher Evaluation</td>
</tr>
<tr>
<td>6</td>
<td>Usage of Instructional Strategies Related to Classroom Culture</td>
</tr>
<tr>
<td>7</td>
<td>Usage of Instructional Strategies Related to Communication</td>
</tr>
<tr>
<td>8</td>
<td>Usage of Instructional Strategies Related to Questioning &amp; Discussion Techniques</td>
</tr>
<tr>
<td>9</td>
<td>Usage of Instructional Strategies Related to Engaging Students in Learning</td>
</tr>
<tr>
<td>10</td>
<td>Usage of Instructional Strategies Related to Assessment</td>
</tr>
<tr>
<td>11</td>
<td>Latent Variable 1—Classroom Culture</td>
</tr>
<tr>
<td>12</td>
<td>Latent Variable 2—Communication</td>
</tr>
<tr>
<td>13</td>
<td>Latent Variable 3—Questioning &amp; Discussion Techniques and Engagement</td>
</tr>
<tr>
<td>14</td>
<td>Latent Variable 4—Professional Development for Teacher Evaluation</td>
</tr>
</tbody>
</table>
Chapter 1—Introduction

Background

No topic has stirred as much debate in education as the new reform policies regarding teacher evaluation that are sweeping the nation (McGuinn, 2012). The implications are important for educators who have been increasingly scrutinized for their roles in improving a public education system, which has come under fire over the last quarter of a century. The Program for International Student Assessment (PISA) assesses 15-year-olds in reading, math, and science every three years to evaluate educational systems throughout the world. First conducted in 2000, the major domain of study rotates between mathematics, science, and reading in each cycle. PISA also includes measures of general or cross-curricular competencies, such as collaborative problem solving. By design, PISA emphasizes functional skills that students have acquired as they near the end of compulsory schooling. PISA is coordinated by the Organization for Economic Cooperation and Development (OECD, 2012), an intergovernmental organization of industrialized countries, and is conducted in the United States by the National Center for Educational Statistics (NCES).

PISA test scores showed that student achievement in the United States lagged behind students in many other industrialized nations (OECD, 2012). As a result of the United States’ mediocre performance on the PISA, teacher quality has become a focus for school improvement. In many states, including Michigan, policy-makers have suggested a more rigorous teacher evaluation system to reduce poor-performing teachers. Consequently, this will help to improve teaching and instructional strategies across the state, and improve PISA scores.
Beginning with *Race to the Top* grant funding announced by the Obama administration in 2009, school districts across the U.S. have competed for financial resources to support various reform efforts. States have been awarded points for establishing innovative plans to address many of the criterion points established by the U.S. Department of Education, including improving teacher effectiveness based on performance. Thus, many districts have sought methods to more effectively evaluate the performance of teachers.

Further, relative to waiver requirements of the No Child Left Behind Act (NCLB, 2001), states could bypass the difficult annual targets of student growth by implementing a variety of components on the U.S. Department of Education’s agenda, including high quality systems of teacher evaluation. Many states reformed their teacher evaluation efforts to comply with NCLB directives:

> We will elevate the teaching profession to focus on recognizing, encouraging, and rewarding excellence. We are calling on states and districts to develop and implement systems of teacher and principal evaluation and support, and to identify effective and highly effective teachers and principals on the basis of student growth and other factors (U.S.D.E., 2011, Section 2, para 1).

The State of Michigan focused efforts on reforming its teacher evaluation policy. The revised school code, section 380.1249, imposed more rigorous requirements for teacher evaluation. Annual teacher evaluations replaced an every third year cycle (Michigan Legislative Website, 2014, section 301.1249, 1a). Further, by 2015–16, at least 50% of the annual year-end evaluation shall be based on student growth and assessment data (Michigan Legislative Website, 2014, section 301.1249, 2a (i)).
During revision of school code section 380.1249, the Michigan Legislature determined a need for a plan to help local school districts implement the teacher evaluation reform efforts and a body of educational experts who could help develop policy recommendations to help school districts carry out these new evaluation mandates. Thus, the state legislature commissioned the Michigan Council for Educator Effectiveness (MCEE, 2013), a group of six educators from the K-12 and higher education arenas, to develop a student growth and assessment tool and a formalized state teacher evaluation tool.

The MCEE (2013) worked for two years to determine which teacher evaluation frameworks would best support the research-based instructional strategies that embody effective teaching. After an extensive, statewide pilot study, the MCEE determined that four evaluation teacher evaluation tools aligned to measure research-based instructional practices would best meet the needs of educators across the state. An MCEE recommendation specified that classroom teaching must be observed and evaluated using one of the four state-piloted evaluation frameworks: Charlotte Danielson’s Framework for Teaching (Danielson, 2007), Marzano Teacher Evaluation Model (Learning Sciences International, 2011), The Thoughtful Classroom (Silver Strong Associates, 2013), or 5 Dimensions of Teaching and Learning (Center for Educational Leadership, 2014).

**Statement of the Problem**

Many states have emphasized development of more effective and rigorous teacher evaluation systems. Doherty and Jacobs (2013) stated,

Spurred in large part by competition for federal Race to the Top program funds, and more recently by the conditions laid out by the U.S. Department of Education to states pursuing waivers of the No Child Left Behind law, the widespread adoption of
more rigorous teacher evaluation policies represents a seismic shift rarely seen in education policy in general or state teacher policy specifically. (p. 1)

Michigan has implemented an important shift in the way teachers are evaluated across the state. If one of the major purposes of teacher evaluation is to enhance instruction and consequently impact student achievement, it will be essential to impact the instructional strategies that educators implement in the classroom. Demonte (2013) noted,

While one goal of the new evaluation systems is to garner information about teachers for human-capital management decisions—such as identifying and dismissing teachers who are ineffective—an important aspect of the system is to specify strengths and weaknesses in instruction and help teachers improve their professional practice. (p. 10)

The Michigan Council of Educator Effectiveness (MCEE, 2013), a committee formed to study and recommend a re-focused teacher evaluation system in Michigan, stated, “The system will be based on rigorous standards of professional practice and of measurement. The goals of this system are to contribute to enhanced instruction, improve student achievement, and support ongoing professional learning” (About Section, para. 3).

Recent research from John Hattie’s (2012) meta-analysis of education, *Visible Learning*, described the effectiveness of virtually every educational instructional strategy practiced in various classrooms around the world. Hattie stated, “Visible Learning was based on more than 800 meta-analyses of 50,000 research articles, about 150,000 effect sizes, and about 240 million students” (p. 1). These meta-analyses provided the basis to compare educational strategies on a scale of effect size and the impact that the strategy can have in the classroom. Effect sizes allow for relative comparisons about the different types of influences
on student achievement over time. Hattie found that virtually every instructional strategy has some influence on student achievement. Any effect size over zero (0) has some impact on achievement, but only the effect sizes that are at a level of .40 or higher influence student achievement at a level of one year’s growth. Thus, Hattie’s message was to understand teachers’ impact. A teacher should know that he or she can have a greater impact by focusing on a research-based instructional strategy that can yield one year’s growth or higher as opposed to an instructional strategy with a very low yield.

Hattie (2012) determined that any instructional strategy above a .60 effect size has a significant impact on student achievement and represents well over a year’s growth. In Visible Learning, Hattie ranked 150 educational practices using the effect size scale. Effective instructional strategies such as providing formative assessments, providing student feedback, and establishing effective teacher-student relationships are the cornerstone of Hattie’s work. He suggested that teachers can have a significant impact on student achievement if they successfully implement these research-based teaching practices.

Robert Marzano (2007), a prominent educational researcher, discovered the significant impact that teachers who effectively use research-based instructional strategies can have on student achievement. He captured these instructional strategies in The Art & Science of Teaching. This was a confluence of previous works researched by Marzano to outline the critical impact that teachers and the instructional strategies they use can have in raising student achievement. His publication outlined three general characteristics of effective teaching.

1. Use of effective instructional strategies
2. Use of effective classroom management strategies
3. Effective classroom curriculum design

Haystead and Marzano (2009) provided further evidence in their meta-analytic synthesis of studies, in which the use of research-based instructional strategies demonstrated a significant impact on student achievement. These studies analyzed 7,872 students who were placed in an experimentation group and 6,415 students who were placed in a control group. Over the course of these studies that took place from 2001—2008, students in the experimental group where the research-based instructional strategies were implemented experienced a 16 percentile jump from their class ranking in achievement. For example, a student who was ranked 50th in class ranking jumped to 34th in class ranking by the conclusion of these studies.

Educator Charlotte Danielson (2007) conducted extensive work to determine the impact that effective instructional strategies can have on student achievement. Her Framework for Teaching has been influential in millions of classrooms across the United States and the world. The framework is built on four domains in which research-based practices have been embedded:

Domain 1: Planning and Preparation

Domain 2: The Classroom Environment

Domain 3: Instruction

Domain 4: Professional Responsibilities

Danielson’s framework is based on research supporting the concept that certain instructional strategies are more influential on student achievement than others. Thus, Danielson’s design effectively isolated the most effective instructional strategies upon which teachers could center their practice. This research base is supported by the idea that teaching is both an art
and a science. Danielson’s Framework for Teaching was influenced by the research of Wittrock (1986), who compiled years of research in his collection *Handbook of Research on Teaching*. Danielson’s framework for teaching provided a base on which teachers and administrators can assess instructional strategies and identify the strengths and weaknesses in a teacher’s practice and can act as a growth model for schools.

The primary purpose of recent teacher evaluation efforts in the United States has been to improve student achievement. Questions remain whether Michigan and other states that are reforming teacher evaluation will be able to impact teachers’ instructional practices. How much, if at all, will teachers alter their practices to reflect research-based instructional practices identified by leading educational researchers? Will teachers change their instructional strategies to be more reflective of these evaluation models? Will instructional strategies increase in use? To what level will teachers use the instructional strategies indicated in their teacher evaluation models? These questions led to the problem at the heart of this study: whether there is a relationship between the teacher evaluation framework and the usage of instructional strategies, or are other factors influencing the change in use of the instructional strategies?

**Purpose of Study**

The purpose of this study was to determine whether teachers altered their teaching practices as a result of their local school district’s teacher evaluation system or whether other factors influenced the change in instructional strategy usage. Hattie (2012) suggested that teachers can be more effective in raising student achievement if they implement strategies that have the greatest effect size on achievement. Marzano (2007) and Danielson (2007)
supported many of Hattie’s (2012) findings in their own work on student and teacher effectiveness.

Teacher effectiveness is a central theme in a majority of school districts throughout Michigan. The Michigan Legislative Website (2014) rates teachers as ineffective, minimally effective, effective, or highly effective based on one of the approved teacher evaluation frameworks recommended by the Michigan Council of Educator Effectiveness (MCEE; 2013). How can administrators best support teachers who are aiming to improve their instructional strategies? According to Tucker and Stronge (2005), “It is our belief that teachers want and need feedback, not only on the act of teaching, but also on the results of teaching. Timely informative feedback is vital to any improvement effort” (p. 6). Administrators must provide guidance and feedback for teachers throughout the teacher evaluation process if they hope to improve instructional strategies and student achievement.

Administrators across Michigan have many opportunities to determine what impact re-focused teacher evaluation efforts are having in the classroom as the administrators have more frequent conversations with teachers about their instructional practices, spend more time on professional development, and analyze student growth data on a regular basis. The following research questions guided this study in the exploration of whether teacher evaluation models had an impact on the instructional practices used in the classrooms of multiple local school districts in southeastern Michigan:

**Research Questions**

1. Was there a significant relationship between the usage of specific teacher evaluation frameworks and the usage of specific instructional strategies?
2. Was there any significant influence between the reported usage of instructional strategies and any factors that might influence this change?

**Data Collection**

Data were gathered in a survey administered to teachers in the elementary grades in 10 selected public school districts in southeastern Michigan that use one of the four piloted evaluation models by the MCEE as their primary evaluation tool. Sections of the survey included 1) individual teacher demographics, 2) teacher evaluation in the school district, and 3) specific instructional strategies and the level of use by teachers (see Appendix A). Data were analyzed using a series of factor analysis and regression tests to determine if specific factors were influencing the use of specific instructional strategies.

**Definitions and Acronyms**

*CEL*—Center for Educational Leadership.

*Elementary School*—For purposes of this study, the term *elementary school* referred to any school that served students in kindergarten through Grade 5 or kindergarten through Grade 6.

*Instructional Strategy*—plan by which course learning objectives is delivered.

*MCEE*—the *Michigan Council of Educator Effectiveness* (MCEE), established by the Michigan legislature to study and recommend a re-focused teacher evaluation system in Michigan.

*Meta-Analysis*—use of statistical methods for contrasting and combining results from various studies in the hope of identifying patterns among study results or identifying other relationships in the context of these studies.
**MET—Measures of Effective Teaching** project, funded by the Bill & Melinda Gates Foundation, is a research partnership of academics, teachers, and education organizations committed to investigating better ways to identify and develop effective teaching.

**NCLB—No Child Left Behind Act of 2001**, enacted by the U. S. Congress, reauthorized the Elementary and Secondary Education Act and supports standards-based education reform based on the premise that setting high standards and establishing measurable goals can improve individual outcomes in education.

**OECD—Organisation for Economic Co-operation and Development**, founded in 1961 comprises the work of 34 countries to stimulate economic progress and world trade.

**PISA—Program for International Student Assessment**, a function of the OECD that assesses 15-year-olds’ achievement in reading, math, and science every three years in educational systems throughout the world.

**Research-Based Practice/ Instructional Strategy**—a procedure or plan that uses objective methods of reliable and valid observations and measurements, meets rigorous standards of peer review, and can be replicated and generalized.

**Student Growth**—the measurement of academic achievement demonstrated over the course of a school year that is typically determined by a combination of data points such as standardized tests and other local school district assessments.

**Teacher Effectiveness**—a term used to describe how a teacher is rated based on the Michigan Department of Education’s scale of ineffective, minimally effective, effective, or highly effective.

**Teacher Evaluation**—process in which the effectiveness of a teacher in the classroom is determined. A teacher evaluation typically includes documentation of multiple classroom
observations, which are assessed by use of an accepted tool such as the Marzano (2007) Teacher Evaluation Framework or the Danielson (2007) Framework for Teaching among others.

*Teacher Evaluation Framework (or Model)—research-based set of components of instruction upon which teachers are evaluated.*

**Limitations**

Information gathered from teachers through the use of a survey instrument demonstrated a level of subjectivity in which the instrument was interpreted differently depending on the teacher’s interpretation of the survey questions. Questions about the level of use of a particular instructional strategy were also subject to the specific teacher’s understanding of the particular strategy. Although survey questions were designed to limit bias, respondents could interpret that there is a certain correct or expected way of responding to these questions.

**Delimitations**

This study was limited to the voluntary participation of public school teachers of kindergarten through Grade 6 in southeastern Michigan. Charter schools were not included in this study. Therefore, findings are not generalizable to the entire population of teachers across the State of Michigan. Although the population of students and teachers in southeastern Michigan is diverse, the participating schools in this study may not be reflective of rural counties, such as those in the Upper Peninsula of Michigan, or densely populated urban environments, such as those in Detroit or Flint. This study did not take into account specific demographics of the population or socio-economic range of communities across the region. Those characteristics could have had an impact on the results of this study. Further,
this study was conducted at a point in time when policy decisions regarding teacher
evaluation and instructional strategies were in flux; thus, it may be difficult to replicate this
study in the future.

**Significance of the Study**

Michigan, like the rest of the United States, feels the pressure of other nations
outperforming its students on recent international PISA benchmarks. Will a more rigorous
teacher evaluation system lead to improved student achievement in local districts? Michigan
has invested $4.9 million in the Michigan Council for Educator Effectiveness (MCEE) to
administer a study with 13 school districts who piloted the use of four teacher evaluation
systems. In addition, MCEE spent more than two years, from June 2011 to June 2013,
researching various teacher evaluation systems (MCEE, 2013). The amount of time, energy,
and financial resources invested into teacher evaluation in Michigan, and many other states
across the nation, is staggering. Thus, it is imperative to determine the effectiveness of the
new teacher evaluation reforms on instructional practices. A positive outcome could have a
major impact on improving the instructional strategies in the classrooms across Michigan and
the nation. However, if the teacher evaluation reform efforts are largely a matter of
compliance, then it could be argued that teacher evaluation reform is a waste of time, energy,
and money.

This study is important, as it revealed the impact of teacher evaluation reform upon
instructional strategies. The study helped to identify a relationship, if any, between changes
in teacher evaluation frameworks and the changes in the usage of instructional strategies used
in classrooms. Further, the study helped to determine if other factors influenced the change in
the usage of research-based instructional strategies that are supported by the research of Hattie (2012), Marzano (2007), and Danielson (2007).

Summary

A history of teacher evaluation reform in the United States and Michigan and a brief summary outlining the importance of using research-based instructional strategies in conjunction with teacher evaluation systems are introduced in Chapter 1. The problem statement inquires whether teacher evaluation reform efforts in the State of Michigan impact the use of research-based instructional strategies. The purpose of this study was to determine the impact of teacher evaluation frameworks upon teachers’ use of research-based instructional strategies in specific public schools in southeastern Michigan. Thus, research questions were designed to determine whether teachers altered their teaching practices as a result of their local school district’s teacher evaluation system. Methods employed for the conduct of the study, definition of terms, limitations, and delimitations were discussed. The significance of this study was shown in the outcomes of implementation of teacher evaluation systems and their impact on improving the instructional strategies used in the classrooms across Michigan and the nation.

A comprehensive literature review in Chapter 2 examines the history of Michigan’s teacher evaluation policies provides details of the four state-approved teacher evaluation frameworks. Finally, eight research-based instructional strategies are reviewed from the supporting literature of John Hattie (2012), Robert Marzano (2007), and Charlotte Danielson (2007).
Chapter 2—Literature Review

History of Michigan’s Teacher Evaluation Reform Efforts

What is at stake? Public school systems throughout the United States have come under fire about student achievement over the last quarter of a century. PISA 2012 test scores showed that students in the United States lagged behind students in many other industrialized nations (OECD, 2012). The United States fared about average in most measures of achievement in mathematics, science, and reading. In mathematics, OECD found 29 countries achieving higher, 26 countries achieving lower and nine countries achieving at the same rate as students in the U.S. In science, OECD found 22 countries achieving higher, 29 countries achieving lower, and 13 countries achieving at the same rate. In reading, OECD found 19 countries achieving higher, 34 countries achieving lower, and 11 achieving at the same rate. These data, in part, fuel discussion about how to improve the educational system in the United States, and questions about teacher quality have been raised across the nation. In many Midwestern states, including Michigan, policy-makers have suggested that developing a more rigorous teacher evaluation system will help to reduce the number of poorly performing teachers and, consequently, improve student achievement in the state. As part of the literature review for this study, the history of Michigan’s teacher evaluation reform efforts was explored in greater detail.

Teacher Evaluation Agenda Setting

Fowler (2004) stated “Not every problem defined as an education policy issue is acted on by a government” (p. 17). However, in the case of teacher evaluation, policy quickly moved to the front of the agenda in the Michigan Legislature. The Michigan Senate first introduced an amendment of Section 1249 of the Revised School Code on November 11,
2009, wherein an annual job performance evaluation for school teachers was required (Michigan Legislative Website, 2014).

According to Fowler (2004), “The first dimension of power consists of explicit exercises of power, which are often observable directly” (p. 25). In this case, the explicit use of power to enforce more rigorous annual teacher evaluations gave the Michigan Legislature, under the guidance of Governor Rick Snyder, legal authority over school districts to monitor compliance with these laws. Despite many revisions and amendments in the House and Senate, this entire process, from start to finish, took fewer than two months. As a result, Senate Bill 0981 (2009) became a law that significantly ramped up the rigor and frequency of teacher evaluations in Michigan public schools (Michigan Legislative Website, 2009).

**The Components of an Effective Teacher Evaluation Framework**

Effective teacher evaluation frameworks require a number of components. First, it is important that the evaluation tool be valid and reliable. Lussier and Herndon (2012) noted, “When a measure has validity, it is a factual measure that measures the process that you wanted to measure. A reliable measure is consistent; it works in generally the same way each time we use it” (p. 287). Second, an evaluation tool must be acceptable and feasible to implement. It needs to be accepted as an appropriate tool to both the evaluator and the teacher being evaluated. Further, it needs to be feasible for the evaluator to use the tool. If an evaluation tool is too lengthy, for example, it doesn’t really matter if it is a good tool. The evaluator simply won’t have enough hours in the day to use the evaluation tool effectively. Next, the evaluation tool must be specific. It needs to provide meaningful information, so that the teacher will understand upon what the evaluation is based. Finally, the evaluation
tool needs to support the school district’s mission and objectives; it needs to serve as a guide to support the direction in which the school district is headed.

A number of other issues need to be considered when designing effective teacher evaluation frameworks. Teacher evaluation tools should be flexible. Mohrman et al. (1989) stated “Most performance appraisal systems are ‘cast in concrete,’ in the shape of an annual form to be completed” (p. 201). Quality teacher evaluation frameworks should allow for multiple forms of evaluation depending on a person’s position within the school district. In other words, the evaluation tool used for a third grade teacher may not necessarily be appropriate to use with a school psychologist. School districts should work toward creating multiple forms of the evaluation tool to meet the needs of all their employees.

Next, the most effective teacher evaluation frameworks provide opportunity for directive functions. This means that evaluators should meet on a regular basis throughout the school year (not just at the end of the year) to help direct the teacher to improve in specific areas. Too often evaluation occurs only at the end of the year, which does not provide for opportunities for improvement in the current year. Teaching and learning is an ongoing process and does not simply end at the conclusion of the school year; thus, effective teacher evaluation frameworks should be considered a work in process. Finally, the most effective teacher evaluation tools offer meaningful feedback from credible evaluators. It is very important that feedback is timely and specific enough that the teacher knows what to do to make improvements.

**Teacher Evaluation Policy Implementation**

Policy implementation is often very difficult. According to Fowler (2004), “The fact that a government body has come up with a new policy does not mean that it will be
followed. The implementers may not want to follow it, or they may not be able to” (p. 244). Realizing that implementation would become a significant issue, the Michigan Legislature created a Governor’s Educator Effectiveness Council. This council was required to contract with an additional expert, no later than October 31, 2011, to develop a student growth and assessment tool and a state evaluation tool upon which to rate teachers. Thus, in September 2011, The Michigan Council of Educator Effectiveness (MCEE), a group of six educational experts from K-12 and higher education, was appointed to develop the coveted student growth and assessment tool and a formalized state teacher evaluation tool. The MCEE, led by University of Michigan Dean of Education, Deborah Ball, worked for two years to pilot four different teacher evaluation tools with local districts throughout the State of Michigan. The purpose of this endeavor was to compile data to determine if one teacher evaluation tool worked better than another to track teacher and student growth. To carry out this daunting task, the MCEE requested and was granted $6 million to conduct the pilot studies, which were conducted in 13 Michigan Public School Districts during the 2012–13 school year. At the conclusion of the pilot, the MCEE released a formal recommendation in July 2013 and highlighted a number of key findings including the following:

- Four evaluation frameworks were piloted over the course of this study: Charlotte Danielson’s (2007) Framework for Teaching, Marzano Teacher Evaluation Model (Learning Sciences International, 2011), The Thoughtful Classroom (Silver Strong Associates, 2013), and 5 Dimensions of Teaching and Learning (Center for Educational Leadership, 2014). All of the four piloted evaluation tools can be effective in teacher evaluation, as they all support researched-based teaching practices. The state should adopt one official tool after conducting a Request for
Proposal (RFP) to determine which tool will be most affordable. However, a district that wants to continue using one of the other three tools that were not officially selected, may do so at their own expense.

- The state should continue to develop or select all aspects of assessments that are aligned to state-adopted content standards in all core content areas (i.e., English language arts, mathematics, science, and social studies).
- The state should also develop or select assessments aligned to state-adopted content standards in high-volume, non-core content areas where state-adopted content standards exist (e.g., arts, health and physical education, career and technical education, and many high school electives).
- The use of three categories (professional, provisional, and ineffective) for teacher effectiveness ratings is more appropriate than the current effectiveness ratings (ineffective, minimally effective, effective, highly effective).

A follow-up report released by the University of Michigan’s Institute for Social Research outlined some important findings from the pilot study of educator effectiveness tools (Rowan et al., 2013). Principals and educators surveyed during the pilot studies in the various districts had differing views on the impact of the teacher evaluation process. A number of key findings highlighted the mixed impact of the pilot. First, principals in the study were responsible for evaluating an average of 25 teachers, making it difficult to effectively be in the classroom an optimal amount of time. Second, vendor training for the four piloted evaluation frameworks was only partially successful. The training left many principals feeling unprepared to effectively evaluate teachers using the existing rubrics. Finally,
teachers and principals had mixed reviews on how effective the observation tools were in assessing instructional practice.

**The Four Evaluation Frameworks**

Michigan piloted four approved frameworks in 13 school districts across the state, including Big Rapids, Cassopolis, Clare, Farmington, Garden City, Gibraltar, Harper Creek, Leslie, Marshall, Montrose, Mt. Morris, North Branch, and Port Huron. A primary goal of all piloted evaluation frameworks was to measure effectiveness of teaching in classrooms across the state. Further, the four-piloted, research-based evaluation frameworks comprised teaching practices designed to improve teaching and learning. It was important to analyze the evaluation frameworks to determine the specific research-based teaching practices employed in each.

**Danielson’s (2007) Framework of Teaching and Learning.** When Charlotte Danielson set out to improve teaching and learning, she never expected to influence so many people in the educational world, but that is exactly what happened. Danielson, an economist, teacher, and administrator studied the essence of good teaching and learning. Her first book, published in 1996, *Enhancing Professional Practice: A Framework for Teaching*, was not designed with the intent of being used as a primary teacher evaluation tool. However, over the years the text evolved into one of the most influential teacher evaluation tools in the world. Danielson was quick to point out that administrators need to be very careful about how they use the tool. Yaple (2012), in an interview, quoted Danielson, “To suggest you can go into a classroom for five minutes with a little checklist and decide whether someone should get tenure is absurd” (Trained Observers section, para 2).
Danielson’s (2007) Framework for Teaching is divided into four Domains of Practice: Domain I, Planning and Preparation; Domain II, Classroom Environment; Domain III, Instruction; and Domain IV, Professional Practice. Each domain has components that identify research-based strategies that, if implemented effectively, can increase student achievement.

**Domain I: planning and preparation.** Extensive research on the importance of careful planning and preparation is documented. Educators who understand the direction of their lesson plan and what they want students to accomplish have much better results than those educators without a concrete plan (Skowron, 2001). Teachers need to understand the content knowledge that they will be teaching. Further, the ability to connect a student’s background knowledge to his/her progression of learning has been proven to be of critical importance (Sykes & Bird, 1992).

**Domain II: classroom environment.** Establishing relationships with students is an essential strategy to student achievement. Teachers have great influence over this process. Lemov (2010) noted “Ideally all teachers connect to their students and inspire them to want for themselves the things the class is trying to achieve. Inspiring students to believe, want to succeed, and want to work for it for intrinsic reasons is influencing them” (p. 149). The domain of classroom environment is where the culture for learning is established and reinforced on a daily basis.

**Domain III: instruction.** Research has shown that quality teachers are very clear about setting high expectations and establishing goals for all students (Tomlinson, 1999). Further, the instruction that takes place inside a classroom should engage students in questioning and discussion techniques, which are the cornerstones of a deep learning
environment. However, that is not always the case in many classrooms where surface-level questions lead to very little discussion. Hattie (2012) noted, “More effort needs to be given to framing questions that are worth asking – ones that open the dialogue in the classroom so that teachers can ‘hear’ students’ suggested strategies” (p. 75). Domain III aims to support educators who teach for understanding and student mastery versus teaching with little or no depth.

**Domain IV: professional responsibilities.** Teaching and learning expands beyond the walls of the classroom. Domain IV endorses the expectation that teachers are growing and developing professionally. DuFour, Dufour, and Eaker (2008) stated in the revision of their 1998 publication, *Professional Learning Communities at Work*, “The most promising strategy for sustained, substantive school improvement is developing the ability of school personnel to function as professional learning communities. Our conviction in the validity of that statement has not waivered” (p. 1). Working collectively with staff to improve teaching and learning in a school is an extremely important aspect of this fourth domain.

Can Danielson’s (2007) *Framework for Teaching* actually measure student achievement? Some have suggested that good teaching and learning are really based on an administrator’s judgment and not on the components of any type of rubric. A large study analyzed the Cincinnati Public Schools’ TES (Teacher Evaluation System) and the records of 2,071 teacher evaluations from the 2000–2001 school year to the 2008–2009 school year. The data showed that certain teaching practices do impact student achievement (Kane, Taylor, Tyler & Wooten, 2010). The Cincinnati TES rating system was based on Danielson’s (2007) *Framework for Teaching*. Using eight of the teaching practices within Domains II and III of the Danielson Framework for Teaching, results demonstrated that teachers in the top
quartile had greater student achievement than teachers rated in the bottom quartile in implementing these eight teaching practices. In this study, 97% of the teachers were observed between two and six times. Conclusions from the Cincinnati study demonstrated that classroom observations are able to determine teaching practices that lead to increased student achievement. Kane et al. (2010) stated,

If one student started the year at the 50th percentile in math and reading and had a teacher in the lowest quartile of the overall TES rating while a similar student had a teacher in the upper quartile of that rating, we would expect the second student to be four percentile points ahead in math and five percentile points ahead in reading by the end of the year. (p. 27)

The Measures of Effective Teaching (MET) Project, funded by the Bill & Melinda Gates Foundation, was conducted to analyze how evaluation, feedback, and professional development can have a significant impact on teaching and learning (Kane & Staiger, 2012). The study involved a partnership of academics, teachers, and education organizations and emphasized six minimum requirements for high quality teacher observations. One requirement involved choosing an observation and evaluation instrument that sets clear expectations. Danielson’s (2007) Framework for Teaching, one of the five evaluation instruments used in the study indicated, “All five instruments were positively associated with student achievement gains (Kane & Staiger, 2012, p. 5). In short, teachers who more frequently emphasized the instructional strategies in these observation and evaluation instruments into their classroom practice had greater student achievement gains than other educators.
The Marzano Teacher Evaluation Model (Learning Sciences International, 2011). Marzano’s model was based on a compilation of over 5,000 meta-analysis studies where effect size on student achievement was measured. The studies spanned several decades of research. Causality is not easily determined in studies on the impact of teacher evaluation models. Marzano’s research provided a connection between teachers who used instructional strategies of his teacher evaluation model and student achievement. Marzano studied more than 14,000 students and 300 teachers in 14 different school districts in a controlled/experimental setting. He was able to determine that the effect-size for teachers who followed the strategies in the Marzano Teacher Evaluation Model were able to increase student achievement by 16 percentile points.

The Marzano Teacher Evaluation Model (Learning Sciences International, 2011) was based on four domains, similar to those of Danielson’s (2007) Framework for Teaching.

- Domain I: Classroom Strategies and Behaviors
- Domain II: Planning and Preparing
- Domain III: Reflecting on Teaching
- Domain IV: Collegiality and Professionalism.

The difference between the Marzano (Learning Sciences International, 2011) model and the Danielson (2007) Framework for Teaching is the emphasis on the number of elements inside the various domains. In the Marzano model, 41 of the 60 elements fall within the first Domain, whereas, as in the Danielson (2007) Framework, 76 elements are, for the most part, equally distributed throughout the four domains. The distribution reflects the importance on teaching strategies and practice.
**Domain I: classroom strategies and behaviors.** The first domain includes 41 of the 60 elements that compose the Marzano Teacher Evaluation Model. Further, the Marzano Teacher Evaluation Model surrounds 10 design questions, and nine of the ten design questions are asked in Domain I. This domain is divided into three segments. Segment 1 includes the routine events that occur in the classroom on a regular basis, such as communicating learning goals and establishing rules and procedures. Content in the classroom is the focus of Segment 2. Strategies that support the content in the classroom include helping students interact with new knowledge, practice deepening their understanding of new knowledge, and testing hypotheses about new knowledge. Segment 3 supports strategies that are enacted on the spot, including engaging students, maintaining effective relationships with students, communicating high expectations, and adherence to rules and procedures.

**Domain II: planning and preparing.** The second domain includes the final design question, which deals with planning and preparing. Three categories in this domain include planning and preparing for lessons and units, planning and preparing for the use of materials and technology, and planning and preparing for special needs of students. Marzano (2007) contended that teachers who demonstrate a firm understanding of how to design instructional strategies will impact student learning far greater than teachers who do not understand how to prepare in this manner.

**Domain III: reflecting on teaching.** The third domain focuses on the teacher’s ability to reflect on his or her practice and develop a personal growth plan. This is an important component of teacher development.
**Domain IV: collegiality and professionalism.** Domain four helps to establish the foundation from which the other three domains can be developed and supported. This domain involves displaying a positive environment and encouraging a learning community where ideas related to teaching practice are shared on a regular basis. Professional behavior should be stressed to establish a nurturing school setting that promotes a culture of collegiality.

**The 5 Dimensions of Learning.** Developed at the Center for Educational Leadership (2014), the 5 Dimensions of Learning Framework was designed around five primary concepts that administrators and teachers should consider when designing and applying various instructional strategies:

1. **Purpose:** setting a clear, meaningful course for student learning
2. **Student Engagement:** encouraging substantive, intellectual thinking
3. **Curriculum and Pedagogy:** ensuring that instruction challenges and supports all students
4. **Assessment for Student Learning:** using ongoing assessment to shape and individualize instruction
5. **Classroom Environment and Culture:** creating classrooms that maximize opportunities for learning and engagement

Instructional coaching is the tenet behind the success of the teacher evaluation framework developed by the Center for Educational Leadership (CEL). Research from six years of studying partner school districts yielded powerful results.

CEL (2007) cited Elizabeth Boatright’s study of the power that instructional coaching had in high school transformation. High schools are often resistant to making meaningful change in the transformation of teaching practice. Boatright studied the impact that
instructional coaching can have to get teachers invested in improving their instruction.

Combined with a teacher evaluation framework that provides a meaningful focus and the right conditions that support instructional coaching, instructional improvement can and does occur. The Center for Educational Leadership noted,

> Among the conditions the researcher explored were the expectation set by district administrators and building principals that teachers would participate in the coaching sessions; the frequency of interaction among teachers and their coach; the coach’s facilitation style; and the students’ response to new strategies employed by teachers. (p. 5)

In another study, instructional coaching combined with the use of the 5 Dimensions of Learning evaluation model demonstrated positive student achievement. Located in Burien, Washington, Highline Public Schools employed the instructional coaching practices from CEL (2007) and found that student achievement rose and the achievement gap between English language learners and the rest of the Highline student population closed. CEL noted “The percent of 4th grade English Language Learners meeting standard in reading improved from 26% in 2005 to 46% in 2006” (p. 9).

Similar research exploring the increase of student achievement and the narrowing of the achievement gap with Hispanic students demonstrated CEL’s (2007) success in combining instructional coaching with their teacher evaluation framework. “There was a similar reduction in the achievement gap between 4th grade White students and Hispanic students, with Hispanic students moving from 48 % meeting standard in 2005 to 63 % in 2006” (p. 9).
The Thoughtful Classroom. Designed by Silver Strong Associates (2013), the Thoughtful Classroom plan is a teacher evaluation framework that comprises three components with ten specific dimensions aimed to improve classroom practice.

- Component One: Four Cornerstones of Effective Teaching
  - Dimension 1: Organization, Rules and Procedures
  - Dimension 2: Positive Relationships
  - Dimension 3: Engagement and Enjoyment
  - Dimension 4: A Culture of Thinking and Learning

- Component Two: Five Episodes of Effective Instruction
  - Dimension 5: Preparing Students for New Learning
  - Dimension 6: Presenting New Learning
  - Dimension 7: Deepening and Reinforcing Learning
  - Dimension 8: Applying Learning
  - Dimension 9: Reflecting and Celebrating Learning

- Component Three: Looking Beyond the Classroom
  - Dimension 10: Effective Professional Practice

The Thoughtful Classroom emphasizes instructional practice aimed at improving student learning; thus, nine of the ten dimensions are geared towards improving classroom instruction. Malm (2009) stated, “Recent research indicates that the quality of teachers and their teaching are the most important factors for student outcomes. Teachers vary markedly in their effectiveness, and differences in student performance are often greater within schools than between schools” (p. 78).
The Thoughtful Classroom framework is based on a compilation of research that integrates instructional design and classroom practice into a model of ten dimensions that can be beneficial to improving instruction. Developers worked directly with the Green River Regional Educational Cooperative (GRREC) to conduct a ten-district pilot study in Southwestern Kentucky. The pilot included 50 schools from 10 different districts in Kentucky. The Silver Strong (n. d.) professional development team worked directly with teachers and administrators in these districts. Together, learning clubs were formed to effectively implement instructional practice. Using this professional practice in conjunction with The Thoughtful Classroom framework, the 10 pilot districts outperformed the state average on the state accountability index by more than 1.5 points over a three-year period between 2004 and 2006. In addition, Kentucky’s district that showed the most improvement on the state accountability index over this time frame, participated in this GRREC pilot (p. 6).

**John Hattie’s Research on Visible Learning**

John Hattie (2012), an educational researcher from New Zealand, wrote Visible Learning in 2009 with the intention of showcasing the learning strategies that make the biggest difference in student achievement. Hattie noted “Visible Learning was based on more than 800 meta-analyses of 50,000 research articles, about 150,000 effect sizes, and about 240 million students” (p. 1). Effect size, as defined by Hattie, is the average post-test to average pre-test spread–standard deviation (p. 257). Since the initial publication, Hattie has conducted another 100+ meta-analyses, all of which support the same conclusion: Certain instructional strategies have a greater impact on student achievement than others. The research is based on two different types of effect size groups:
1. Comparison between groups. For example, comparing one group of students who received significant teacher feedback with a group of students who did not receive significant teacher feedback.

2. Comparisons over time. For example, initial results with results that were determined 6 months later.

Hattie’s meta-analyses in *Visible Learning* (2009) compiled a list of 150 influences on student achievement (p. 251). Hattie developed a scale that determined that an effect size (ES) of 0.40, signifying approximately one year’s growth in achievement, is a hinge point for determining effective or non-effective strategies. The scale demonstrated that instructional strategies where d<0.20 have a low effect size; those that fall between 0.30–0.60 have a medium effect size; and strategies that are > 0.60 have a large effect size. Hattie’s list of influences demonstrated that 145 out of the 150 influences have an effect size that is larger than zero. Only five influences have a negative impact on student achievement.

Hattie’s (2012) work demonstrated that a majority of the teaching strategies implemented in classrooms across the world do impact student achievement. Hattie noted “When teachers claim that they are having a positive effect on achievement, or when it is claimed that a policy improves achievement, it is a trivial claim, because virtually everything works” (p. 2). His primary argument was that certain instructional strategies have a far greater impact than others. For example, lowering class size as a strategy to improve achievement has been one of the most researched strategies to date. However, the impact of lowering class size according to Hattie is 0.21. Thus, lowering class size does have a low impact on student achievement. The finding doesn’t mean an educator would not strive for lower class size; however, if faced with the decision of spending a significant amount of
money to lower class size, which has an effect size of 0.21 versus spending time improving classroom discussion, which has an effect size of 0.82, the educator would have to question the return on the investment.

Watts and Georgiou (2008) supported Hattie’s argument with her research on class size in the Tennessee STAR (Student/Teacher Achievement Ratio) study. Watts and Georgiou found that the student-teacher ratio had little impact on the four achievement measures (criterion referenced assessments in K-8 math, K-8 reading/language plus writing, 9–12 math, and 9–12 reading/language plus writing) that were being examined in the study. “After controlling for the variance due to socioeconomic status, student-teacher ratio was not significantly related to any of the four achievement measures” (p. 29).

Strategies that have a greater impact on student achievement should be replicated. Strategies that have a lesser impact on student achievement should be analyzed to determine how to make them more impactful. Hattie’s (2012) studies did not suggest that teachers should abandon instructional strategies that he determined have a lower impact on student achievement. Hattie stated “The central question should be the debate about allocating resources to sustain and support those that have this d>0.40 influence, and to ask seriously what to change where there is evidence of lower effects” (p.12).

Hattie (2012) suggested that school systems need to develop nine key practices if they wish to improve student achievement:

- High expectations for all students;
- Strong personal connections between students and adults;
- Greater student engagement and motivation;
- A rich and engaging formal and informal curriculum;
• Effective teaching practices in all classrooms on a daily basis;
• Effective use of data and feedback by students and staff to improve learning;
• Early support with minimum disruption for students in need;
• Strong positive relationships with parents;
• Effective engagement with the broader community. (p. 151)

Hattie (2012) discussed the notion that school districts need to create communities of learners who are eager to collaborate and look critically at student achievement to determine what impact teachers are having in the classroom. According to Hattie “So often, in schools when time is created for teachers to be out of their classes, teachers want to spend the time marking, preparing, and seeking resources” (p. 168). Hattie further pointed out that teachers and administrators consistently want to try different curriculums, and implement more intensive assessment practices. Yet, the time for professional development can be best spent if teachers and administrators plan with each other, analyze student learning, and document evidence of student growth. It is not about creating the next innovative instructional strategy. Instead, it is about using the list of student influences that we now know have the greatest impact on student achievement to get better at implementing these strategies. According to Hattie, it is about knowing thy impact and acting on it.

Danielson, Hattie, Marzano—Instructional Practices Connection

Danielson (2007), Hattie (2012), and Marzano (2007) all highlighted the importance of teachers using research-based instructional strategies to maximize student achievement. All of these practitioners emphasized strategies that have a greater impact on student achievement than other strategies. Table 1 demonstrates a connection between the research-based instructional strategies analyzed in this study that, if implemented successfully, have a
significant impact on student achievement. For example, regarding instructional strategies, Danielson (2007) used language in *Creating an Environment of Respect and Rapport* similar to Hattie’s (2012) exploration to the effectiveness of the student-teacher relationship and Marzano’s (2007) question relative to establishing and maintaining effective relationships.
Table 1

*Instructional Strategy Connections*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain 2a: Creating and Environment of Respect and Rapport</td>
<td>Teacher-Student Relationship ES = 0.72</td>
<td>What will I do to establish and maintain effective relationships?</td>
</tr>
<tr>
<td>Domain 2b: Establish a Culture for Learning</td>
<td>Student Expectations ES = 1.44</td>
<td>What will I do to communicate high expectations for all students?</td>
</tr>
<tr>
<td>Domain 3c: Managing Classroom Procedures</td>
<td>Classroom Management ES = 0.52</td>
<td>What will I do to establish or maintain classroom rules and procedures?</td>
</tr>
<tr>
<td>Domain 2d: Managing Student Behaviors</td>
<td>Classroom Behaviours ES = 0.68</td>
<td>What will I do to recognize and acknowledge adherence and lack of adherence to classroom rules and procedures?</td>
</tr>
<tr>
<td>Domain 3a: Communicating with Students</td>
<td>Teacher Clarity ES = 0.75</td>
<td>What will I do to establish rules and procedures?</td>
</tr>
<tr>
<td>Domain 3b: Questioning and Discussion Techniques</td>
<td>Classroom Discussion ES = 0.82</td>
<td>What will I do to help students effectively interact with new knowledge?</td>
</tr>
<tr>
<td>Domain 3c: Engaging Students in Learning</td>
<td>Meta Cognitive Strategies ES = 0.69</td>
<td>What will I do to engage students?</td>
</tr>
<tr>
<td>Domain 3d: Using Assessment in Instruction</td>
<td>Formative Assessment ES = 0.90</td>
<td>What will I do to establish and communicate learning goals, track student progress and celebrate success?</td>
</tr>
</tbody>
</table>

*ES = Effect Size (small effect size < 0.30, medium effect size is 0.30–0.60, large effect size >0.60)*
Eight Instructional Strategies Proven to Raise Student Achievement

1. Student-Teacher Relationship. The relationships established between the student and teacher are very important to improving student achievement. Hattie (2012) noted that an effect size of .72 can be realized by establishing positive student-teacher relationships. This equates to almost two years of growth in student achievement using his effect size scale. Goodwin (2011) examined studies on building strong relationships with students, including one study that was conducted in Alaska in 1969 by Judith Kleinfeld, a doctoral student at Harvard University. Kleinfeld examined four types of teachers to determine what types had the greatest impact on Native Alaskan students who were not performing well in school.

- Traditionalists—set high expectations but did not develop personal relationships with students.
- Sophisticates—aloof and undemanding
- Sentimentalists—warm but undemanding
- Supportive Gadflies—warm and demanding

Only the students whose teachers were classified as Supportive Gadflies, or warm demanders, demonstrated any desire to work hard in school. Goodwin (2011) noted “In the classrooms of these teachers, students actively participated in discussions and were willing to work hard for their teachers, with whom they had developed a positive, mutually respectful rapport” (p. 23).

Roorda, Koomen, Spilt, and Oort (2011) conducted four separate analyses of the associations between positive aspects of the Teacher-Student Relationship (TSR) and engagement, negative aspects of the TSR and engagement, positive aspects of the TRS and achievement and negative aspects of TSR and achievement. This research looked at 810
studies that factored in these four associations. Roorda, et al. (2011) found that “All analyses showed significant associations between the investigated variables, providing further support for the notion formulated in prior research literature and review studies that TSRs influence students’ engagement and achievement” (p. 515). In addition, Cornelius-White (2007) revealed an above-average association between person-centered teacher variables—affective variables such as empathy and warmth and student outcomes—affective or behavioral and cognitive outcomes (p. 134).

2. Setting High Student Expectations. Lemov (2010) stated, “One consistent finding of academic research is that high expectations are the most reliable driver of high student achievement, even in students who do not have a history of successful achievement” (p. 27). The work of Rosenthal and Jacobsen (1968) supported the notion that a teacher’s expectations significantly impact student performance. In an experiment called the Pygmalion effect, they randomly selected groups of students and told the teachers that this group of students did very well or very poorly on the Harvard Test of Inflected Acquisition. In fact, neither of these groups had been tested at all. However, the study concluded that the students who allegedly scored higher on the Harvard test were treated differently by their teachers than the control group. Results demonstrated that higher expectations were set for these students and therefore they performed at a higher level than the control group.

John Hattie (2009) listed student expectations as the influence that has the most significant impact on academic achievement. He calculated an effect size of 1.44, which translates into approximately three years of student growth. When a teacher determines a student’s expectations and pushes the learner to exceed those expectations, the student can gain confidence in his or her learning ability. This practice can translate into significant
student growth and academic achievement. However, the way in which teachers convey their expectations is very important. It is critical to provide praise with specific feedback for students to excel to a higher level of achievement. Simply praising students and telling them that they are really smart with no specific feedback about their effort can often be detrimental.

Dweck (2006), a Stanford psychologist, conducted an experiment in which she divided students into two groups. In the first group, students were consistently praised about their test results and attributed those results to how smart the students were. In the second group, the students were consistently praised about their test results and attributed the results to their hard work. The first group, after a period of time, developed a fixed mindset that their achievement was solely based on how smart they were and not something that was earned through effort. Thus, these students began to have trouble in accepting more challenging assignments out of fear that they would no longer be perceived as smart if they failed. On the other hand, 90% of the second group of students who were consistently praised for their hard work and provided with specific feedback were much more willing to accept and excel at challenging assignments. In describing this second group of students, Dweck noted, “They knew that human qualities, such as intellectual skills, could be cultivated through effort; and that’s what they were doing – getting smarter” (p. 4). The second group of students had developed a growth mindset which continually pushed them to have higher expectations.

3. Classroom Management. Establishing rules and procedures in the classroom is essential for student learning to take place. Marzano (2007) noted, “The importance of establishing rules and procedures is mentioned in virtually every discussion of effective classroom management” (Research and Theory, Chapter 6, Para. 3). Marzano reviewed more
than 100 studies on classroom management and found the classrooms that had teachers who established effective classroom management procedures showed a decrease in disruptive behavior of 28 percentage points.

Lemov (2010) noted, “Too often teachers have not taken the time to teach their students, step by step, what successful learning behavior looks like” (p. 146). Effective classroom management is best combined with discipline, control, influence, and engagement. Lemov continued,

Teach students how to do things right, not just establish consequences for doing them wrong. To truly succeed you must be able to control students; that is, get them to do things regardless of consequence, and to inspire and engage them in positive work. (p. 147)

Stronge, Ward, and Grant (2011) studied the impact that various classroom practices had on student achievement. In Phase I of their study, they analyzed the effectiveness of 307 fifth-grade teachers in terms of student learning gains. The teachers were then separated out in quartiles in terms of their students’ achievement gains on reading and mathematics assessments. In Phase II of the study, 32 of the teachers participated in an in-depth analysis of their classroom management practices. Seventeen of these teachers were in the top quartile and 15 of these teachers were in the bottom quartile based on the student achievement gains in Phase I of the study. Top quartile teachers scored significantly higher in multiple dimensions related to classroom management. These teachers were far better at establishing routines, monitoring student behavior, and using time effectively.

4. Student and Classroom Behaviors. Establishing a strong foundation around student and classroom behavior management goes deeper than just establishing rules and
order. Effective behavior management is more focused on an authoritative versus authoritarian approach to running a classroom. According to Wilkinson and Meiers (2007), “Throughout the literature, there is a clear distinction drawn between ‘authoritarian’ and ‘authoritative’ classroom management styles, with the latter being more effective in improved social and academic outcomes for students” (p. 2). Unlike the authoritarian teacher who makes it very clear that he or she is in charge of the classroom, the authoritative teacher sets limits on the students, but also encourages independence. The authoritative teacher is much more concerned about establishing an effective student–teacher relationship to establish a discipline with dignity approach to running a classroom. Hattie’s (2003) meta-analysis studies found that expert teachers established deep respect for the student–teacher relationship as it relates to classroom and behavior management. Thus, when a teacher imposes a negative consequence on a student, the positive relationship with the student already established by the teacher allows for a mutual understanding for the needed consequence.

Marzano (2007) described the importance of balancing positive and negative consequences when it comes to student and classroom behavior. In particular, he studied a type of classroom management coined withitness. He concluded that this type of behavior management had a significant impact on reducing classroom disruptions by 42%. (Research and Theory, Chapter 7, Para. 11). Brophy (2003) described withitness as “Remaining ‘with it’ (aware of what is happening in all parts of the classroom at all times) by continuously scanning the classroom, even when working with small groups or individuals” (p. 11). Further, effective managers do not wait until behavior is becoming disruptive to other
students in the class. They intervene quickly to ward off unwanted disruptions in the classroom.

5. **Teacher Clarity and Goal Setting.** Cortez, Gayle and Preiss (2006) stated, “Teacher clarity is another construct embedded in the concept of teacher effectiveness. Clarity is described as the ability of teachers to unambiguously explain ideas and directions and the ability to discern student understanding of the material presented” (p. 268).

Numerous research studies have confirmed that teachers who provide clear directions and establish learning targets in which students know how to achieve a successful outcome can significantly increase student learning. Hattie (2009) confirmed that teacher clarity has a .75 effect size on influencing student achievement. This finding suggested that this strategy, if done well, can increase student achievement up to two years. Those teachers who clearly communicate the criteria for success, provide the knowledge and understand how to guide next steps in student instruction, tend to have the greatest success in the classroom.

Toale (2001) sampled 671 students from a medium-sized Mid-Atlantic university. The students, enrolled in a large communications class, were surveyed anonymously and asked a series of questions, several which were related to teacher clarity. Results of the study showed that teacher clarity had a positive impact on affective learning and teacher credibility. Toale concluded “As teacher clarity increased, the scores on the affective learning and credibility outcomes also increased. This is consistent with previous findings on teacher clarity” (p. 53).

Marzano (2007) reported that teachers who are effective in setting goals have a significant impact on student learning. He cited studies, including one from Lipsey and Wilson (1993), in which they synthesized the findings of 204 reports. Marzano (2007) noted,
“For the Lipsey and Wilson effect size of 0.55, the percentile gain is 21. This means that the average score in classes where goal-setting was effectively employed would be 21 percentile points higher than the average score in classes where goal setting was not employed” (Marzano, 2007, *Research and Theory*, Chapter 1, Para. 2).

6. **Questioning and Discussion Techniques.** Developing good questioning and discussion techniques is a very important part of any teacher’s repertoire of instructional strategies. Lemov (2010) stated, “Good questioning builds solid mastery of even complex ideas by uncovering and explicating each component piece of a concept in progression” (p. 235). Marzano (2007) synthesized the studies of multiple scholars who researched the impact that questioning techniques had on student achievement. He found that these studies, which had 143 effect sizes, demonstrated an increase of 10 to 28% on student achievement. Questioning techniques that were inferential in nature and required students to elaborate and extend their thinking were the techniques that reported the largest gains (Marzano, 2007, *Questioning*, Chapter 2,).

Hattie (2012) supported the need to ask specific types of inferential questions. He noted that teachers tend to ask too many surface-level questions that fail to truly engage students in lively and deep discussion. He stated, “More effort needs to be given to framing questions that are worth asking – ones that open the dialogue in the classroom so that teachers can hear students’ suggested strategies” (p. 75). Opening dialogue and allowing students to dive deeply into a classroom discussion gives them greater voice in expressing their opinions and thoughts. It can also allow the teacher to gauge student understanding of a specific topic. Hattie listed classroom discussion as a very effective strategy that has an effect size of .82.
Classroom discussion is an instructional strategy that is further supported by the research of Soter et al. (2008). They conducted a three-year study in which they analyzed nine types of discussion techniques in a literature review in year one and a meta-analysis study in years two and three:

The data indicate that the most productive discussions (whether peer or teacher-led) are structured, focused, occur when students hold the floor for extended periods of time, when students are prompted to discuss texts through open-ended or authentic questions, and when discussion incorporates a high degree of uptake. (p. 373)

7. Student Engagement. Engaging students in classroom instruction is necessary for learning to occur. Defining student engagement can be difficult, as it can be discussed in a variety of ways, including behavioral, emotional, and cognitive engagement. Reeve (2006) mentioned,

Engagement includes on-task behavior, but it further highlights the central role of students’ emotion, cognition, and voice. When engagement is characterized by the full range of on-task behavior, positive emotions, invested cognition, and personal voice, it functions as the engine for learning and development. (p. 658)

Marzano (2007) synthesized 80 effect sizes in four different studies to demonstrate that student engagement increased student achievement in the range of 27 to 31% (*Research and Theory*, Chapter 5, Research Findings Regarding Engagement and Achievement). Marzano identified five areas that can provide assistance for teachers aiming to increase student engagement:

- High Energy—physical activities coupled with pacing of instruction lead to greater student engagement.
• Missing Information—games that require students to solve a mystery or some unknown entity.

• The Self-system—where students focus on the “I” part of the self to internalize what motivates a student to engage in a task.

• Mild Pressure—using questioning strategies and wait time helps to engage students, as they need to be ready if they are called upon.

• Mild Controversy and Competition—using debate as a format to stimulate controversy and spirited competition.

Klem and Connell (2004) stated, “Researchers have found student engagement a robust predictor of student achievement and behavior in school regardless of socioeconomic status. Students engaged in school are more likely to earn higher grades and test scores, and have lower drop-out rates” (p. 262-263). Hattie (2012) pointed out that engagement, by way of using metacognition strategies, is a very effective method of impacting student achievement. Metacognition is a practice that teaches students to think about their thinking. Students learn how to approach a learning task, evaluate their own progress, monitor comprehension, and self-question. All of these skills have a high effect size of 0.69 which leads to greater student achievement and deeper engagement in the learning process.

8. Formative Assessment. Formative assessment, also termed assessment for learning, is a practice that, according to the work of Black and Wiliam (2009), is based on five major strategies:

• Clarifying and sharing learning intentions and criteria for success;

• Engineering effective classroom discussions and other learning tasks that elicit evidence of student understanding;
• Providing feedback that moves learners forward;
• Activating students as instructional resources for one another; and
• Activating students as the owners of their own learning.

These strategies can have a significant impact on student learning. Black, Harrison, Lee, and Marshall (2003) worked with a group of 24 teachers in math and science to support their use of formative assessments. Through this work, these teachers were successfully able to increase student achievement by approximately 70%.

Marzano’s (2007) collection of meta-analysis studies in the area of formative assessment also indicated that significant student achievement can be realized from the effective use of formative assessment (Research and Theory, Chapter 1, Para. 6). His analysis of the research demonstrated that the frequency of using formative assessment has a direct impact on the percentile gain of student achievement. A synthesis of 29 studies reported by Bangert-Drowns, Kulik, Kulik, and Morgan, (1991) determined that the number of formative assessments administered over the course of 15-week sessions had a direct impact on the percentage increase in student achievement. This percentile gain ranged from 13.5% growth with the use of one formative assessment to 29% growth with the use of 30 formative assessments over this same period.

**Motivational Theory: Extrinsic vs. Intrinsic Rewards**

The review of literature relevant to this study examined various teacher evaluation frameworks and instructional strategies that have been proven to raise student achievement. It is also important to discuss how teachers may or may not be motivated to change their instructional practices to incorporate the instructional strategies suggested in this chapter. The research questions in this study sought to determine the relationship between
instructional strategies and teacher evaluation frameworks. Are teachers using the instructional strategies that are outlined in this chapter? And, if they are using them, why are they using them? Is it because they are being evaluated in these areas in their teacher evaluation frameworks or are they motivated to use these instructional strategies by something else?

Daniel Pink (2011) suggested that most people are extrinsically motivated to some extent by money when they perform a job. However, when a person can establish that he or she has obtained a fair and equitable salary, monetary bonuses or further extrinsic incentives of this nature are no longer effective. Instead, people are motivated intrinsically by deepening their learning, delighting their students, or simply doing their best. Thus, it is very important to find ways in the work environment to allow for intrinsic rewards to be commonplace.

Pink (2011) noted further that using a carrot and stick approach to motivation is not always a bad thing if you can find ways to offer intrinsic rewards. Providing positive feedback, praise, and specific information related to their performance is much more motivating than other methods of motivation, such as a bonus or extra time off.

Humans are motivated from the inside out. Internal control psychology promoted the idea that people are internally, not externally, motivated. Sullo (2007) noted, “Powerful instructions that are built into our genetic structure drive our behavior. The outside world, including all rewards and punishment, only provides us with information. It does not make us do anything” (p. 7). Further, Sullo suggested that the need for belonging, gaining power through achievement, the ability to have choices, have fun, and satisfy our basic needs are key motivating intrinsic factors for all humans.
Not all research supported the notion that extrinsic motivation is bad and unrelated to greater work performance. In a recent research study, Gerhart, Fang, and Ledford (2013) concluded, “Extrinsic rewards do not undermine intrinsic motivation and effects on intrinsic motivation do not render extrinsic rewards ineffective” (p. 18). A field study that involved white-collar employees from eight Taiwanese companies representing six different industries analyzed the effects of extrinsic motivation, in this case pay for performance, on intrinsic motivation. Data showed that the correlation between intrinsic and extrinsic motivation was positive (r = .22), demonstrating that there was not a tradeoff between intrinsic and extrinsic motivation for these employees. Gerhart et al. continued to research the findings of other major literature reviews in peer-reviewed journals on the topic of motivation. They found that the effects of any reward depend on the social context in which it occurs: “If the reward is appropriately implemented, it should enhance, rather than undermine, intrinsic motivation…” (p. 28).

Teacher evaluation frameworks could be seen as both extrinsic and intrinsic motivational tools. A teacher could be motivated extrinsically by simply trying to comply with the language in the evaluation tool to receive a more effective performance rating or a teacher could perceive the teacher evaluation tool as a mechanism to help him/her intrinsically grow to become a much better teacher. Perhaps it does depend on the social context on whether intrinsic and/or extrinsic motivational theory will be applied in the realm of teacher evaluation.

Summary

The literature review included a history of Michigan’s teacher evaluation reform efforts beginning in 2009, followed by a summary of the work of the Michigan Council of
Educator Effectiveness, who in 2011 developed a pilot study of four teacher evaluation frameworks throughout the State of Michigan. Recommendations in 2013 of the two-year pilot study allowed for and supported the use of the four teacher evaluation frameworks in Michigan public school districts. The literature review provided a more detailed look at the research base supporting all of the teacher evaluation frameworks and explored the research behind specific instructional strategies tied to the work of the leading educational researchers, John Hattie (2012), Charlotte Danielson (2007), and Robert Marzano (2007). Eight instructional strategies that provide evidence of increasing student achievement were reviewed, concluding with a discussion of motivational theory, specifically extrinsic versus intrinsic rewards, as these concepts relate to teachers’ motivation to change their instructional strategies.
Chapter 3—Research Methods

The purpose of this study was to determine whether teachers altered their instructional strategies as a result of their local school district’s teacher evaluation system. Further, the study was designed to analyze the levels of use on which research-based instructional strategies were implemented by teachers (Hall, Dirksen, & George, 2006). If teacher evaluations are intended to improve instruction in the classroom, development and use of more effective instructional strategies by teachers should be assumed.

Research Questions

Two questions guided this research to determine whether teacher evaluation models had an impact on the instructional strategies used across classrooms in southeastern Michigan public schools:

1. Was there a significant relationship between the usage of specific teacher evaluation frameworks and the usage of specific instructional strategies?
2. Was there any significant influence between the reported usage of instructional strategies and any factors that might influence this change?

Research Design

This study used an electronic survey tool to gather data from elementary teachers in 10 public school districts in southeastern Michigan. The survey comprised information about five of the eight instructional strategies discussed in the literature review. The sample of K-12 public school district participants in this study were primarily suburban, upper-middle class districts that served from 3500 to 8300 students. The survey data were gathered in the following categories:
• Individual demographic data about the teachers, including grade-level/s of instruction and number of years of experience.

• Teacher evaluation framework data, including the current teacher evaluation model being used, the understanding of the model and professional development offered in support of this model.

• The level of use for five instructional strategies supported by large effect sizes according to the research of Danielson (2007), Marzano (2007) and Hattie (2012).

**Pilot test of survey instrument.** A pre-test of the survey was distributed to 16 elementary teachers in the school district of the researcher. The pilot test was designed to achieve the following:

1. to test the survey design for understanding of the wording, spelling, and the general flow of the survey;

2. to assess the length of time needed to complete the survey;

3. to gather feedback about a sense of bias or repetition in any part of the survey; and

4. to establish content validity; confirming that data collected would provide sufficient answers to the research questions.

The pre-test determined that five questions were sufficient to gather the needed quantitative data from a variety of Michigan public school elementary teachers about the use of research-based instructional strategies. Reasons for this decision included consideration of the length of the survey, which required approximately 15 minutes to complete. A few confusing word choices were clarified based on pre-test feedback. All pre-test participants reported gains in the use of instructional strategies from a previous to the current teacher
evaluation framework; thus confirming a focus on gain scores of instructional strategies in the study. Restructuring of the survey questions reflected this finding. The five questions chosen were deemed most conducive to determine the level of use of these specific instructional strategies.

**Conceptual Framework**

Table 2 shows the conceptual framework that was developed and served as a roadmap to the analysis of the data in this study.

Table 2

*Survey Data Relative to the Conceptual Framework.*

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Mediating Variables</th>
<th>Dependent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics / Context</td>
<td>Professional Development for Teacher Evaluation</td>
<td>Instructional Strategies</td>
</tr>
<tr>
<td>Grade Level / Dept.</td>
<td>Trained to use Rubric</td>
<td>Classroom Culture</td>
</tr>
<tr>
<td>Years in Field</td>
<td>Feedback on Teaching</td>
<td>Communication</td>
</tr>
<tr>
<td>Years in Current Position</td>
<td>Review Scoring Rubric</td>
<td>Questioning / Discussion</td>
</tr>
<tr>
<td>Race</td>
<td>Times Observed by Admin</td>
<td>Engagement</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td>Assessment</td>
</tr>
<tr>
<td>Level of Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation to Change</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Culture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher Eval. Framework</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Particular emphasis was paid to the teacher evaluation framework as one of the key demographic factors that could lead to increased usage of instructional strategies.
Data Collection Process

Superintendents and assistant superintendents in southeastern Michigan school districts were contacted for permission to implement this study and to discuss the intent of the study in greater detail. The purpose of the study was to gather data to look at broad issues related to teacher evaluation and instructional practices across Michigan; the data gathered did not discredit any district’s teacher evaluation system or instructional practices. In addition, superintendents and assistant superintendents were sent an approval for conducting the study from the Eastern Michigan University Human Subjects Review Committee, which assured that the data would remain confidential, and that the district name would never be mentioned in the context of the study (see Appendix B). Upon verbal approval from the superintendent or assistant superintendent, a letter was sent from the central office administrator to teachers to authorize district participation in this study (see Appendix C). District leaders had an option regarding their participation in the study; they could grant consent for the full district or authorize individual buildings to decide about participation. When the method of participation was determined and authorized, survey participants were sent a consent form (see Appendix D). The survey was administered through the online Survey Monkey© process.

A direct link to the 26-question survey was provided to the teachers who were authorized to take the survey. Benefits and value of the data was provided to the participants. As an incentive for participation in the study, a $5 Amazon.com gift card credit was awarded to the first 200 teachers who were willing to authorize completion of the survey and provided an email address to receive the Amazon.com gift card link. Revealing the name of the survey respondent did not jeopardize the anonymity of the survey data, as no names were matched.
with respondents’ data. The researcher sent multiple email reminders to potential participants to encourage participation. Individual surveys were coded by demographics, years of experience in teaching, type of teacher evaluation model used, and the levels of use of various instructional strategies.

**Instrumentation**

Educational researchers, including Danielson (2007), Marzano (2007), and Hattie (2012) identified several common instructional strategies that yield large effect sizes on achievement. All of the four piloted teacher evaluation models approved by the Michigan Council for Educator Effectiveness (MCEE, 2013) use many elements of these high-yield instructional strategies. All Michigan teachers use one of the four piloted teacher evaluation models in their school districts. For the purpose of this study, an online Survey Monkey© survey instrument was used to gather individual demographic data and teacher evaluation framework data from local public school districts across southeastern Michigan. Further, the researcher synthesized the work of Danielson (2007), Marzano (2007), and Hattie (2012) and designed five primary questions related to the instructional strategies that have a positive impact on the following components of learning which have all produced large effect sizes on student achievement:

- Establishing a Culture for Learning;
- Communicating with Students;
- Using Question and Discussion Techniques;
- Engaging Students in Learning and
- Using Assessment in Instruction.
Survey Validity

Designing a survey that yields meaningful data is a very important part of any research study. Blair, Czaja, and Blair (2014) outlined five key stages in Designing Surveys: A Guide to Decision and Procedures.

- Stage 1: Survey Design and Preliminary Planning
- Stage 2: Pretesting
- Stage 3: Final Survey Design and Planning
- Stage 4: Data Collection
- Stage 5: Data Coding, Data File Construction, Analysis and Final Report

The purpose of a pre-test survey conducted prior to the final distribution of the survey in this study was to increase construct validity of the survey by determining whether the survey measured the intended objectives. Teachers of Grades kindergarten through Grade 6 in the school district of the researcher were asked to participate in a pre-test of the survey. Pre-test participants were asked to provide information about the length of time to complete the survey and whether any of the questions seemed confusing or vague. The survey included four questions related to the demographics of the teachers, five questions related to the teacher evaluation framework employed in the local school district, 15 questions related to the five components of learning as described in the instrumentation section, and two questions sought direct input from teacher and administrators about the impact of teacher evaluation models and instructional practice. Participants were assured that their results would be kept confidential. Based on this pre-test survey data, the researcher modified the survey to better meet the needs of the study.
Analysis of Data

The first research question analyzed how teachers reported the relationship between their teacher evaluation model in their local district and the instructional strategies used in the classroom. Responses to this question revealed whether the teacher evaluation model used in the school district had an impact on teachers’ instruction. Responses to the second research question addressed the level of implementation by teachers of research-based instructional strategies. The data gathered helped to determine whether teacher evaluation frameworks had any impact on the use of instructional strategies and therefore an impact on teachers improving their practices in the classroom. Factor analysis and regression tests were conducted using SPSS software to determine any statistical significance in the reported use of instructional strategies and the impact of teacher evaluation frameworks.

Summary

In this quantitative study, numerous elementary school teachers in southeastern Michigan public school districts participated in a survey to determine whether a relationship existed between teacher evaluation frameworks in local school districts and teachers’ instructional practices. In addition, the level of use of research-based instructional strategies were also explored to determine whether specific factors influenced the change of these instructional strategies.

Data were sorted in three categories:

1. Demographic data about the teacher and the school district
2. Information about the teacher evaluation framework used in the district
3. Instructional strategies used in the district
Survey questions relative to the instructional strategies used in the district were modified from a level-of-use survey developed by Hall, Dirksen, and George (2006) and the Southwest Education Development Laboratory. Respondents provided details to indicate whether new teacher evaluation frameworks had an impact on the instructional strategies used in the classroom.
Chapter 4—Data Analysis

The purpose of this study was to explore the relationship between teacher evaluation models and classroom instructional strategies. In addition, the study sought to determine any relationship that may exist between the reported use of instructional strategies by elementary teachers before and after the implementation of new teacher evaluation frameworks in public schools in southeast Michigan. If teachers reported a greater use of instructional strategies from the previous teacher evaluation framework to the new teacher evaluation framework, the factors associated with the greater use of these instructional strategies were explored.

Many factors were considered in the analysis of teacher evaluation models, instructional strategies, and any gain scores associated with these strategies. Then, the study included teachers’ years of experience, grade level, years teaching in the same position, race, gender, teacher evaluation framework used in their district, teacher evaluation process, school culture, and motivation to change instructional strategies.

Survey data were gathered from elementary teachers in grades kindergarten through sixth grade in 10 southeastern Michigan public school districts. Appendix E shows a breakdown of the number of teachers who responded to the survey from the various school districts. Pseudonyms were used to protect the identity of specific school districts within each county.

Assistant superintendents and/or superintendents in the various districts approved and distributed the electronic survey to elementary teachers in their school districts. Elementary teachers with at least three years of teaching experience were asked to respond to a series of items related to their demographic, district characteristics and instructional strategies.

The following research questions guided this study:
1. Was there a significant relationship between the usage of specific teacher evaluation frameworks and the usage of specific instructional strategies?

2. Was there any significant influence between the reported usage of instructional strategies and any factors that might have influenced this change?

Analysis of the data sought to identify any statistical significant relationships between the many variables in this study.

A detailed analysis of the demographics, professional development for teacher evaluation, and the use of instructional strategies is addressed in this chapter. Demographics collected in the first section of the survey included the teachers’ grade level, number of years working in education, number of years teaching in the current assignment, racial or ethnic heritage, gender, highest level of education, school culture, and motivation to change instructional strategies.

Data collected in section two of the survey included professional development for teacher evaluation to support a district’s teacher evaluation framework, including the number of times that a teacher was trained to use their school’s teacher evaluation rubric, number of times that teachers received feedback about their teaching related to their teacher evaluation process, number of times teachers reviewed the components of their teacher evaluation rubric, and number of times that a teacher was observed by an administrator over the course of the year.

In section three of the survey, data were collected regarding the use of instructional strategies related to classroom culture, communication, questioning and discussion techniques, engaging students in learning, and assessment.
The conceptual framework that was developed and discussed in Chapter 3 (Table 2) was helpful in framing the analysis of this data. It helped the researcher identify the relationship between independent variables and mediating variables as well as how mediating variables connected to the dependent variables.

Analysis of the independent demographic variables from teachers in 10 southeastern Michigan public school districts was compared to a larger set of demographic data from public school districts in Oakland, Livingston, and Washtenaw Counties. The professional development for teacher evaluation was identified and numerated as the mediating variables. Dependent variables in the study were analyzed based upon responses to survey items related to identified instructional strategy categories. Further, gain scores were determined by comparing the instructional strategy in the previous teacher evaluation framework to the instructional strategy usage in the current teacher evaluation framework.

Factor analysis tests were performed in SPSS (Minimum, 1982) to determine whether instructional strategies could be sorted into categories to get at the larger underlying concepts. The purpose of performing these factor analysis tests, also referred to as principal component analysis, was to reduce observable variables, also known as manifest variables, and group them together because they were measuring the same construct. When manifest variables were grouped together, they were referred to as latent variables. The latent variables were transferred into SPSS software for a series of regression analysis tests. These tests attempted to determine whether these specific latent variables associated with instructional strategies were being impacted in a significant manner by the independent variables listed in Figure 1 shown on page 73.
**Demographics.** The demographics of the study were analyzed in greater detail. Table 3 shows the compiled results of key demographic data from the surveyed K through sixth grade teachers in 10 southeastern Michigan public school districts in Oakland, Livingston, and Wayne Counties. Where information was available in a State of Michigan database, the demographics were compared to teachers at all grade levels in the three counties.
Table 3

Compiled Participant Demographics and Comparison to All Teachers in Three Counties

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>K-6&lt;sup&gt;th&lt;/sup&gt; grade teachers surveyed</th>
<th>Oakland County All Teachers (K-12)</th>
<th>Wayne County All Teachers (K-12)</th>
<th>Livingston County All Teachers (K-12)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K-2&lt;sup&gt;nd&lt;/sup&gt; Grade</td>
<td>34.46%</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt;-6&lt;sup&gt;th&lt;/sup&gt; Grade</td>
<td>36.71%</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Special Ed/Other</td>
<td>32.58%</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td><strong>Years in Field</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-10</td>
<td>23.60%</td>
<td>26.82%</td>
<td>21.95%</td>
<td>22.32%</td>
</tr>
<tr>
<td>11+</td>
<td>76.41%</td>
<td>52.61%</td>
<td>48.87%</td>
<td>62.47%</td>
</tr>
<tr>
<td><strong>Years in Current Position</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-10</td>
<td>66.16%</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>11+</td>
<td>33.84%</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>97%</td>
<td>90.6%</td>
<td>69.7%</td>
<td>98.6%</td>
</tr>
<tr>
<td>Other Race</td>
<td>3%</td>
<td>9.4%</td>
<td>30.3%</td>
<td>1.4%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>6.74%</td>
<td>21.6%</td>
<td>20.5%</td>
<td>20.3%</td>
</tr>
<tr>
<td>Female</td>
<td>93.26%</td>
<td>78.4%</td>
<td>79.5%</td>
<td>79.7%</td>
</tr>
<tr>
<td><strong>Education Level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor’s</td>
<td>10.11%</td>
<td>29.86%</td>
<td>35.75%</td>
<td>36.01%</td>
</tr>
<tr>
<td>Masters</td>
<td>83.52%</td>
<td>67.12%</td>
<td>61.13%</td>
<td>60.58%</td>
</tr>
<tr>
<td>Ed Specialist</td>
<td>4.12%</td>
<td>1.36%</td>
<td>1.00%</td>
<td>1.03%</td>
</tr>
<tr>
<td>Doctorate</td>
<td>2.25%</td>
<td>.66%</td>
<td>.63%</td>
<td>.12%</td>
</tr>
<tr>
<td><strong>Motivation to Change</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructional Strategies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Motivated, Motivated</td>
<td>85.39%</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Somewhat Motivated, Not Motivated</td>
<td>14.61%</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td><strong>School Culture</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent, Good</td>
<td>76.78%</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Average, Below Average</td>
<td>23.22%</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

*Data unavailable from a State of Michigan database.
A total of 208 teachers completed the entire survey. An additional 59 teachers began the survey but only completed the demographics section. The survey allowed participants to skip items, and this occurred at an infrequent rate. Of the teachers who completed the demographics section, approximately one-third of respondents were early childhood (K–2) teachers, one-third were upper elementary (3–6) teachers, and one-third were special education teachers, reading/math specialists, RTI coordinators, or other and specials teachers.

The survey was designed for teachers with at least three years of experience because implementation of new teacher evaluation laws have been mandated within the last three years in public school districts across the State of Michigan. Thus, it was essential to survey only teachers who used a previous teacher evaluation framework prior to the teacher evaluation framework used under new teacher evaluation laws. A large percentage, 76%, of the survey respondents were veteran teachers with 10 or more years of experience in education; approximately 24% of the respondents reported less than 10 years of experience in education.

Although more than 37% of the survey respondents reported teaching for more than 20 years, a majority of those teachers experienced a variety of teaching positions throughout their educational careers. Only slightly more than 9% of survey respondents reported working in their same position for more than 20 years.

Other demographic data revealed that the majority (83.5%) of participants in this survey had attained a master’s degree, compared to a lower percentage (63%) of teachers in the overall population of teachers in Oakland, Livingston, and Wayne Counties who had obtained a master’s degree. Other data showed that a high percentage (85%) of survey respondents indicated that they were motivated or very motivated to change their
instructional strategies, whereas fewer than 15% of the participants reported that they were somewhat motivated or unmotivated to change their instructional strategies. Finally, approximately 77% of participants in this survey rated their school culture as good or excellent, whereas approximately 23% described their school culture as average, not good, or poor.

The Michigan Department of Education (2015) approved four evaluation frameworks to be used by Michigan school districts in 2013. Table 4 reflects the usage of these evaluation frameworks as reported by survey participants.

Table 4

*Teacher Evaluation Framework Used in School Districts*

<table>
<thead>
<tr>
<th>Evaluation Framework</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlotte Danielson</td>
<td>86</td>
<td>34.40</td>
</tr>
<tr>
<td>Marzano Model</td>
<td>82</td>
<td>32.80</td>
</tr>
<tr>
<td>5 Dimensions</td>
<td>32</td>
<td>12.80</td>
</tr>
<tr>
<td>Thoughtful Classroom</td>
<td>1</td>
<td>.40</td>
</tr>
<tr>
<td>Do Not Know</td>
<td>49</td>
<td>19.60</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>250</td>
<td>100.00</td>
</tr>
</tbody>
</table>

The two evaluation frameworks used most frequently were the Charlotte Danielson Framework for Teaching (2007) and the Marzano Teacher Evaluation Model (Learning Sciences International, 2011). More than 67% of the respondents reported use of one of these teacher evaluation frameworks. Almost 20% of the respondents reported that they did not know which teacher evaluation framework most closely aligned with their district’s teacher evaluation framework.
Professional Development for Teacher Evaluation

Table 5 shows specific professional development strategies to help teachers and administrators implement the teacher evaluation frameworks in their school districts and become more educated about the teacher evaluation process. Survey respondents were asked to report on the amount of professional development they received in both their current, state-approved, teacher evaluation framework and their previous teacher evaluation framework.

Survey respondents indicated the number of times each strategy was implemented—four or more times per year, three times per year, two times per year, one time a year, or no times per year. All respondents who reported at least three times per year were combined into one group for analysis. Three or more times per year was chosen by the researcher in order to keep this comparison between the previous teacher evaluation framework and the current teacher evaluation framework more manageable in size. Next, gain scores were calculated from the previous evaluation framework to the current evaluation framework.

Table 5

<table>
<thead>
<tr>
<th>Professional Development</th>
<th>Previous Evaluation Framework</th>
<th>Current Evaluation Framework</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Times Trained to Use Evaluation Rubric</td>
<td>8 (3.3%)</td>
<td>56 (23%)</td>
<td>20.4%</td>
</tr>
<tr>
<td>Times Receiving Feedback from Admin</td>
<td>46 (18.7%)</td>
<td>87 (36.6%)</td>
<td>17.9%</td>
</tr>
<tr>
<td>Times Reviewing Evaluation Rubric</td>
<td>31 (12.8%)</td>
<td>103 (43.5%)</td>
<td>30.7%</td>
</tr>
<tr>
<td>Times Observed by an Administrator</td>
<td>61 (25%)</td>
<td>113 (47.7%)</td>
<td>22.7%</td>
</tr>
</tbody>
</table>
**Instructional strategies.** The use of five categories of research-based instructional strategies was examined: culture, communication, questioning and discussion techniques, engaging students, and assessment. These instructional strategies are discussed in more detail in Chapter Three. There are numerous categories of instructional strategies. However, these five categories were selected based on research that suggested that the instructional strategies within these categories yielded very high effect sizes for student achievement (Danielson, 2007; Hattie, 2012; Marzano, 2007).

Survey respondents were asked to indicate the percentage of time that these instructional strategies were used in their classroom lessons in the time periods prior to and during the current state-approved teacher evaluation framework. Their choices included less than 20% of the lessons, 20–40% of the lessons, 40–60% of the lessons, 60–80% of the lessons, and more than 80% of the lessons. Tables 6 through 10 show the gain scores from respondents who reported that they used the instructional strategies in their lessons at least 80% of the time. A gain score is the percentage increase reported for use of the instructional strategies in the current, state-approved evaluation framework, versus use of the strategies three years ago in the previous evaluation framework.

Analysis of all 14 of the strategies in Tables 6 through 10 showed that the average percentage of respondents who reported using these instructional strategies 80% of the time or more in their lessons in their previous evaluation framework was 45.9%. The average percentage of respondents who reported using these instructional strategies 80% of the time or more in their lessons in the current, state-approved evaluation framework was 66.4%, which represents a 20.5% average increase between use of the instructional strategies used in the previous evaluation framework and use of the instructional strategies in the current evaluation.
framework. In the change columns, instructional strategies that showed average gain scores above 20.5% are highlighted in bold.

Table 6 shows the number of respondents reporting usage of these instructional strategies in 80% or more of their classroom lessons. The data demonstrates that one of the two strategies related to classroom culture reflected above average gain scores from the previous evaluation framework to the current evaluation framework. Survey participants reported that they were using the instructional strategy *Helping students understand the value of what they are learning* 23.7% more in the current evaluation framework than the previous evaluation framework.

Table 6

*Usage of Instructional Strategies Related to Classroom Culture*

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Previous Evaluation Framework</th>
<th>Current Evaluation Framework</th>
<th>Gain Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expectations that all students will achieve the goals of the lesson.</td>
<td>113 (54.3%)</td>
<td>146 (72.6%)</td>
<td>18.3%</td>
</tr>
<tr>
<td>Helping students understand the value of what they are learning.</td>
<td>108 (51.9%)</td>
<td>152 (75.6%)</td>
<td><strong>23.7%</strong></td>
</tr>
</tbody>
</table>
Table 7 shows the number of respondents reporting usage of these instructional strategies in 80% or more of their classroom lessons. Table 7 demonstrates that one of the three strategies related to communication reflected above average gain scores from the previous evaluation framework to the current evaluation framework. Survey participants reported that they were using the instructional strategy *Clarifying a Lesson's Purpose* 37.5% more in the current evaluation framework than the previous evaluation framework.

Table 7

*Usage of Instructional Strategies Related to Communication*

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Previous Evaluation Framework</th>
<th>Current Evaluation Framework</th>
<th>Gain Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarifying a Lesson’s Purpose</td>
<td>62 (29.8%)</td>
<td>135 (67.2%)</td>
<td>37.4%</td>
</tr>
<tr>
<td>Providing Clear Directions</td>
<td>166 (80.2%)</td>
<td>185 (92%)</td>
<td>11.8%</td>
</tr>
<tr>
<td>Connecting Concepts with Students’ Interests and Lives Beyond School</td>
<td>98 (47.1%)</td>
<td>121 (60.2%)</td>
<td>13.1%</td>
</tr>
</tbody>
</table>

Table 8 shows the number of respondents reporting usage of these instructional strategies in 80% or more of their classroom lessons. Table 8 demonstrates that none of the three strategies related to questioning and discussion techniques reflected above average gain scores from the previous evaluation framework to the current evaluation framework.
Table 8

*Usage of Instructional Strategies Related to Questioning & Discussion Techniques*

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Previous Evaluation Framework</th>
<th>Current Evaluation Framework</th>
<th>Gain Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posing Questions of High Cognitive Challenge</td>
<td>59 (28.5%)</td>
<td>89 (45%)</td>
<td>16.5%</td>
</tr>
<tr>
<td>Facilitating Student-led Discussions</td>
<td>44 (21.3%)</td>
<td>73 (36.9%)</td>
<td>15.6%</td>
</tr>
<tr>
<td>Eliciting High Levels of Students’ Participation in Discussion</td>
<td>82 (39.8%)</td>
<td>115 (57.8%)</td>
<td>18.0%</td>
</tr>
</tbody>
</table>

Table 9 shows the number of respondents reporting usage of these instructional strategies in 80% or more of their classroom lessons. Table 9 demonstrates that three of the three strategies related to *Engaging Students in Learning* reflected above average gain scores from the previous evaluation framework to the current evaluation framework. Survey participants reported that they were using all three of these instructional strategies more than the 20.5% average gain score.

Table 9

*Usage of Instructional Strategies Related to Engaging Students in Learning*

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Previous Evaluation Framework</th>
<th>Current Evaluation Framework</th>
<th>Gain Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishing Learning Tasks that Require High-level Student Thinking</td>
<td>57 (27.5%)</td>
<td>97 (48.5%)</td>
<td>21.0%</td>
</tr>
<tr>
<td>Motivating Students to Persist Even When the Tasks are Challenging</td>
<td>113 (54.6%)</td>
<td>152 (76%)</td>
<td>21.4%</td>
</tr>
<tr>
<td>Creating an Environment Where Students are Actively <em>Working</em> Rather than Watching While Their Teacher <em>Works</em></td>
<td>92 (44.4%)</td>
<td>149 (74.5%)</td>
<td>30.1%</td>
</tr>
</tbody>
</table>
Table 10 shows the number of respondents reporting usage of these instructional strategies in 80% or more of their classroom lessons. Table 10 demonstrates that two of the three strategies related to assessment reflected above average gain scores from the previous evaluation framework to the current evaluation framework. Survey participants reported that they were using the instructional strategy *Posting Questions to Elicit Evidence of Student Understanding* 24.24% more in the current evaluation framework than the previous evaluation framework. Further, survey participants reported that they were using the instructional strategy *Providing Feedback to Students* 22.35% more in the current evaluation framework than the previous evaluation framework.

Table 10

*Usage of Instructional Strategies Related to Assessment*

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Previous Evaluation Framework</th>
<th>Current Evaluation Framework</th>
<th>Gain Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posing Questions to Elicit Evidence of Student Understanding</td>
<td>81 (38.9%)</td>
<td>127 (63.2%)</td>
<td>24.3%</td>
</tr>
<tr>
<td>Circulating Throughout the Class to Monitor Student Learning</td>
<td>142 (69.3%)</td>
<td>165 (82.9%)</td>
<td>13.6%</td>
</tr>
<tr>
<td>Providing Feedback to Students</td>
<td>111 (54.2%)</td>
<td>153 (76.5%)</td>
<td>22.3%</td>
</tr>
</tbody>
</table>

**Factor Analysis**

Further analysis was necessary to determine if there was significance in the way the respondents were reporting their gains for the dependent variables (instructional strategies) to other independent variables (demographics and professional development for teacher evaluation). Thus, a series of factor analysis tests were conducted using SPSS software to
determine whether specific latent variables could be grouped and separated from the original manifest variables. The purpose of grouping manifest variables into a latent variable is to take a number of observable variables, or manifest variables, that can be aggregated in a model to represent an underlying inferred concept (Lund & Lund, 2013).

The factor analysis tests determined which manifest variables would load together; thus, suggesting highly correlated survey items. Strategies that yield at or near .6 (or higher), in a specific column, demonstrate some connection with these strategies and the independent variables. In other words, these variables are considered important. Any factor that loads at .4 or higher is considered to be important (Rahn, 2014). The survey items that loaded at .6 or higher in this study were retained.

These variables were reported in a principal component analysis matrix that demonstrated the various loadings. This was reflected in Appendix F. A principal component matrix or a principal component analysis is a method that can be used to stress variation and extract solid patterns in a set of data (Powell, 2015), thus making the dataset easy to explore and determine what items warrant further analysis.

Any strong patterns should be further explored in their own factor analysis. When manifest variables load together, the new grouping is considered a latent variable. Latent variables are constructs, though not directly observed or measured but inferred from data collected on related observed and measured variables (Escobar, 2016). Tables 11 through 14 represent the four latent variables that were further tested in specific factor analyses. These results showed loadings around the .6 significance level or higher.
As shown in Table 11, both culture items loaded together in the component matrix because they were strongly correlated. Thus, these two manifest variables were grouped together and now become the Latent Variable 1. Survey respondents answered these two culture questions in very similar ways, which is why these two variables loaded above the .6 threshold. This was explored in a regression analysis.

Table 11

*Latent Variable 1—Classroom Culture*

<table>
<thead>
<tr>
<th>Survey Items</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture item 1: Expectations to achieve goals</td>
<td>.884</td>
</tr>
<tr>
<td>Culture item 2: Value of the learning</td>
<td>.884</td>
</tr>
</tbody>
</table>

As shown in Table 12, both communication items loaded together in the component matrix because they were strongly correlated. Thus, these two manifest variables were grouped together and now become the Latent Variable 2. Survey respondents answered these two communication questions in very similar ways, which is why these two variables loaded above the .6 threshold. This was explored in a regression analysis.

Table 12

*Latent Variable 2—Communication*

<table>
<thead>
<tr>
<th>Survey Items</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication item 2: Provide clear directions</td>
<td>.774</td>
</tr>
<tr>
<td>Communication item 3: Connect concepts with student interests and lives beyond their school</td>
<td>.774</td>
</tr>
</tbody>
</table>
The seven items in Table 13 across three categories (questioning, engagement and assessment) loaded together in the component matrix. Thus, they were grouped together for a future regression analysis as Latent Variable 3. Survey respondents answered these seven survey questions in similar ways, which is why these seven variables loaded near or slightly above the .6 threshold.

Table 13

**Latent Variable 3—Questioning & Discussion Techniques and Engagement**

<table>
<thead>
<tr>
<th>Survey Items</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questioning item 1: Questions of high challenge</td>
<td>.533</td>
</tr>
<tr>
<td>Questioning item 2: Student-led discussions</td>
<td>-.561</td>
</tr>
<tr>
<td>Questioning item 3: Elicit high levels of participation</td>
<td>.623</td>
</tr>
<tr>
<td>Engagement item 1: High-level learning tasks</td>
<td>.675</td>
</tr>
<tr>
<td>Engagement item 2: Persistence through challenging tasks</td>
<td>-.606</td>
</tr>
<tr>
<td>Engagement item 3: Students <em>actively</em> working</td>
<td>.667</td>
</tr>
<tr>
<td>Assessment item 1: Pose questions for student understanding</td>
<td>.675</td>
</tr>
</tbody>
</table>

In the factor analysis, also termed principal component analysis, Assessment Item 3 loaded by itself in column 3 (Appendix F); thus, it would be unreliable to perform a regression analysis on a single data point. Communication Item 1 and Assessment Item 2 were dropped from the analysis because the result of the factor analysis yielded a loading result that crossed over more than one component; thus, the significance of these items could not be clearly measured.

A fourth factor analysis was also conducted for strategies related to Professional Development for Teacher Evaluation in the current teacher evaluation framework. Table 14 represents a principal component analysis of these strategies associated with the school
district’s current teacher evaluation framework. This Latent Variable 4 was also considered to be a mediating variable, often called an intervening or process variable that serves to clarify the nature of the relationship between the independent and dependent variables (Kenny, 2016). In this case, aspects of professional development were found to influence the dependent variable.

Table 14

*Latent Variable 4—Professional Development for Teacher Evaluation*

<table>
<thead>
<tr>
<th>Survey Items</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of Time Trained to Use Rubric</td>
<td>.708</td>
</tr>
<tr>
<td>Feedback on Teaching</td>
<td>.640</td>
</tr>
<tr>
<td>Amount of Time Reviewing Rubric</td>
<td>.632</td>
</tr>
<tr>
<td>Number of Observations by an Administrator</td>
<td>.713</td>
</tr>
</tbody>
</table>

This factor analysis demonstrated that participants’ responses about how often their school was using these strategies related to Professional Development of Teacher Evaluation loaded together in the component matrix. All of the loadings were above the .6 threshold, which suggested that all of these items had a relationship and could be grouped together as the fourth latent variable when performing regression.

**Regression**

The purpose of a regression test was to relate dependent variables to independent variables and thus to predict outcomes based on the data. Regression tests aim to find the slope of the line to describe the relationship between two variables; the closer to 1, the stronger the relationship.

In this case, the researcher tried to determine if the four latent variables (the dependent variables and the mediating variables) were relating to specific independent
variables in any significant manner. Growth of instructional strategies and professional development for teacher evaluation strategies were analyzed; thus, an effort was made to see if specific demographic groups were growing more or less in any type of significant manner. Demographics consisting of grade-level/department, years in the education field, years in current position, race, gender, highest level of education, teacher evaluation frameworks, and motivation to change instructional strategies were loaded as independent variables. Results are shown in Figure 1.

Professional Development for Teacher Evaluation strategies consisting of the strategies used by districts to support the current, state-approved teacher evaluation framework were also loaded as mediating variables. All of these independent variables were then compared to four groups of latent variables that loaded together in the previous principal component analysis tests. For each regression analysis, a significance level of .05 was set to isolate variables that were either lower than .05 or close to that significance level. These variables all loaded into regression coefficient tables, which helped to determine significance level. Some subjects within the independent variables answered survey questions about instructional strategies that showcased greater growth in the amount of usage of these instructional strategies or professional development for teacher evaluation strategies, as compared to other independent variables. As shown in Figure 1, arrows indicate the independent variables that demonstrated more significant growth and their significance level. The closer the absolute value of the regression coefficient is to 1, the stronger the relationship.
Figure 1. Instructional Strategies Regression Analysis  *Significance level ≤.05 ≥.01
The first regression analysis was performed on the two items shown in Table 11 related to Latent Variable 1: Classroom Culture. The oval in Figure 1 shows a path analysis between the demographics that influenced the classroom culture latent variable. Kindergarten, first grade, and second grade teachers reported a negative regression coefficient of -.318, which suggested that these kindergarten, first and second grade teachers, compared to teachers at other levels, showed less growth with their use of classroom culture instructional strategies. This is a strong correlation.

Special Education teachers also reported a negative regression coefficient of -.581, which suggested that the elementary special education teachers, compared to teachers at other levels, also showed less growth with their use of classroom culture instructional strategies. This is a very strong correlation.

The regression coefficient that indicated a positive direction was years worked in current position. The regression coefficient of .028 suggested that the greater the number of years a teacher worked in their current position, the greater their growth of using instructional strategies in the current evaluation framework, as compared to teachers with less experience. However, this is a much weaker correlation as compared to the strength of the regression coefficient of kindergarten, first and second grade teachers and special education teachers.

The second regression analysis was performed on the two items shown in Table 12 related to Latent Variable 2: Communication. The results of this regression analysis are reflected in the triangle in Figure 1, which shows a path analysis between the demographics that influenced the communication latent variable. This regression model shows a slightly significant correlation for the number of years worked in education and the communication
latent variable. This suggests that the more years teachers worked in the educational field, the less the usage of instructional strategies related to communication as compared to other teachers who have worked fewer years in education.

The third regression analysis was performed on a series of seven questions shown in Table 13 related to Latent Variable 3: Questioning, Discussion Techniques/Engagement. In this regression analysis, years worked in education refers to the total number of years the participant worked as an educator. School culture refers to the way in which the participants responded to the overall health of their school environment. This regression model, see parallelogram in Figure 1, demonstrated that respondents who reported healthier school culture also reported more growth in the usage of the instructional strategies in their current, state-approved teacher evaluation framework than did teachers who reported a less healthy school culture. This was a strong correlation.

The fourth regression analysis was performed on the mediating variables shown in Table 14 related to the strategies associated to Professional Development for Teacher Evaluation. This data, see square in Figure 1, suggested a slightly significant negative correlation for teachers with greater years of experience reporting less professional development for teacher evaluation.

None of these data suggested that the specific teacher evaluation framework being used by the survey participants had any significant effect on the gain scores of the use of current instructional strategies. Whether a teacher was using the Charlotte Danielson Framework (2007), Marzano Teacher Evaluation Model (Learning Sciences International, 2011), or the 5 Dimensions of Teaching and Learning (Center for Educational Leadership, 2014) apparently had no impact on the gain scores of the use of instructional strategies.
Summary Results

The purpose of this study was to examine two primary research questions to determine whether teacher evaluation frameworks used in public school districts had any impact on how teachers used instructional strategies in their respective classrooms. Further, the study sought to determine whether there were specific factors that influenced the gain scores in the instructional strategies and professional development for teacher evaluation strategies used in their schools. In a survey of 208 teachers in grade kindergarten through sixth grade, participants responded to a series of items regarding demographics, district strategies, and instructional strategies. Data gathered in the survey were downloaded to SPSS software, which conducted a series of factor analysis and regression tests to determine predictors for the increased usage of instructional strategies in classrooms.

**Research Question 1. Was there a significant relationship between the usage of specific teacher evaluation frameworks and the usage of specific instructional strategies?**

In this study, about 34% of the participating teachers were using the Charlotte Danielson (2007) Model for Teaching, 33% were using the Marzano Teacher Evaluation Model (Learning Sciences International, 2011), and 13% were using 5 Dimensions of Teaching and Learning (Center for Educational Leadership, 2014). All of these teacher evaluation frameworks were researched and approved for usage in Michigan public school districts by the Michigan Council of Educator Effectiveness. Approximately 20% of the participants did not know which teacher evaluation model their districts were using. There was no significance reported between the type of evaluation framework used by these teachers and the reported growth of instructional strategies used in their classrooms.
Research Question 2. Was there any significant influence between the reported usage of instructional strategies and any factors that might influence this change? Fourteen items in the survey related to instructional strategy usage in the classroom. The items were grouped into five categories: school culture, communication, questioning and discussion techniques, engagement, and assessment. Teachers were asked to state the percentage of time they were using various instructional strategies before and after the implementation of new teacher evaluation frameworks in local districts. All survey items reported gains in instructional strategy usage from the prior teacher evaluation framework to the new teacher evaluation framework. Thus, the data were analyzed further to determine gain scores for those respondents who reported usage in more than 80% of their daily lessons. Factor analysis tests were performed to determine whether specific factors should be considered further to conduct a series of regression tests. Several factors were isolated in the factor analysis tests. Regression tests were then performed in areas that yielded some significant results.

The first regression test looked for predictors for the increased usage for strategies related to classroom culture. Strong significance was found in this area for kindergarten, first and second grade general education teachers, and special education teachers who reported a decrease in the growth of classroom culture instructional strategy usage compared to other teachers. Another finding showed a slight significance between the number of years that a teacher had worked in their current position and the increase in usage of these strategies related to classroom culture.

The second regression test looked for predictors for the increased usage of strategies related to communication. Slight significance was shown in this area for the number of years
that a teacher had worked in the educational field. The longer that a teacher worked in the educational field, the less growth they reported using strategies related to communication compared to teachers who worked in the educational field for a shorter amount of time.

The third regression test looked for predictors for the increased usage of strategies related to questioning and discussion techniques and engagement. Teachers who reported having a healthier school culture reported more growth in the usage of instructional strategies related to questioning and discussion techniques and engagement in their current teacher evaluation framework compared to those teachers who reported a less healthy school culture.

A fourth regression test analyzed the mediating variables related to the strategies used for Professional Development for Teacher Evaluation. These data suggested a slightly significant negative correlation for teachers with greater years of experience who reported less professional development for teacher evaluation.

Data suggested that some specific factors influenced the increased usage of instructional strategies. According to John Hattie (2007), all of the instructional strategies tested in this survey yielded a greater than 0.6 effective size (ES) in terms of student achievement. The average effect size for the hundreds of instructional strategies studied by Hattie is 0.4. Thus, instructional strategies that yield an ES of .6 or greater are considered to have a very large impact. Further analysis determined why some factors, such as the type of teacher, the number of years of employment in the education field, the number of years in the current position, and the school culture, have both positive and negative influence on reported growth in the usage of various instructional strategies. These factors are discussed further in the concluding chapter of this study.
Chapter 5—Discussion, Implications, and Recommendations

The purpose of this study was to explore the relationship between teacher evaluation frameworks and the usage of research-based instructional strategies. More than 200 teachers in southeast Michigan public schools completed a survey that included demographic information about the teacher, information about the current (and previous) teacher evaluation frameworks, and the teachers’ use of instructional strategies in the classroom. The responses were analyzed and reported in Chapter 4 of this study. The significance and conclusions of these findings are discussed in this chapter along with suggestions for future research.

Purpose and Research Questions

The researcher wanted to determine whether teachers altered their use of instructional strategies in response to their local school district’s teacher evaluation system. Further, if alterations were made to these instructional strategies, what specific factors influenced how often specific instructional strategies were used.

Two research questions guided this study:

1. Was there a significant relationship between the usage of specific teacher evaluation frameworks and the usage of specific instructional strategies?
2. Was there any significant influence between the reported usage of instructional strategies and any factors that might have influenced this change?

Discussion of Findings

Teacher evaluation frameworks and usage of instructional strategies. Data revealed that, regardless of the teacher evaluation framework, Danielson (2007), Marzano (2007), or 5 Dimensions (CEL, 2014), there was no significant difference reported in the
increased usage of instructional strategies in the classroom. In this study, approximately 35% of the respondents used the Charlotte Danielson Model, 33% used the Marzano Model, 13% used the 5 Dimensions Model and roughly 20% of the respondents were not clear about which model they were using in their respective school districts (see Table 4 in Chapter 4). Responses of participants showed no significant differences in the amount of growth related to instructional strategies between the use of current and former evaluation frameworks. If a key factor in teacher evaluations is to help teachers grow as educators, one could argue that it is essential for teachers to increase implementation of more effective instructional strategies in their classroom.

The three teacher evaluation models (Danielson (2007), Marzano (2007), or 5Dimensions (CEL, 2014) at the center of this study were researched and supported by the Michigan Council for Education Effectiveness (2013). Yet, some variables impacted the gains in the increased usage of strategies more than others.

Other states have adopted a plan similar to Michigan’s plan. The State of Washington required school districts to choose between Danielson (2007), Marzano (2007), or 5Dimensions (CEL, 2014). According to Coulter (2013), “The new law ultimately allowed each school district to select among three state-approved evaluation models, and unions were allowed to bargain with school districts about the way student performance would be used.”

Despite the lack of significance, teachers reported gains in the use of all instructional strategies from the previous to current teacher evaluation frameworks. Data in this study showed that there was not a relationship between using a specific teacher evaluation framework and the usage of instructional strategies. Other factors such as the type of teacher,
early childhood kindergarten and Grades 1 and 2 for example, were found to have a significant effect on the usage of instructional strategies.

**Factors Influencing Instructional Strategies**

**Classroom culture instructional strategies.** For this study, the researcher chose to define classroom culture instructional strategies as a series of research-based teaching practices that yield above average effect sizes in instructional gains according to the research of Danielson (2007), Marzano (2007), and Hattie (2012). (See Domain 2b in Table 1 in Chapter 2). Expectations that all students will achieve the goals of the lesson and helping students to understand the value of what they are learning are instructional strategies related to classroom culture. In terms of the current evaluation framework, early elementary teachers in kindergarten, first and second grade, and special education teachers in kindergarten through sixth grade, reported less growth than other teachers in the use of classroom culture instructional strategies (see Figure 1).

One explanation for these findings may be that teachers in early grades and special education have concerns that the increased expectations for curriculum standards to be mastered at an early age are not feasible for all students. Many students in these classrooms are not ready for the increased demands imposed by Common Core State Standards and other local and state measures. Kamii (2015) noted in reference to the Common Core State Standards, “It is obvious to any teacher of children in grades K-3 that the standards discussed above are too hard for most children” (p. 19). Further, the increased demands of these standards have reduced the time for play in school that most early childhood and special education teachers argue is a critical component to a developmentally appropriate educational experience. Fromberg and Bergen (2006) stated,
Many early childhood educators have argued that children need more “free play” time when they can engage in play activities of their own choosing. These educators worry about how the new early childhood academic teaching mandates are preventing young children from having time to engage in play settings. (p. 231)

Early childhood educators and elementary special education teachers do not believe they can realistically set expectations that students will achieve the goals of their lessons when the goals are so advanced (Heitin, 2015). Initially, Common Core State Standards were to reduce the number of standards to encourage deeper development in content areas. But, when analyzed, the kindergarten common core standards for English/Language Arts, which include literature, informational text, foundational skills, writing, speaking, and language, comprise 46 standards and an additional 29 sub-standards. Students are also expected to learn many standards in math, social studies, and science (Common Core State Standards Initiative, 2016).

Conversely, teachers who taught in the same position for an extended period of time reported a slight increase in the growth of the usage of instructional strategies related to classroom culture versus those who taught for a shorter period of time in that position. A conclusion for this finding may be that teachers who were more comfortable with the increased demands of the curriculum also have a better understanding of how to help students achieve the goals of the lesson and help them understand the value of what they are learning. Goodwin (2012), cited Fry (2007), who noted that beginning teachers with less experience in lesson planning or effective classroom processes may find curricular freedom to be more of a burden than veteran teachers. Case studies have observed novice teachers struggling "just trying to come up with enough curriculum" and spending 10 to 12 hours a day juggling
lesson planning; grading, and the myriad demands of paperwork, committees, and extracurricular assignments (p. 225).

**Communication instructional strategies.** For this study, the researcher chose to define communication instructional strategies as a series of research-based teaching practices that yield above average effect sizes in instructional gains according to the research of Danielson (2007), Marzano (2007) and Hattie (2012). (See Domain 3a in Table 1 in Chapter 2). The responses on survey questions about how often a teacher provides clear directions or connects concepts with student interests and lives beyond the school, revealed that teachers with more extensive experience in the classroom reported a slight decrease of growth in usage of the strategies related to communication versus teachers with less experience in the classroom (see Figure 1). Teachers with extensive classroom experience may be resistant to change because they believe their current methods are sufficient. According to Bohn (2014) “Veteran teachers are likely to resist change because they believe that traditional methods are best” (Resisting Change, para 1). Terhart (2013) noted that teachers who have been in education for many years are no longer interested in changing instructional practice and believe that this is better left up to their younger colleagues: “It is now the turn for younger colleagues to take over; us older ones have had our share of having to experiment with newfangled ideas. It is of no importance of value to us anymore” (n. p.). Various other arguments supported resistance to change, including failure of past changes, not enough time in a busy schedule, and that policy-makers, administrators, and others do not have experience in the classroom where change is expected.

**Questioning, discussion techniques, and engagement instructional strategies.** For this study, the researcher chose to compile questioning and discussion techniques and
engagement instructional strategies defined as a series of research-based teaching practices that yield above average effect sizes in instructional gains according to the research of Danielson (2007), Marzano (2007), and Hattie (2012). (See Domain 3b and 3c in Table 1 in Chapter 2).

These types of strategies were directed more toward student-centered instructional elements, which are more prevalent in school cultures that support facilitative teaching. Wiggins and McTighe (2007) noted that teachers help students develop meaning and deeper understanding of complex ideas by guiding opportunities for students to process knowledge in projects, cases, or authentic situations more than in direct transfer of information.

**School culture matters.** School culture had a significant effect on the way teachers answered survey questions regarding questioning, discussion and engagement strategies (see Figure 1). Teachers in healthier school cultures showed more growth in their use of instructional strategies related to questioning, discussion and engagement techniques than teachers in less healthy cultures. According to Gruenert (2015), “When teachers feel they are making a professional contribution to their school, they enjoy their work more and accomplish far more than what any merit pay can yield” (p. 71).

**Mediating variables for professional development of teacher evaluation.** Strategies related to the professional development of teacher evaluation demonstrated that teachers with greater years of experience reported slightly less professional development than their more novice counterparts (see Figure 1). This finding may reflect that more time is likely spent on helping newer teachers learn the teacher evaluation framework and improve practices than time spent with veteran colleagues.
Assessment of the Significance of the Findings

Although teachers did report growth in the use of instructional strategies posed in this survey, the actual teacher evaluation framework that they were using seemed to have very little influence on this growth. Thus, it could be argued that the extensive amount of time spent on teacher evaluation could be better channeled in other areas that may have a greater impact on student achievement.

Policy-makers focus much time on trying to weed out poor-performing teachers (Demonte, 2013). A fundamental look at the link between teacher evaluation and instructional strategies demonstrated that this approach may not achieve the anticipated results. Enacting laws and policies that aim to penalize districts for poor-performing teachers has not proved to be effective.

New teacher evaluation laws were established in Michigan in 2011. In 2015, nearly all (97.5 %) of the teachers in the State of Michigan were rated as effective or highly effective by their respective school districts; only 2.5 % of teachers were rated as minimally effective or ineffective. These results are almost identical to previous years’ ratings. These findings have drawn attention from experts, as the rating system appears to have had no effect on making changes in instructional strategies, despite the teacher evaluation reform efforts. According to a Michigan Department of Education analysis of 2013–14 educator effectiveness ratings, "Unfortunately, labeling all teachers as effective does not achieve the purpose of educator evaluations—if all teachers are effective, it is unnecessary to target professional development or to provide individual support” (McVicar, 2015, para 4).
From the current study and many other supporting studies, it could be argued that policy-makers should focus rewards on districts that implement efforts to support pre-K–third grade education and explicitly focus on positive school cultures instead of teacher evaluation systems that, by their own account, are not working the way they were intended (McVicar, 2015).

**Early childhood education.** In this study, early elementary teachers at the kindergarten, first and second grade levels, and elementary special education teachers reported less growth in the use of instructional strategies that included setting expectations that all students achieve the goals of the lesson and helping students to understand the value of what they are learning. This is an alarming trend pattern. Research suggested that it is essential for our early education teachers to be at the forefront of increasing the usage of instructional strategies that help support our students. The Common Core State Standards (CCSS) have been under attack regarding appropriateness for kindergarten students. Many early elementary educators believe that the CCSS for kindergarten students are not developmentally appropriate and, therefore, do not support the expectation that students meet the goals set forth in various lessons. According to Heitin (2015), “At the heart of the dispute is a literacy standard that says kindergartners should be able to ‘read emergent-reader texts with purpose and understanding.’ Experts agree it’s a more advanced expectation than appeared in most previous state standards” (p. 6). This is an area that needs to be further explored. How can we expect the CCSS to be effective if so many early elementary teachers question their validity?

One area on which experts and educators all agree is the importance of students being able to read by the end of third grade. Sparks (2011) cited a study by the American
Educational Research Association that said, “A student who can't read on grade level by 3rd grade is four times less likely to graduate by age 19 than a child who does read proficiently by that time” (n. p.). This is an alarming statistic. Educators who know that the most impactful learning happens at the K-3 level need to be laser-focused in helping teachers improve the use of instructional strategies while giving them time and support to do this.

Educators have debated whether the CSSS supports Developmentally Appropriate Practice (DAP) for early childhood students. According to the National Association for the Education of Young Children (2015),

Developmentally appropriate practice is grounded in the research on child development and learning and in the knowledge base regarding educational effectiveness. From this knowledge base, we know a great deal about how children develop and learn at various ages and what approaches and conditions tend to work best for them. (Copple & Bredekamp, 2009, p. 33)

In this debate, the National Association for the Education of Young Children (2015) established a number of steps to help teachers bridge the gap between the CCSS and Developmentally Appropriate Practice including:

- Build and maintain your skills in developmentally appropriate practice
- Work with the Common Core State Standards from other areas of child development, and professional knowledge of child development to build experiences that meet children’s needs across multiple domains
- Work with other teachers in your school or community, including professional and digital communities, to develop plans for meeting the Common Core standards through DAP. (p. 11)
Moving forward, it will be important for early childhood teachers and elementary special education teachers to support the direction of the Common Core State Standards and Developmentally Appropriate Practice to engage in greater usage in the instructional strategies listed in this research survey.

**Improve school culture.** Findings from this study noted that positive school cultures lead to increased learning due to a shift in the focus. In positive school cultures, the emphasis is on the learning rather than just the teaching. According to Everett Ryan (2011), editor of the C & I (Curriculum & Instruction) Journal, “Research findings indicate that failing schools begin to see progress when they systematically become focused on learning rather than on teaching” (p. 1). Healthier school cultures support greater use of student-centered learning instructional strategies such as student-led discussions, high levels of student participation, high-level learning tasks, students actively working, and posing questions for student understanding. “Although seemingly simplistic, the process of redirecting from an emphasis on how well teachers teach to how well students learn reflects an epic shift, albeit not a novel one, in educational policy and practice” (p. 1). Further, it is suggested that there must be continued emphasis placed on student achievement, improved school culture and more advanced teacher and leader effectiveness.

Supportive school cultures result in a well-rounded teaching staff that can increase student achievement. MacNeil, Prater, and Busch (2009) stated “Strong school cultures have better motivated teachers. Highly motivated teachers have greater success in terms of student performance and student outcomes” (p. 77)
Limitations of This Study and Future Research

This study was limited in size and scope to include ten suburban school districts in southeastern Michigan. The districts surveyed were not socio-economically diverse; all districts were largely upper-middle class. In addition, most of the teachers in this study were Caucasian. Future research could explore a wide range of districts who are more diverse in socio-economic status. A future study could explore public school districts in other geographic locations in the State of Michigan. Given the parameters of this study which determined whether teachers altered their instructional strategies in response to their local school district’s teacher evaluation system, future studies could explore the experience of teachers in states other than Michigan, or in private or charter schools.

This study included only teachers with experience of at least three years in the public schools. Further, the study did not differentiate between teachers holding a provisional teaching certificate and those holding a professional certificate. Although, this study in local districts aimed at a comparison of instructional strategy use between the previous evaluation framework and the current evaluation framework, a future study that investigates how teachers new to the field report instructional strategy use could be of interest.

This study found that one of five (20%) of the nearly 200 respondents were not sure the teacher evaluation framework with which their school district was most closely aligned. If teacher evaluation is important, at a minimum, all teachers in a school district should know and understand the basic tenets of the evaluation framework. Further studies could seek to determine the methods school districts use to provide professional development for their specific teacher evaluation framework. Greater professional development around teacher evaluation frameworks and the evaluation process can help teachers improve their practice.
In New York State, many school districts, in conjunction with their teachers, have created a pathway for professional growth called the Teacher Evaluation and Development system (TED). This process allows for teacher-directed teams to develop an evaluation system that stimulates learning (von Frank, 2013).

Future studies involving a much larger, more diverse, population of teachers would be advantageous. Further, future studies might determine whether findings would be different in research involving teachers in middle and high school.

**An unexplained finding.** On average, the teachers who responded to this study, reported grains in the usage of instructional strategies from the previous teacher evaluation framework to the current teacher evaluation framework. Yet, the reasons for these findings were difficult to determine. Perhaps it is because of the overall greater scrutiny on the use of teacher evaluation frameworks. The data demonstrated that there was no significance in how much growth in the use of instructional strategies was occurring in any of the teacher evaluation frameworks in the survey. However, that did not mean that teacher evaluation frameworks do not help teachers grow. Other reasons may suggest the reason that teachers reported that they are growing in their use of instructional strategies. Teachers with extensive experience may believe that they are more advanced in their ability to use the instructional strategies. Further, simply paying more attention to the usage of a specific instructional strategy could have accounted for the change.

A specific teacher evaluation framework might have very little to do with the growth of instructional strategies. Yet, it is important not to rule out the notion that the overall process of teacher evaluation is making a difference in the growth of instructional strategies. However, there could be many other factors such as pursuing a more advanced degree, better
lesson planning, or increased usage of Professional Learning Communities (PLCs) that are helping teachers grow their instructional strategies. Future research, such as a qualitative study involving interviews in a wide network of teachers, could explore specific reasons why teachers report growth in the use of instructional strategies.

**Conclusion**

According to researchers John Hattie (2012), Charlotte Danielson (2007), and Robert Marzano (2007), specific instructional strategies yield greater student achievement than others (See Table 1). These instructional strategies were highlighted in this research study. It is promising that teachers in this research study reported gains in their usage of instructional strategies from their previous teacher evaluation framework to the current teacher evaluation framework. However, findings in the study demonstrated that there was no relationship between any specific teacher evaluation framework and any of the gain scores of these instructional strategies. Further, evidence was cited that showed that school districts in Michigan have not found their teachers to be any more or any less effective despite the legislature’s efforts to weed out poor-performing teachers (McVicar, 2015). A question that arises as a result of this study is whether school districts in Michigan should be devoting extensive time with the teacher evaluation process when it seems to be making little to no difference in teachers changing the amount of usage for specific research-based instructional strategies (See Table 1). Given the limitations of teacher evaluation frameworks and the limited time that educators have to make an impact on student achievement, policy-makers may want to reconsider their mandate on the usage of specific teacher evaluation frameworks.
Promising findings. This study revealed that some variables such as teacher demographics (kindergarten, first and second grade, and special education teachers) and school culture support the greater use of research-based instructional strategies.

1. Support for blending Developmentally Appropriate Practice (DAP) and Common Core State Standards (CCSS) is critical so that early childhood educators can better achieve the goals of lessons taught. Support for students reading proficiently by the end of third grade is a critical indicator for high school graduation.

2. The emphasis on building strong and supportive school cultures supports increased use of instructional strategies by teachers and increased student learning.

Summary

This study explored the relationship between teacher evaluation frameworks and the usage of research-based instructional strategies. Chapter 1 included an introduction of teacher evaluation history reform efforts in Michigan. The problem, purpose, and research questions in this study were introduced. A comprehensive literature review of research-based instructional strategies and the teacher evaluation frameworks approved by the Michigan legislation were presented in Chapter 2. Chapter 3 comprised the research methods used in this study and the conceptual framework and survey tool that was developed to gather data to support the research questions. Analysis of the findings from the survey in this study and the statistical tests conducted, including factor analysis and regression, were described in Chapter 4. Implications and recommendations based on the findings in this study were discussed in Chapter 5.

Findings in this study revealed no relationship between any specific teacher evaluation framework and any of the gain scores of these instructional strategies. However,
there were a number of important findings in this study that should be further explored. These findings include a focus on developmentally appropriate instructional strategies to support our kindergarten, first and second grade, and special education students. Further, findings indicated that improving school cultures offers opportunities for achieving a greater impact on teaching and learning.
References


Center for Educational Leadership (CEL, n. d.), *5 Dimensions of Teaching and Learning Instructional Framework Version 4.0*. University of Washington, Retrieved from: 


http://setosa.io/ev/principal-component-analysis/


Ryan, E. A. (Ed.) (2011). Focused on learning: Four critical questions to which every educator should have the answers. C & I (Curriculum & Instruction)Tech Journal 2(1), Christiansted, VI: Department of Education. Retrieved from

Silver Strong Associates (n.d.) The strategic teacher: Better instruction, deeper learning, higher achievement. Retrieved from
http://www.thoughtfulclassroom.com/PDFs/TheStrategicTeacher-BetterInstruction.pdf


Appendix A—Instructional Strategies and Teacher Evaluation Survey

Thank you for participating in this survey. Your feedback is very important. This survey is designed for elementary teachers / staff who have been teaching for at least three years. This survey is completely voluntary. If at anytime you do not wish to continue, simply quit out of the survey and do not submit it.

The survey is divided into three parts:

1. **Demographics** - to find out general information about the participant and the school district in which the participant is employed.

2. **Teacher Evaluation Process**
   Three years ago Michigan public school districts began to reform their teacher evaluation process to comply with changes to state law. This included changes such as evaluating all teachers annually, increased requirement for student growth and requiring more frequent observation of teachers. This part of the survey is to find out about the beliefs participants hold in regard to the PREVIOUSLY USED TEACHER EVALUATION PROCESS (before teacher evaluation reform) vs. the CURRENT TEACHER EVALUATION PROCESS (used now) in their local school district.

3. **Instructional Strategies** - to find out how often participants were using research-based instructional strategies 3 YEARS AGO (before teacher evaluation reform) vs. TODAY.

This survey is 16 questions long (with some subcomponents) and is estimated to take the participant 10 - 15 minutes to complete.

Please answer the following demographic questions

**Demographics**

1. What grade level / department do you currently teach or work in? NOTE: If you teach a split grade level, select either grade level option
   - Kindergarten
   - 1st Grade
   - 2nd Grade
   - 3rd Grade
   - 4th Grade
   - 5th Grade
   - 6th Grade
   - Special Education (TC, Resource Room, Speech, Psychologist, Social Worker, etc.)
   - Literacy / Math / RTI / (Other) Coordinator Position
   - "Specials" Teacher (Ex: Art, P.E., Music, World Language, etc.)
   - Other (please specify) __________________________

2. How many TOTAL years have you been working in the education field? ____________

3. How many years have you been teaching in your current grade level (or assignment)? ____
4. Which of the following best represents your racial or ethnic heritage? Choose all that apply.

- White
- Black (African-American)
- Hispanic or Latino
- Asian
- Native Hawaiian / Pacific Islander
- American Indian
- Two or more races
- Other ________________________________

5. What is your gender?

- Male
- Female

6. What is your highest level of education?

- Bachelor's Degree (undergraduate)
- Master's Degree (graduate)
- Education Specialist Degree
- Doctorate Degree

7. How would you describe your school's overall culture?
A strong school culture is positive, healthy and adaptable to new challenges. Indicators include: * teacher morale is high in the school * collaboration amongst colleagues is strong * the school operates on strong values and beliefs * teachers are motivated to be life-long learners

- Excellent
- Good
- Average
- Not Good
- Poor

8. How motivated are you to change your instructional strategies?

- Very motivated
- Motivated
- Somewhat motivated
- Unmotivated
- Extremely unmotivated
The following questions relate to your knowledge and implementation of the teacher evaluation process used in your school district.

Teacher Evaluation Process

9. Which teacher evaluation framework is your district using? (Please choose the one that aligns closest to your district's evaluation framework. Over the course of the last three years, the Michigan Department of Education has identified 4 possible teacher evaluation frameworks to be used in the public schools in the state of Michigan.)
   - Charlotte Danielson Framework for Teaching
   - Marzano Teacher Evaluation Model
   - 5 Dimensions of Teaching and Learning
   - The Thoughtful Classroom Teacher Effectiveness Framework
   - I do not know

10. Please answer the following questions about your school district's teacher evaluation process

<table>
<thead>
<tr>
<th>Previously Used Teacher Evaluation Process</th>
<th>Current Teacher Evaluation Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many times were you (are you) trained to use your school district's teacher evaluation rubric?</td>
<td></td>
</tr>
<tr>
<td>How many times did you (do you) receive feedback about your teaching when it comes to your teacher evaluation process?</td>
<td></td>
</tr>
<tr>
<td>How often did you (do you) review the components of your teacher evaluation rubric?</td>
<td></td>
</tr>
<tr>
<td>How often were you observed by an administrator over the course of a year?</td>
<td></td>
</tr>
</tbody>
</table>
### Instructional Strategies

<table>
<thead>
<tr>
<th></th>
<th>3 Years Ago (prior to reforming current teacher evaluation process)</th>
<th>Today</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>11.</strong> Please respond to how often you have used (or are using) the instructional strategies related to CLASSROOM CULTURE in your lessons.....</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expectations that all students will achieve the goals of the lesson.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Helping students understand the value of what they are learning.</td>
<td></td>
</tr>
<tr>
<td><strong>12.</strong> Please respond to how often you have used (or are using) the instructional strategies related to COMMUNICATION in your lessons...</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clarifying of a lesson’s purpose.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing clear directions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Connecting concepts with students’ interests and lives beyond school.</td>
<td></td>
</tr>
<tr>
<td><strong>13.</strong> Please respond to how often you have used (or are using) the instructional strategies related to QUESTIONING AND DISCUSSION TECHNIQUES in your lessons.....</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Posing questions of high cognitive challenge.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Facilitating student-led discussions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eliciting high levels of students’ participation in discussion.</td>
<td></td>
</tr>
<tr>
<td><strong>14.</strong> Please respond to how often you have used (or are using) the instructional strategies related to ENGAGING STUDENTS IN LEARNING in your lessons.....</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Establishing learning tasks that require high-level student thinking.</td>
<td></td>
</tr>
</tbody>
</table>
Motivating students to persist even when the tasks are challenging.

Creating an environment where students are actively "working" rather than watching while their teacher "works."

15. Please respond to how often you have used (or are using) the instructional strategies related to ASSESSMENT in your lessons.....

Posing questions to elicit evidence of student understanding.

Circulating throughout the class to monitor student learning.

Provide feedback to students.

<table>
<thead>
<tr>
<th>Thank You and Confirmation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thank you for taking this survey. Your time is very much appreciated. If you would like to receive a $5 Amazon.com gift voucher (sent directly to the email address of your choice), please provide your email address in the field below. Please note that your email address will never be given to any third party. In addition, your survey responses will not be connected to the email address that you provide. $5 Amazon.com gift vouchers will be provided for the first 200 participants of this survey.</td>
</tr>
</tbody>
</table>

16. Would you like a $5 Amazon.com gift voucher sent to your email address for completing this survey?

   o   No
   o   Yes (please enter email address in box below)

Insert email address where you would like the $5 Amazon.com gift voucher sent.
Appendix B—University Human Subjects Review Committee

RESEARCH @ EMU  
UHSRC Determination: EXEMPT  
DATE: November 7, 2015

TO: Stephen Laatsch  
Department of Leadership and Counseling  
Eastern Michigan University

Re: UHSRC: #  810369-1  
Category: Exempt category 2  
Approval Date: November 7, 2015

Title: The Relationship Between Instructional Strategies and Teacher Evaluation in Michigan's Public Schools

Your research project, entitled The Relationship Between Instructional Strategies and Teacher Evaluation in Michigan's Public Schools, has been determined Exempt in accordance with federal regulation 45 CFR 46.102. UHSRC policy states that you, as the Principal Investigator, are responsible for protecting the rights and welfare of your research subjects and conducting your research as described in your protocol.

Renewals: Exempt protocols do not need to be renewed. When the project is completed, please submit the Human Subjects Study Completion Form (access through IRBNet on the UHSRC website).

Modifications: You may make minor changes (e.g., study staff changes, sample size changes, contact information changes, etc.) without submitting for review. However, if you plan to make changes that alter study design or any study instruments, you must submit a Human Subjects Approval Request Form and obtain approval prior to implementation. The form is available through IRBNet on the UHSRC website.

Problems: All major deviations from the reviewed protocol, unanticipated problems, adverse events, subject complaints, or other problems that may increase the risk to human subjects or change the category of review must be reported to the UHSRC via an Event Report form, available through IRBNet on the UHSRC website.

Follow-up: If your Exempt project is not completed and closed after three years, the UHSRC office will contact you regarding the status of the project.

Please use the UHSRC number listed above on any forms submitted that relate to this project, or on any correspondence with the UHSRC office.

Good luck in your research. If we can be of further assistance, please contact us at 734-487-3090 or via e-mail at human.subjects@emich.edu. Thank you for your cooperation.

Sincerely,

Beth Kubitskey  
Chair COE Human Subjects Review Committee
Appendix C—Letter from Central Office Administrator to Elementary Teachers

Date

Elementary teachers:

One of my colleagues, Steve Laatsch, Assistant Superintendent of Instructional Services in the Saline Area Schools is conducting a survey on teacher evaluation and instructional strategies for his doctoral study.

Thus survey is for **elementary teachers** who have been teaching for at least three years.

Steve is interested in learning how teachers describe the relationship between teacher evaluation models and the instructional strategies used in the classroom.

The 16-question survey has been piloted and is estimated to take 10-15 minutes of your time. As an incentive to take the survey, he is offering the first 200 participants a $5 [Amazon.com](https://www.amazon.com) voucher that will be sent directly to the email address provided at the completion of the survey.

The survey is confidential. It does not ask for your name and there is no identifiable information. No effort will be made on the part of the personnel who administer and analyze this survey to identify the respondents.

Here is the link to the survey: [https://www.surveymonkey.com/r/BFXVYF5](https://www.surveymonkey.com/r/BFXVYF5)

Please consider helping a fellow educator gather data about this topic.

Thank you,

Name
Appendix D— Informed Consent Form

Informed Consent Form: The person in charge of this study is Steve Laatsch. Steve is a doctoral student at Eastern Michigan University. His faculty advisor is Dr. Ronald Williamson. Throughout this form, this person will be referred to as the “investigator.”

Purpose of the study: The purpose of this study is to determine if there is a relationship between teacher evaluation models and the instructional strategies that teachers are using in the classroom. Further, the study will seek to determine the degree to which teachers are using research-based instructional strategies.

Funding: This research is unfunded. Study Procedures: Participation in this study involves completing an online survey. It should take between 10-15 minutes.

Risks: There are no anticipated physical or psychological risks to participation. The primary risk of participation in this study is a potential loss of confidentiality. That could only occur if the participant chooses to provide an email address in which to send a $5 gift card upon completion of the survey. However, the participant’s data will not be connected to their name regardless of whether they provide an email address or not.

Benefits: You will not directly benefit from participating in this research. Benefits to educators include understanding the impact that teacher evaluation frameworks are having on the instructional strategies being used by elementary teachers.

Confidentiality: We will keep your information confidential. At no time will a person’s name be coded back to any of the data that is collected. This survey will not collect the name of any of the school district’s participating in the study. If a participant chooses to provide an email address in which to have a $5 gift card sent as compensation for completing the survey, the email address will not be connected to any of the data that has already been submitted in the survey. We may publish information about this study with people outside of Eastern Michigan University, but at no time will identifiable information about any of the participants be revealed.

Compensation: As an incentive for teachers to participate in the study, a $5 Amazon.com credit will be provided to the first 200 survey participants who would like to provide a contact email address. In order to claim this incentive, teachers will provide an email address to the investigator upon completion of the survey. This will verify completion of the survey. A $5 Amazon.com credit will then be sent directly to the participant’s email address.

Contact Information: If you have any questions about the research, you can contact the Principal investigator, Steve Laatsch at laatschs1234@yahoo.com or by phone at 734-732-6242. For questions about your rights as a research subject, you can contact the Eastern Michigan University Office of Research Compliance at human.subjects@emich.edu or by phone at 734-487-3090.

Voluntary participation: Participation in this research study is your choice. You may refuse to participate at any time, even after signing this form. If you leave the study in the middle of the data collection process, you may request in writing that the information you submitted thus far be destroyed. However, if the participant completes the survey and the information has already been published, we will no longer be able to destroy any of this information.

Statement of Consent: I have read this form. I have had an opportunity to ask questions and am satisfied with the answers I have received. By completing this survey you are agreeing to participate in this research.
### Appendix E—District Location for Completed Surveys

<table>
<thead>
<tr>
<th>County</th>
<th>District Pseudonym</th>
<th>Number of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oakland</td>
<td>Rose</td>
<td>20</td>
</tr>
<tr>
<td>Oakland</td>
<td>Tulip</td>
<td>13</td>
</tr>
<tr>
<td>Oakland</td>
<td>Azalea</td>
<td>10</td>
</tr>
<tr>
<td>Oakland</td>
<td>Carnation</td>
<td>11</td>
</tr>
<tr>
<td>Oakland</td>
<td>Iris</td>
<td>17</td>
</tr>
<tr>
<td>Oakland</td>
<td>Violet</td>
<td>36</td>
</tr>
<tr>
<td>Livingston</td>
<td>Erie</td>
<td>9</td>
</tr>
<tr>
<td>Livingston</td>
<td>Superior</td>
<td>10</td>
</tr>
<tr>
<td>Livingston</td>
<td>Huron</td>
<td>17</td>
</tr>
<tr>
<td>Wayne</td>
<td>Oak</td>
<td>28</td>
</tr>
<tr>
<td>County Unidentified</td>
<td>*</td>
<td>37</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>208</strong></td>
</tr>
</tbody>
</table>
Appendix F — Component Matrix demonstrating various loadings.

<table>
<thead>
<tr>
<th>Component</th>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cult_Q1_Gain</td>
<td>-.070</td>
<td>.855</td>
<td>.066</td>
<td>-.146</td>
<td>.188</td>
<td></td>
</tr>
<tr>
<td>Cult_Q2_Gain</td>
<td>.033</td>
<td>.856</td>
<td>.141</td>
<td>-.012</td>
<td>.162</td>
<td></td>
</tr>
<tr>
<td>Comm_Q1_Gain</td>
<td>.527</td>
<td>-.147</td>
<td>.349</td>
<td>.302</td>
<td>.244</td>
<td></td>
</tr>
<tr>
<td>Comm_Q2_Gain</td>
<td>-.490</td>
<td>.049</td>
<td>.013</td>
<td>.680</td>
<td>-.023</td>
<td></td>
</tr>
<tr>
<td>Comm_Q3_Gain</td>
<td>-.287</td>
<td>.243</td>
<td>-.474</td>
<td>.628</td>
<td>-.126</td>
<td></td>
</tr>
<tr>
<td>Quest_Q1_Gain</td>
<td>.543</td>
<td>-.083</td>
<td>-.115</td>
<td>-.330</td>
<td>.274</td>
<td></td>
</tr>
<tr>
<td>Quest_Q2_Gain</td>
<td>-.547</td>
<td>-.357</td>
<td>.154</td>
<td>-.082</td>
<td>.182</td>
<td></td>
</tr>
<tr>
<td>Quest_Q3_Gain</td>
<td>.608</td>
<td>-.138</td>
<td>.175</td>
<td>.298</td>
<td>-.160</td>
<td></td>
</tr>
<tr>
<td>Eng_Q1_Gain</td>
<td>.663</td>
<td>-.083</td>
<td>.323</td>
<td>.158</td>
<td>.345</td>
<td></td>
</tr>
<tr>
<td>Eng_Q2_Gain</td>
<td>-.617</td>
<td>-.070</td>
<td>.413</td>
<td>.127</td>
<td>.274</td>
<td></td>
</tr>
<tr>
<td>Eng_Q3_Gain</td>
<td>.622</td>
<td>.047</td>
<td>-.173</td>
<td>.061</td>
<td>.047</td>
<td></td>
</tr>
<tr>
<td>Ass_Q1_Gain</td>
<td>.597</td>
<td>.018</td>
<td>.522</td>
<td>.014</td>
<td>-.037</td>
<td></td>
</tr>
<tr>
<td>Ass_Q2_Gain</td>
<td>-.515</td>
<td>-.034</td>
<td>-.001</td>
<td>.249</td>
<td>.513</td>
<td></td>
</tr>
<tr>
<td>Ass_Q3_Gain</td>
<td>.268</td>
<td>-.183</td>
<td>-.618</td>
<td>-.028</td>
<td>.559</td>
<td></td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

a. 5 components extracted.