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The Relationship Between Teachers' Perceptions of the Feedback They Receive and Their Teaching Efficacy in High-Performing Schools

Joshua D. St. John
Purdue University

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For the degree of Doctor of Philosophy



Is approved by the final examining committee:

Marilyn Hirth

Chair

James Freeland

Deborah Bennett

William McInerney

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Approved by Major Professor(s): Marilyn Hirth

Approved by: Ala Samarapungvan

Head of the Graduate Program

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Date

THE RELATIONSHIP BETWEEN TEACHERS' PERCEPTIONS OF THE
FEEDBACK THEY RECEIVE AND THEIR TEACHING EFFICACY IN HIGH-
PERFORMING ELEMENTARY SCHOOLS

A Dissertation

Submitted to the Faculty

of

Purdue University

by

Joshua D. St. John

In Partial Fulfillment of the

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of

Doctor of Philosophy

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West Lafayette, Indiana

This dissertation is dedicated to my mother, Linda St. John, who gave consistent encouragement that fostered countless dreams and established my self-worth, to my father, David St. John, who showed me what it looked like to be a great father, husband, and man, and to my wife, Myah St. John, who is the love of my life and my greatest earthly blessing.

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“A work in progress,” I said when asked to share my view of myself as a writer. I was never given the gift of writing, nor am I a gifted communicator, but I have come to realize these are things I can improve ... with practice. Though this journey, I have practiced, indeed.

In no way could I have achieved this goal without the support of colleagues, mentors, and family. My first principal, Dr. Bill Duke, was the first person to mention school administration to me, and I thank him for planting the seed. I thank my friends in cohort 15, especially John Miller and Becca Lamon, for their support, encouragement, and moments of levity through the journey. It is John Miller who showed me what a student-centered school administrator looked (and sounded) like, and for that I am forever changed. I am thankful for the mentoring I have received from Ken Kline and Dr. Steve Yager, whose leadership I will strive to emulate as it always has what is best for boys and girls as the target. I would be remiss to not thank my committee for insights and guidance through the journey. Dr. McInerney’s questioning always challenged me to think, Dr. Freeland’s common sense wisdom always left me inspired, Dr. Bennett’s feedback made this dissertation possible, and Dr. Hirth’s encouragement and optimism kept me on the right track.

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TABLE OF CONTENTS

	Page
LIST OF TABLES	vii
ABSTRACT.....	xii
CHAPTER 1: INTRODUCTION TO THE STUDY.....	1
Significance of Study.....	7
Research Questions.....	9
Hypotheses.....	9
Delimitations and Limitations	11
Definition of Terms	14
Summary.....	15
CHAPTER 2: REVIEW OF THE RELATED LITERATURE.....	16
Teacher Efficacy.....	17
The Sources and Development of Teacher Efficacy	22
Types of Feedback Teachers Receive.....	26
The Effects of Various Types of Feedback	37
Summary.....	41
CHAPTER 3: METHODOLOGY	46
Research Questions.....	47
Hypotheses.....	48
Participants and Settings.....	50
Instruments	52
Research Design	56
Procedures.....	57
Data Analysis Procedures.....	58
Summary.....	59

	Page
CHAPTER 4: REPORT OF DATA ANALYSIS	60
Descriptive Analysis	60
Correlations.....	69
Analysis of Variance.....	80
Reliability of Instruments	84
Analysis of Research Question 1	88
Analysis of Research Question 2.....	93
Analysis of Research Question 3.....	102
Analysis of Research Question 4.....	111
Analysis of Research Question 5.....	120
Summary.....	151
CHAPTER 5: SUMMARY AND DISCUSSION	156
Introduction.....	156
Review of the Literature	157
Purpose	160
Methodology.....	161
Settings and Participants.....	161
Procedures.....	162
Research Questions.....	163
Data Analysis.....	164
Results and Hypotheses Testing.....	164
Findings	174
Implications and Suggestions for Future Research	180
Limitations and Threats to Validity	182
Conclusion	183
REFERENCES	184
APPENDICES	
Appendix A: Feedback and Efficacy Survey	192
Appendix B: Permission to Use the Teachers' Sense of Efficacy Scale	198
VITA.....	199

LIST OF TABLES

Table	Page
1. Evaluative Feedback Items	61
2. Formative Feedback Experiences Items	62
3. Total Feedback Items	62
4. Open-ended Items	63
5. Teacher Efficacy Items (TSES)	64
6. Descriptive Statistics for Feedback Variables	65
7. Descriptive Statistics for Teacher Efficacy Variables	65
8. Descriptive Statistics for Demographic and Evaluative Feedback Variables	66
9. Descriptive Statistics for Demographic and Formative Feedback Variables	67
10. Descriptive Statistics for Demographic and Total Feedback Variables	68
11. Descriptive Statistics for Demographic and Teacher Efficacy Variables	69
12. Correlations: Teacher Variables and Evaluative Feedback Variables.....	70
13. Correlations: Teacher Variables and Formative Feedback Variables	71
14. Correlations: Teacher Variables and Total Feedback Variables	72
15. Correlations: Teacher Variables and Teacher Efficacy Variables	73
16. Correlations: Evaluative Feedback and Formative Feedback Variables	74
17. Correlations: Evaluative Feedback and Total Feedback Variables	75

Table	Page
18. Correlations: Formative Feedback and Total Feedback Variables	76
19. Correlations: Evaluative Feedback Variables and Teacher Efficacy Variables	77
20. Correlations: Formative Feedback Variables and Teacher Efficacy Variables	78
21. Correlations: Total Feedback Variables and Teacher Efficacy Variables ...	79
22. ANOVA: Categorical Variables and Teacher Efficacy in Classroom Management	80
23. ANOVA: Categorical Variables and Teacher Efficacy in Student Engagement	81
24. ANOVA: Categorical Variables and Teacher Efficacy in Instructional Strategies	82
25. Cronbach's Alpha: Feedback and Teacher Efficacy Variables	84
26. Cronbach's Alpha: Descriptive Statistics for Variables with Cronbach's Alpha < .700	87
27. Pearson Product Coefficient for the Formative Feedback Predictors and Teacher Efficacy in Instructional Strategies	94
28. Summary for Multiple Regression for Formative Feedback Predictors and Teacher Efficacy in Instructional Strategies	95
29. Analysis of Variance for Formative Feedback Predictors and Teacher Efficacy in Instructional Strategies	96
30. Pearson Product Coefficient for the Formative Feedback Predictors and Teacher Efficacy in Classroom Management	97
31. Summary for Multiple Regression for Formative Feedback Predictors and Teacher Efficacy in Classroom Management	98
32. Analysis of Variance for Formative Feedback Predictors and Teacher Efficacy in Classroom Management	99

Table	Page
33. Pearson Product Coefficient for the Formative Feedback Predictors and Teacher Efficacy in Student Engagement	100
34. Summary for Multiple Regression for Formative Feedback Predictors and Teacher Efficacy in Student Engagement	101
35. Analysis of Variance for Formative Feedback Predictors and Teacher Efficacy in Student Engagement	102
36. Pearson Product Coefficient for the Evaluative Feedback Predictors and Teacher Efficacy in Instructional Strategies	103
37. Summary for Multiple Regression for Evaluative Feedback Predictors and Teacher Efficacy in Instructional Strategies	104
38. Analysis of Variance for Evaluative Feedback Predictors and Teacher Efficacy in Instructional Strategies	105
39. Pearson Product Coefficient for the Evaluative Feedback Predictors and Teacher Efficacy in Classroom Management	106
40. Summary for Multiple Regression for Evaluative Feedback Predictors and Teacher Efficacy in Classroom Management	107
41. Analysis of Variance for Evaluative Feedback Predictors and Teacher Efficacy in Classroom Management	108
42. Pearson Product Coefficient for the Evaluative Feedback Predictors and Teacher Efficacy in Student Engagement	109
43. Summary for Multiple Regression for Evaluative Feedback Predictors and Teacher Efficacy in Student Engagement	110
44. Analysis of Variance for Evaluative Feedback Predictors and Teacher Efficacy in Student Engagement	111
45. Pearson Product Coefficient for the Total Feedback Predictors and Teacher Efficacy in Instructional Strategies	112
46. Summary for Multiple Regression for Total Feedback Predictors and Teacher Efficacy in Instructional Strategies	113

Table	Page
47. Analysis of Variance for Total Feedback Predictors and Teacher Efficacy in Instructional Strategies	114
48. Pearson Product Coefficient for the Total Feedback Predictors and Teacher Efficacy in Classroom Management	115
49. Summary for Multiple Regression for Total Feedback Predictors and Teacher Efficacy in Classroom Management	116
50. Analysis of Variance for Total Feedback Predictors and Teacher Efficacy in Classroom Management	117
51. Pearson Product Coefficient for the Total Feedback Predictors and Teacher Efficacy in Student Engagement	118
52. Summary for Multiple Regression for Total Feedback Predictors and Teacher Efficacy in Student Engagement	119
53. Analysis of Variance for Total Feedback Predictors and Teacher Efficacy in Student Engagement	120
54. Qualitative Data: Characteristics of Evaluative Feedback and Teacher Self-Efficacy for Instructional Strategies	139
55. Qualitative Data: Characteristics of Evaluative Feedback and Teacher Self-Efficacy for Classroom Management	140
56. Qualitative Data: Characteristics of Evaluative Feedback and Teacher Self-Efficacy for Student Engagement	141
57. Qualitative Data: Characteristics of Formative Feedback Experiences and Teacher Self-Efficacy for Instructional Strategies	143
58. Qualitative Data: Characteristics of Formative Feedback Experiences and Teacher Self-Efficacy for Classroom Management	144
59. Qualitative Data: Characteristics of Formative Feedback Experiences and Teacher Self-Efficacy for Student Engagement	146
60. Qualitative Data: Characteristics of Total Feedback and Teacher Self-Efficacy for Instructional Strategies	147

Table	Page
61. Qualitative Data: Characteristics of Total Feedback and Teacher Self-Efficacy for Classroom Management	148
62. Qualitative Data: Characteristics of Total Feedback and Teacher Self-Efficacy for Student Engagement	150

ABSTRACT

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As reform efforts are prescribed in every state through mandates and regulations in an effort to better prepare students to compete in a global economy, and as states like Indiana implement new evaluation plans for teachers based on a rigorous rubric and objective measures of student achievement, close attention to the ripple effects must be involved. While efforts such as professional learning communities and instructional coaches are aimed at building teacher capacity, maximum results can only be achieved when school leaders balance how they leverage their evaluative power while promoting these formative experiences. Absent in the drive for heightened accountability, evaluative feedback, and formative feedback is the understanding of the effect that specific characteristics of feedback will have on teacher self-efficacy.

The purpose of this study was to extend previous research regarding teachers' perceptions of the characteristics of the feedback they receive in six high-performing elementary schools in Indiana, rich with evaluative and formative feedback. In addition to the feedback characteristics, teacher demographic variables were included in the data collection and analysis. Hierarchical multiple regression was used to best determine the predictive power of the independent variables on teacher self-efficacy.

The schools in the study employed an evaluative model which called for frequent observations and frequent feedback using a state-mandated, uniform, rigorous evaluation rubric. In addition, each school had daily collaboration time and a full-time literacy coach, providing for ample formative feedback opportunities. For the formative feedback model, regression showed that the independent variables did not have a significant predictive relationship to any of the subscales for teacher efficacy. For the evaluative feedback model, regression showed that the independent variables did have a significant predictive relationship to teacher self-efficacy for Instructional Strategies and Classroom Management and did not for Student Engagement. For the total feedback model, regression showed that the independent variables did have a significant predictive relationship to teacher self-efficacy for Classroom Management and did not for Instructional Strategies and Student Engagement. Finally, an examination of the data from the open-ended questions of the survey showed teachers with differing levels of self-efficacy perceived useful and helpful feedback differently.

Building the capacity of teachers is complex; nonetheless, when high-performing schools seek to be better today than they were yesterday, all protocols must be examined for best practice. Thus, schools that offer rich formative feedback experiences must deliver evaluative feedback that embodies emotional intelligence and respects relationships, principals and instructional coaches must be aligned, and attention to differentiation in leadership must be paid when planning for all types of feedback.

CHAPTER 1

INTRODUCTION TO THE STUDY

Henry Ford once said, “Whether you think you can or whether you think you can’t, you’re right.” This statement illuminates the power in one’s confidence to achieve. The belief that is inherent to this statement is represented in the construct of self-efficacy.

Teacher self-efficacy has been defined as teachers’ belief in their capabilities to organize and execute the courses of action required to produce given proficiencies (Tschannen-Moran & Woolfolk Hoy, 2001). Self-efficacy in general affects behavior, goals, outcome expectations, and affective states. People who believe they will be successful in a given task are more likely to bring the task to completion; they persevere to achieve challenging goals, are optimistic when faced with obstacles, and develop coping mechanisms for managing their emotional states (Bandura, 1997). Teacher self-efficacy affects the effort teachers invest in teaching, as well as the goals they set for themselves and their students (Tschannen-Moran & Hoy, 2000). Highly efficacious teachers persist with struggling students, dedicate more instructional time to student achievement, and more often celebrate growth with students (Gibson & Dembo, 1984). Clearly, teacher self-efficacy is worthy of consideration in the pursuit of improving education.

Most recent educational improvement initiatives can be linked to the No Child Left Behind (NCLB) Act of 2001 which raised the bar for student achievement and teacher accountability. While NCLB may seem appropriate, the types of support provided to teachers to improve and rise to the demands of new standards may be problematic. The primary target in education is to provide learning opportunities and support in the development of goals for every learner – teachers included – in the quest for high achievement. In developing teachers to best hit the target, teacher education programs work to prepare teachers to pursue goals they set for themselves with consideration to students and school (Darling-Hammond & Bransford, 2005). The support and development of teachers should not cease when teachers move from formal training; it must be specific and ongoing to meet the ever-changing demands of individual teacher capacity, local context, and the greater education system. The support and development provided to teachers cannot be examined without attention to the concept of feedback.

Without a doubt, research supports the idea that feedback is an accelerant to learning (Danielson, 2007; Marzano, Pickering, & Pollock, 2001; Reeves, 2006). Grant Wiggins says, “Feedback is information about how we are doing in our efforts to reach a goal” (2012, p. 11). The feedback teachers receive regarding their teaching can come from a variety of sources – administrators, peers, instructional coaches, students, and parents. It can also be perceived as either evaluative or formative. Regardless of the type, not all feedback is perceived as effective. Hall and Simeral (2008) say, “Feedback is effective if it helps the teacher to improve in knowledge, skill, or self-reflective behavior” (p. 139). These authors of *Building Teachers’ Capacity for Success* also assert,

Great administrators offer their teachers the professional favor of giving them direct performance feedback, allowing them the opportunity to take that feedback and implement a strategy to address a concern, identify a strength, rectify an error, consider an alternative, and, in the end, improve their performance. In order for this to happen and feedback to be effective, it must contain certain characteristics (Hall & Simeral, p. 139).

In terms of teacher evaluation models, Danielson and McGreal (2000) maintain that the objectives of evaluative feedback are to guide teachers in data use, assess individual and classroom needs, and use prior knowledge and experience to establish goals. Research shows that feedback is one the most important elements within an evaluation system (Darling-Hammond, Wise, Pease, 1983). However, research also shows that evaluation systems are failing to provide teachers with the information and feedback required to yield learning and professional growth (Danielson & McGreal, 2000). Formative feedback experiences in the form of instructional coaching, peer visits, and collaboration may provide teachers with the needed feedback and information to maximize learning and growth. However, this type of feedback, too, must adhere to certain characteristics to be most effective.

Providing effective feedback is an essential ingredient in our nation's work at strengthening teacher quality and lifting student achievement. Further, as schools in Indiana and across the nation work to deliver optimal feedback, school leaders would be negligent to dismiss the significance of best understanding how teachers' perceptions of various types and characteristics of feedback relate to teacher self-efficacy. By

explaining specific characteristics of types of feedback that relate to teacher self-efficacy, both teachers and administrators, and ultimately students, will benefit from the results.

The purpose of this study is to add needed depth to existing research on the relationship between the feedback teachers receive and teachers' sense of self-efficacy in high-performing elementary schools in Indiana. With respect to feedback, this study will seek to identify *specific characteristics* of three types of feedback teachers receive that predict higher levels of teacher self-efficacy: evaluative, formative, and total feedback. Evaluative feedback is a result of the protocol used by an evaluator to deliver feedback relative to the evaluation rubric. Formative feedback is a result of an informal or formal experience with colleagues or an instructional coach. Total feedback is the cumulative feedback from the evaluation model and formative feedback experiences. High-performing schools are of focus in this study due to their students' successful performance on statewide assessments – an important metric in determining teacher quality. Further, it stands to reason that specific characteristics of effective feedback that predict higher levels of teacher self-efficacy in high-performing schools should be modeled in all schools that desire to become or maintain a high-performing status. Elementary schools are of focus in this study due to the growing trend of instructional coaches at this level and opportunities for formative feedback which occur in the setting which is typically smaller than that of secondary schools. By limiting this study to similar schools – both high-performing and elementary – factors that may contribute to varying levels of teacher self-efficacy are reduced. It is important to note that this study builds upon the research of Dr. Jim McCall whose dissertation examined teachers' perceptions of evaluation and teachers' sense of self-efficacy in high-performing high

schools. In his study, McCall (2011) examined two high schools with teacher evaluation models differing in frequency of observations, amount of feedback, and teacher participation. However, this study will examine high-performing elementary schools with one common teacher evaluation model which requires great frequency of observation and feedback relative to a rigorous evaluation rubric. Also, teachers' perceptions of *specific characteristics* of feedback will be studied – that which are a result of the evaluative model, and that which are a result of a formative feedback experience with an instructional coach or other colleagues. Thus, the results of this study will provide evaluators, instructional coaches, and others who provide feedback to teachers with a greater understanding of the relationship between characteristics of feedback and teacher self-efficacy. Consequently, feedback protocols can be adjusted to maximize the development of teacher self-efficacy resulting in school improvement.

Statement of Problem

Reform efforts have been prescribed in every state through mandates and regulations in an effort to prepare students to compete in our changing society (Danielson, 2007; Darling-Hammond, 2005; DuFour & Eaker, 1998). In Indiana, legislators put into law a plan for a common evaluation plan for educators based on a rigorous rubric and objective measures of student performance. The model plan, RISE, requires the evaluation of teachers in four domains: Planning, Instruction, Leadership, and Core Professionalism. Consequently, at the conclusion of each year all teachers are provided a summative evaluation and placed into one of four categories: Highly Effective, Effective, Improvement Necessary, Ineffective (Indiana Department of

Education, 2012). In addition to legislative reform efforts, professional learning communities and instructional coaches are among the most recent trends in education aimed at school improvement. With many school leaders responding to clear research that points to teacher quality as paramount, they are embracing the concept of colleagues engaging in formative feedback experiences through in-house structures (Hall & Simeral, 2008).

Absent in the drive for heightened accountability, evaluative feedback, and formative feedback is the understanding of the effect that specific characteristics of feedback will have on the teacher and on student learning. Teacher self-efficacy is the critical concept that is lost in the discussion on the subject of feedback. Research on the concept demonstrates that teacher self-efficacy has a strong impact on essential teaching behaviors such as leading small group instruction (Gibson & Dembo, 1984), instructional experimentation (Fuchs, Fuchs, & Bishop, 1992), teacher work ethic (Chase, Germundsen, Brownstein, & Distad, 2001), and frequency of feedback-asking (Runhaar, Sanders, & Yang, 2010). In addition, research on teacher self-efficacy has a positive effect on student achievement (Bandura, 1993; Dembo & Gibson, 1985; Saklofske, Michayluk, & Randhawa, 1988). To summarize, highly efficacious teachers demonstrate greater effectiveness and have more positive influence on student learning than teachers who are less efficacious. With this strong connection between teacher self-efficacy, teacher quality and student achievement, it is imperative that the effect of teachers' perceptions of the specific characteristics of feedback they receive has on teachers' sense of self-efficacy is further understood.

Significance of Study

As shown above, many studies have been executed over the last several years that examine teacher self-efficacy and its connection to teaching behaviors and student achievement. In addition, several researchers have sought to find organizational factors that elicit higher levels of self-efficacy in teachers (Cantrell & Hughes, 2008; Ciani, Summers, & Easter, 2007; Ebmeier, 2003; Henson, 2001; Hipp, 1995; McCall, 2011; Ross, 1994). It is clear that delivering feedback is critical to ensuring teacher quality and building teacher capacity, but done incorrectly it can be counterproductive and demoralizing. A review of research reveals an absence in the understanding of how specific characteristics of evaluative and formative feedback affect the specific construct of teacher self-efficacy. Furthermore, little research and literature exist that examines how these two distinct forms of feedback are perceived to work together and relate to teacher self-efficacy. Thus, a study which endeavors to advance the examination of teacher self-efficacy by studying specific characteristics of evaluative, formative, and total feedback and the possible connection to teacher efficacy has merit.

The purpose of this study is to explore teachers' perceptions of the characteristics of the feedback they receive in six high-performing elementary schools in Indiana, rich with evaluative and formative feedback, through a researcher-designed survey instrument. Like McCall's study, teacher self-efficacy is conceptualized by the theoretical model presented by Bandura (1977) and expanded by others (Gibson & Dembo, 1984; Tschannen-Moran & Woolfolk Hoy, 2001). Furthermore, measurement of teachers' sense of self-efficacy is quantified using an instrument first developed by Gibson and Dembo (1984) and then refined by Tschannen-Moran and Woolfolk Hoy

(2001) in their Teacher Self-Efficacy Scale (TSES). Unique to this study, specific characteristics of the feedback that teachers receive are measured using a researcher-designed instrument with closed-ended, Likert-like, and open-ended questions. Variables are analyzed through descriptive statistics and multiple regressions. A concurrent embedded strategy is used to gain a broader perspective on the problem in this mixed methods study by examining the quantitative data gained through closed-ended and Likert-like questions next to the qualitative data gained through open-ended questions.

This study examines teachers' perceptions of feedback from the evaluative feedback model and formative feedback experiences in six high-performing elementary schools in a single school district in Indiana, in addition to teachers' sense of self-efficacy in these schools. The research in this study provides the schools and the district an analysis of their teachers' perceptions about specific characteristics of the feedback they receive as well as an examination of their teachers' beliefs in their ability to produce positive outcomes with students – their sense of self-efficacy. In Indiana, both teachers and administrators are responding to legislative mandates that require adherence to a uniform, more rigorous evaluative model. However, autonomy in leveraging specific characteristics of feedback is afforded, and there are growing efforts to provide teachers with valuable formative feedback experiences. Hence, this study yields needed clarity on the relationship between teachers' perceptions of various types of feedback they receive and their teaching efficacy while providing support for the further development of feedback protocols that maximize the self-efficacy of teachers, improve teaching and learning, and increase student achievement.

Research Questions

This mixed-methods study of teachers' perceptions of the feedback they receive and teachers' sense of self-efficacy in high-performing elementary schools is guided by the following research questions:

1. What are teachers' perceptions of the evaluative feedback, formative feedback experiences, and total feedback they receive?
2. Is there a significant predictive relationship between characteristics of feedback from formative feedback experiences and teacher self-efficacy?
3. Is there a significant predictive relationship between characteristics of feedback from the evaluative model and teacher self-efficacy?
4. Is there a significant predictive relationship between characteristics of the total feedback teachers receive and teacher self-efficacy?
5. Are there predominant themes in teachers' perceptions of feedback that relate to teacher self-efficacy?

Hypotheses

As a result of the research questions, the following hypotheses are tested:

HO₁: There is no statistically significant predictive relationship between teachers' perceptions of participation, accuracy, support, and emotional intelligence of formative feedback experiences as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Instructional Strategies as measured by the TSES.

HO₂: There is no statistically significant predictive relationship between teachers' perceptions of participation, accuracy, support, and emotional intelligence of formative feedback experiences as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Classroom Management as measured by the TSES.

HO₃: There is no statistically significant predictive relationship between teachers' perceptions of participation, accuracy, support, and emotional intelligence of formative feedback experiences as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Student Engagement as measured by the TSES.

HO₄: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is timely and ongoing, accurate, relevant, and emotionally intelligent from the evaluative model as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Instructional Strategies as measured by the TSES.

HO₅: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is timely and ongoing, accurate, relevant, and emotionally intelligent from the evaluative model as measured by the survey; teaching assignment; degree obtained; years teaching in the district and teachers' self-efficacy in Classroom Management as measured by the TSES.

HO₆: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is timely and ongoing, accurate, relevant, and emotionally intelligent from the evaluative model as measured by the survey; teaching assignment;

degree obtained; years teaching in the district; and teachers' self-efficacy in Student Engagement as measured by the TSES.

HO₇: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is coordinated and aligned from the total feedback they receive as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Instructional Strategies as measured by the TSES.

HO₈: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is coordinated and aligned from the total feedback they receive as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Classroom Management as measured by the TSES.

HO₉: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is coordinated and aligned from the total feedback they receive as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Student Engagement as measured by the TSES.

Delimitations and Limitations

The research in this study aims to determine if specific characteristics of the feedback teachers receive is related to teachers' sense of self-efficacy. The research is limited to teachers' perceptions of their self-efficacy and the types and characteristics of

feedback they receive. Two surveys are utilized in this study: the Teachers' Sense of Efficacy Scale (TSES) (Tschannen-Moran & Woolfolk Hoy, 2001) and a researcher-developed survey designed to measure teachers' perceptions of the feedback they receive from the evaluative feedback model, formative feedback experiences, and the total feedback system. A limitation of both surveys is the readiness of participants to take part, to respond with honesty and accuracy, and to complete each survey with timeliness in order to quantify and qualify responses. A limitation of the survey designed to measure teachers' perceptions of the feedback they receive is the researcher's ability to effectively develop an instrument that is both valid and reliable. Also, because this is not an experimental study, it will only be possible to discuss the relationship between variables. That is, if a correlation between self-efficacy and perceptions of feedback is found, then it will not be possible to state that perceptions of feedback cause teacher self-efficacy – only that the two variables are associated. This leads to the problem of the chicken and the egg. For example, do teachers' perceptions of formative feedback experiences that support their teaching lead to more highly efficacious teachers? Or, could it be possible that more highly efficacious teachers are more likely to perceive formative feedback experiences as supportive? This study does not attempt to solve the problem of the chicken and the egg. It may raise more questions. For example, do teachers with greater levels of teaching efficacy perceive some characteristics of feedback differently? If so and detrimental, then how do feedback providers best mitigate these perceptions. Is a minimum level of teaching efficacy necessary for teachers to perceive certain characteristics of evaluative feedback experiences more favorably? This study raises possibilities, but the chicken-egg problem remains

unsolved. Furthermore, it will not be known if both self-efficacy and perceptions of feedback are impacted by a third, unmeasured variable by analysis of the quantitative data alone. However, the study's qualitative data collected through the mixed-methods design provides needed richness and depth.

A delimitation for the study is that participants are limited to six suburban, high-performing elementary schools in a single school district in Indiana. Furthermore, there is limited contrast in the characteristics of the schools with respect to ethnicity, socio-economic status, and student achievement. Thus, conclusions reached based on relationships found cannot be transferable to secondary levels or districts with contrasting demographics. However, the limited generalizability is a strength for the district being studied – the study provides the district with rich data on teachers' perceptions of feedback and teacher efficacy in year one of compliance with teacher evaluation legislation in Indiana. In addition, the limited generalizability of the study is a strength for high-performing schools that are congruent to those in this study. Specifically, the study has great value for high performing elementary schools that are wrestling with the balance of teacher evaluation changes and crafting feedback that best builds teacher capacity and teachers' efficacy, all while navigating through and around any potential unintended negative outcomes of increased feedback. Another delimitation for the study is that there are limited specific characteristics of feedback that are tested to investigate a potential predictive relationship to teacher self-efficacy. The specific characteristics that are tested were selected by the researcher based on a thorough review of the research and literature on feedback and teacher self-efficacy.

Definition of Terms

Teacher self-efficacy: The belief of a teacher in his or her ability to produce positive outcomes with students.

Feedback: The information delivered to a person regarding the performance of a task.

Evaluative feedback model: The protocol used by an evaluator to deliver feedback relative to the evaluation rubric.

Formative feedback experience: Informal or formal experience of a teacher with colleagues or instructional coaches that provides feedback which is perceived to be formative by a teacher.

Evaluative feedback: Feedback that is a result of the evaluative feedback model.

Formative feedback: Feedback that is a result of a formative feedback experience.

Total feedback: The cumulative feedback from the evaluative feedback model and formative feedback experiences.

High-performing elementary school: For the purposes of this study, a high-performing elementary school is an institution of learning made of grades K-5 which has most recently earned a “B” or higher according to the Indiana Department of Education.

Instructional strategies: The actions and methods used by a teacher in a lesson to ensure that the sequence or delivery of instruction helps students learn.

Classroom management: The purposeful practices and policies leveraged by a teacher to maintain an environment conducive to learning in a classroom.

Student engagement: A psychological investment in learning by a student as evidenced by active listening and/or participation.

Instructional coach: A faculty member who facilitates professional development opportunities among two or more colleagues through activities such as modeling, co-teaching, lesson study, visitation, and professional dialogue.

Summary

Along with this chapter, four additional chapters are included in this study. In chapter two's review of the related literature, theory and research on the concept of teacher efficacy and its outcomes is reviewed to yield an understanding of its importance to teacher quality. In addition, existing literature and research on the sources of teacher efficacy and organizational factors that impact teacher efficacy is examined to uncover how feedback may influence teacher efficacy, research and literature on the types and purposes of feedback to teachers is explored to supply a contrast in these differing approaches with teachers, and research on the outcomes of varying feedback to teachers is investigated to make sense of earlier conclusions in this field of research. Chapter three discusses the methodology for this study. Chapter four outlines the data gained from the study. Finally, chapter five provides a summary of the results of the study, a thorough analysis of the data, and recommendations for further research. It is without question that educators should be on a continuous journey of improvement with the target of increased student achievement. This study aims to provide educators with the missing information regarding feedback and teacher self-efficacy needed to better hit the target.

CHAPTER 2

REVIEW OF THE RELATED LITERATURE

The supervision and evaluation of teachers in the State of Indiana has been a strong focus of legislators looking to improve teacher quality. As a result of Indiana Public Law 90 (2011), school leaders are charged with greatly increasing the amount of feedback they provide to teachers through an evaluative feedback model. A school's evaluative feedback model is the process by which teachers receive ongoing feedback that is evaluative and formal, typically delivered by the principal through observations and evaluation protocol. School leaders also work to build the capacity of their teachers by supporting processes and programs that provide formative feedback experiences. Formative feedback experiences are the processes by which teachers receive ongoing feedback that is formative and either formal or informal. Examples of formative and formal feedback would be that which is provided by instructional coaches, mentors, and peers through structured and systematic processes. Examples of formative and informal feedback would be that which is provided by principals, instructional coaches, mentors, peers, and even students and parents but through conversations and general communication. Lost in the discussion of increased evaluative feedback and formative feedback experiences is how the two together provide for an ongoing feedback system for teachers and its relationship to teachers' sense of efficacy.

In order to establish the requisite foundation for a study on the relationship between the feedback teachers receive and teachers' sense of efficacy, this review of the related literature focuses on four topics. First, theory and research on the concept of teacher efficacy and its outcomes was reviewed to yield an understanding of its importance to teacher quality. Second, existing literature and research on the sources of teacher efficacy and organizational factors that impact teacher efficacy was examined to uncover how feedback may influence teacher efficacy. Next, research and literature on the types and purposes of feedback to teachers was explored to supply a contrast in these differing approaches with teachers. Finally, research on the outcomes of varying feedback to teachers was investigated to make sense of earlier conclusions in this field of research. In combination, the reviewed literature and research in this chapter served to (1) verify teacher efficacy as a critical component in teacher quality, (2) provide the sources and factors that build this critical component in teacher quality, (3) outline varying forms of teacher feedback, and (4) describe the outcomes of varying forms of feedback to teachers. This review all leads to the noteworthiness of a mixed-methods study examining the relationship between the characteristics of formative, evaluative, and total feedback received by teachers and teachers' sense of self-efficacy.

Teacher Efficacy

Self-efficacy is defined as a person's belief about their abilities to produce levels of performance that demonstrate influence in their life experiences (Bandura, 1994). Simply put, perceived self-efficacy is a person's belief about their ability to achieve success. According to Bandura (1994), how people feel, think, motivate themselves and

ultimately act is collectively a function of one's self-efficacy beliefs. Albert Bandura is one of the pioneers of self-efficacy; his work began in the mid 1970's and presently continues. He is one of the most cited researchers on the concept of self-efficacy. While the theoretical model was developed by Bandura, many researchers have extended the concept to teachers and teaching efficacy. For many researchers, teaching efficacy is a measure of a teacher's confidence in the educational performance of students regardless of environmental factors. According to Guskey and Passaro (1994), teacher efficacy is defined in general as, "teachers' belief or conviction that they can influence how well students learn, even those who may be considered difficult or unmotivated" (p. 628).

The concept of teacher efficacy has been narrowed even further by some researchers. In their two-dimensional construct of teacher efficacy, Hoy and Woolfolk (1993) identify general teaching efficacy and personal teaching efficacy as components of teacher efficacy. General teaching efficacy (GTE) is associated with a general belief about the power of teaching to reach difficult children. Personal teaching efficacy is associated with the belief in one's own ability to make a difference in student achievement.

As the concept of teacher efficacy has narrowed and evolved, so have the tools used to measure the concept. The measurement of teacher efficacy started simply with two Likert-Scale items in a survey constructed by the Rand Corporation in the 1970's to investigate the effectiveness of educational programs (Guskey & Passaro, 1994). This brief assessment eventually evolved into a more comprehensive tool called the Teacher Efficacy Scale, published by Gibson and Dembo in 1984. In an effort to more accurately measure the concept, the Teacher Efficacy Scale considered two different factors of

efficacy that aligned with the existing theoretical model – teaching efficacy and personal efficacy. Teaching efficacy related to a teacher’s capacity to be successful regardless of external factors. Personal efficacy was connected to a teacher’s sense of personal responsibility for student achievement (Gibson & Dembo, 1984).

In a quest to best measure teachers’ sense of self-efficacy in a variety of contexts, Albert Bandura (1997) developed the Teacher Self-Efficacy Scale. His instrument included 30 questions on a 9-point scale with response options ranging from “Nothing” to “A Great Deal” and targeted seven areas of the efficacy of teachers: efficacy to influence decision making, efficacy to influence school resources, instructional self-efficacy, disciplinary self-efficacy, efficacy to enlist parent involvement, efficacy to enlist community involvement, and efficacy to create a positive school climate (Bandura, 1997). Subsequently, researchers worked to even better assess teachers’ sense of self-efficacy across a variety of classroom conditions and content areas while balancing the danger of developing a measure that is so specific it loses its predictive power beyond specific contexts. Hence, Tschannen-Moran and Woolfolk Hoy (2001) developed a new measure of teacher efficacy called the Teachers’ Sense of Efficacy Scale (TSES). The researchers performed a series of three studies with both in-service and pre-service teachers, each time refining and reducing the number of items on the instrument. The result was a three-dimensional measure of teaching efficacy: efficacy in instructional strategies, efficacy in student engagement, and efficacy in classroom management (2001). Tschannen-Moran and Woolfolk Hoy (2001) assert, “It is superior to previous measures of teacher efficacy in that it has a unified and stable factor structure and assesses a broad range of capabilities that teachers consider important to good teaching, without being so

specific as to render it useless for comparisons of teachers across contexts, levels, and subjects” (p. 801). Because the instrument was developed at the Ohio State University, it is sometimes referred to as the Ohio State Teacher Efficacy Scale (OSTES). However, the researchers prefer the name Teachers’ Sense of Efficacy Scale (TSES) (Woolfolk Hoy, 2012). With respect to the TSES, Tschannen-Moran and Woolfolk Hoy (2001) state, “In these days of hard-nosed accountability, teachers’ sense of efficacy is an idea that neither researchers nor practitioners can afford to ignore. The TSES is a promising tool for capturing this powerful construct and putting it to constructive use” (p. 803). A review of studies that investigate the concept of teachers’ sense of efficacy across a variety of disciplines show the TSES among the most preferred tools in use (LeDuc, 2009; McCall, 2011; Wood, 2011).

The existing research and literature show two main outcomes of teacher efficacy - teaching behaviors and student achievement. There is great variety in teaching behaviors influenced by teacher efficacy found in the existing research. In 1998, Tschannen-Moran, Woolfolk Hoy, and Hoy published an article that organized much of this research. They cite Gibson and Dembo (1984) in stating that teachers with a higher sense of efficacy were less likely to criticize a student following an incorrect response and more likely to persist with a student in a failure situation. Gibson and Dembo also found that when high levels of teacher efficacy were present, teachers were more likely to divide class for small group instruction as opposed to instructing the class as a whole. Furthermore, instructional experimentation, which included a willingness to try a variety of materials and approaches, as well as the desire to find and implement better ways of teaching were linked to teacher efficacy (Fuchs, Fuchs, & Bishop, 1992). Other research demonstrates

that teachers with high teacher efficacy set the bar higher with students, are more in tune with student accomplishments, persist longer with low achieving students, place more focus on teaching and learning with students, and tend to be more hard working with students (Chase, Germundsen, Brownstein, & Distad, 2001). With respect to the concept of instructional coaching where a teacher's colleague provides pedagogical guidance and feedback, there is research that suggests teachers who demonstrated higher efficacy prior to participating in a coaching model were more likely to implement the recommended content literacy practices (Cantrell & Hughes, 2008). In 2010, Runhaar, Sanders, and Yang at University Twente in The Netherlands published a study that investigated how teachers' reflection and feedback asking - two critical factors of professional development - is related to their efficacy. First, they found a positive relationship between teacher efficacy and reflection and feedback asking. That is, the more teachers believe they can deal with difficulties and positively impact their students, the more they reflect and ask colleagues, students, and/or their principal for feedback.

Aside from impacting teaching behaviors, there is research that links teacher efficacy to greater student achievement and performance. Not only do teachers' perceptions of their personal efficacy to inspire and support learning affect the various environments they foster, but they also impact the amount of measurable academic progress their students make (Bandura, 1993). Teachers with high levels of teacher efficacy significantly influence student achievement through higher level questioning strategies used with students (Dembo & Gibson, 1985; Saklofske, Michayluk, & Randhawa, 1988). Further, Midgley, Feldlaufer, & Eccles (1989) examined the relationship between teacher efficacy and changes in student beliefs of their academic

performance during their transition to junior high school in a study of 1,329 students and their math teachers. A positive relationship was found linking teacher efficacy and students' perceptions of their performance.

The Sources and Development of Teacher Efficacy

So, how is efficacy developed in individuals? Bandura (1977) points to four sources of information that work to build one's self-efficacy beliefs: mastery experiences, vicarious experiences, social persuasion, and psychological and emotional states. For the first source, experiencing success through mastery experiences contributes to the belief that future endeavors will also be successful. Teachers may experience this factor over many years of classroom experience, their own learning outside of the classroom, and successes with diverse groups of learners. Somewhat similar to personal mastery experiences is watching others who have success through vicarious experiences. Witnessing a similar person succeed by perseverant effort raises an observer's beliefs that they, too, possess the capabilities to master comparable activities (Bandura, 1996). A third source of efficacy building information is the receiving of social persuasion from others whose opinion is valued. When a person is verbally persuaded that they have the skills or potential to master given activities, they are more likely to demonstrate and sustain greater effort than if they have self-doubts and focus on their weaknesses when problems emerge (Bandura, 1996). A fourth source of efficacy building information is found in one's psychological and emotional states. Experiencing delight or anxiety when carrying out a task has an impact on the development of self-efficacy beliefs, and it is not just the intensity of these internal reactions, but how the individual processes them. To

summarize, the overall development of a person's efficacy beliefs is a function of the strength and frequency of the four sources of efficacy building experiences in light of the perceived value of the tasks being done. For the great majority of researchers who have studied teacher efficacy, this collection of efficacy building sources developed by Bandura (1977, 1996) has been the central framework.

While Bandura's four sources give broad explanations regarding the development of efficacy, school leaders can look to the research and literature for more specific organizational factors that play a role in developing individual levels of efficacy. A study of teacher efficacy and motivation (Ciani, Summers, & Easter, 2007) examined the relationships between academic context (as measured with teacher community and school goal structure) and the motivational beliefs and classroom practices of teachers in four Midwestern high schools. In describing teacher community, Ciani et al. identify levels of trust, encouragement, collaboration, and support from leaders as components. In describing school goal structures, the authors identify schools to exhibit a mastery goal structure if the school's emphasis is on student learning, whereas the authors identify schools to exhibit a performance school goal structure if the school's emphasis is on competition among students and high test scores. The study found that when schools overly stress the importance of high test scores and academic competition (high performance school goal structure), teachers may tend to feel less community and perceive less self-efficacy for using a variety of instructional strategies (Ciani et al., 2007).

There have been a number of studies that have sought to identify a link between specific principal leadership behaviors and teacher efficacy. For example, survey data in

a mixed methods study of 10 middle schools in Wisconsin indicated statistically significant relationships between total leadership behavior and both general teacher efficacy (GTE) and personal teacher efficacy (PTE). More specifically, significant relationships were found between GTE and three leadership behaviors: models behavior, provides contingent rewards (i.e. recognize and praise efforts), and inspires group purpose. In addition, significant relationships were found between PTE and two leadership behaviors: models behavior and provides contingent rewards. In an expansion of the study, interview data confirmed survey results and added eight additional principal leadership behaviors that reinforce and sustain teacher efficacy: (1) models behavior; (2) inspires group purpose; (3) recognizes teacher efforts and accomplishments (this is categorized as contingent rewards); (4) provides personal and professional support; (5) promotes teacher empowerment and decision-making; (6) manages student behavior; (7) creates a positive climate for success; (8) fosters teamwork and collaboration; (9) encourages innovation and continual growth; (10) believes in staff and students; and (11) inspires caring and respectful relationships (Hipp, 1995, p. 239).

In 2003, Howard Ebmeier from the University of Kansas completed a study that sought to test a model describing how principal supervision works in schools to influence teacher efficacy. Results of the study indicated that the model fit exceptionally well. Specifically, the data support the notion that when principals demonstrate an interest in the instructional process and support good teaching, it is likely that teachers will have more respect for and confidence in the principal; this leads to greater teacher efficacy. However, it was found that active principal supervision in the form of frequent classroom observations and conferencing activities in itself does not directly influence confidence,

trust, and/or support of the principal. Results from the study show that the effects of principal supervision on teachers' feelings and beliefs that impact efficacy are obtained only through the extent to which teachers believe the principal is interested in and committed to supporting teaching. That is, active supervision helps set the stage but must be balanced by activities such as rewarding good teaching and providing technical and symbolic leadership. In the study, Ebmeier found that principals influence personal teacher efficacy by offering improvement assistance through coaching and praise. The conferencing that goes with supervision helps generalize goals and provides extra feedback about teachers' craft. When components of supervision are teacher directed, teachers' sense of control of classroom processes and staff development activities are increased, leading to greater personal teaching efficacy. In addition, principals can provide opportunities for teachers to observe other teachers. This can increase teachers' vicarious experiences, which Bandura identifies as a source for building efficacy. In summary, Ebmeier concludes that the behaviors of principals play important roles in the development of teacher efficacy, but this influence is indirect. Principals' specific behaviors work to influence teacher efficacy through "a complex series of interactions with other intermediate variables" (Ebmeier, 2003, p. 140).

While limited, there is also research that shows when professional development programs span several months and include opportunities for teachers to collaborate, increased teacher efficacy is a result (Henson, 2001; Ross, 1994). Along with collaboration, instructional coaching has the potential to contribute to the development of teachers' efficacy as they practice new programs or strategies. Relationships between student achievement, teacher efficacy, and instructional coaching have been studied, and

it has been found that middle school teachers' efficacy is supported through interaction with coaches (Ross, 1992). Instructional coaching and teacher efficacy research is still emerging. Cantrell and Hughes concluded a study in 2008 that contributed to this area by exploring teacher efficacy and content literacy implementation. In their study, a year-long professional development program with an emphasis on coaching was linked to increased teacher efficacy for literacy teaching (Cantrell & Hughes, 2008).

It is clear that through instructional coaching and collaboration, teachers are able to receive formative feedback from colleagues. For teachers, this type of feedback can stand in stark contrast to the evaluative feedback that is received from supervisors. However, evaluative feedback has been linked to teachers' sense of self-efficacy. In his study of high-performing high schools in Indiana, McCall (2011) found that teachers who experienced a participatory model of evaluation that has frequency and feedback at its core have higher levels of self-efficacy than their colleagues in schools that do not have those characteristics in the evaluation model. In his recommendations for further study, McCall expressed that examining the relationship between evaluation models and feedback and teacher efficacy at elementary schools could produce different perspectives and add breadth to the research, literature, and discussion.

Types of Feedback Teachers Receive

Feedback can be an elusive concept that has various meanings in different contexts. In their thorough review of the literature on feedback, Hattie and Timperley (2007) conceptualize feedback as information provided by an agent regarding aspects of one's performance. Examples include a principal providing corrective information, a

colleague providing ideas on an alternative strategy, a peer providing encouragement, and a teacher looking up strategies in books to evaluate the effectiveness of a used practice.

Hattie and Timperley say, “Feedback thus is a ‘consequence’ of performance” (p. 81).

So, what does ‘effective’ feedback look like? Grant Wiggins (2012), who co-authored the widely-known landmark book *Understanding by Design* and writes frequently for ASCD, says there are seven keys to effective feedback. Wiggins says, “Whether feedback is just there to be grasped or is provided by another person, helpful feedback is goal-referenced; tangible and transparent; actionable; user-friendly; timely; ongoing; and consistent” (p. 13). Feedback that is goal-referenced requires that a person have a goal, works towards meeting the goal, and receives goal-related information about his or her actions. Feedback that is tangible and transparent has such clear, observable results that anyone with the same goal would learn from it. Feedback that is actionable is specific and useful; it yields information that can be acted upon because it describes what should be done next time. Feedback that is user-friendly is understandable and easily-digestible; it does not seem odd and confusing to the receiver. Feedback that is timely is not delivered weeks after an event; the best feedback comes sooner rather than later. Feedback that is ongoing provides the receiver multiple opportunities to receive and use feedback to make multiple adjustments to better achieve the goal. Finally, feedback that is consistent is stable, accurate, and trustworthy; this requires teachers and principals to be on the same page regarding high-quality teaching and learning (Wiggins, 2012).

In advocating for the development of teachers, Hall and Simeral (2008) make recommendations for delivering reflective feedback to teachers. The authors use the acronym TARP to represent four principles of effective feedback found in their review of

the literature: timely, accurate, relevant, and private. Timely feedback - the most important characteristic of effective feedback - is delivered within the same half-day window. Accurate feedback is technically correct, credible, and respected regardless of the source. Relevant feedback is connected to a teacher's goals or clear area(s) of focus. Private feedback is delivered directly in a confidential, trust-building manner that supports the relationship between parties (Hall & Simeral, 2008).

Not unlike the private characteristic of effective feedback that works to build and sustain a positive relationship as promoted by Hall and Simeral, Alan Mortiboys (2012) believes feedback must be delivered in a way that is emotionally intelligent to be most effective. Mortiboys is not the first to present emotional intelligence as important to teaching and learning. Daniel Goleman (1995) wrote *Emotional Intelligence: Why it can matter more than IQ* in 1995 where the term gained great traction. Goleman (1998) has defined emotional intelligence as “the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships” (p. 317). Emotional intelligence has also been described as involving the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when facilitating thought; the ability to understand emotions and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth (Salovey and Mayer, 1997). Learning in any context is a complex process that often involves struggle, frustration, thrill, or excitement. Furthermore, with the perception that there is the possibility for success or failure, the potential for strong feelings is increased. Thus, Alan Mortiboys (2012) states in his book *Teaching with Emotional Intelligence*, “Given the power and inevitability of emotions in

learning and teaching and the influence on learners' feelings that can be exerted by the teacher, it is essential to ask what it is that the teacher needs to have and to develop in order to maximize the potential for emotions to support rather than hinder learning" (p. 2). With respect to giving feedback, Mortiboys suggests strategically positioning positive and critical comments, confining critical feedback to the amount the recipient can handle rather than the amount one would like to give, making observations and not inferences, making certain the feedback is something the recipient is in a position to act upon, and using a supportive tone of voice. By issuing feedback that adheres to these guidelines and addresses a learner's feelings: the learners will feel valued; it assists in developing a deeper relationship; it supports learning; and it helps to shape a positive environment (Mortiboys, 2012).

The ongoing feedback received by teachers regarding their instruction can be categorized as either evaluative or formative. The evaluative feedback model results in feedback that is evaluative and formal. Examples of evaluative and formal feedback would be that which is provided by the principal through teacher observations and evaluation protocol. Formative feedback experiences can be described as events where the feedback delivered is either both formative and formal or both formative and informal. Examples of formative and formal feedback would be that which is provided by instructional coaches, mentors, and peers through structured and systematic processes. Examples of formative and informal feedback would be that which is provided by principals, instructional coaches, mentors, peers, and even students and parents but through conversations and general communication. In their book *Building Teachers' Capacity for Success* published by ASCD, Pete Hall and Alisa Simeral (2008) describe a

teacher's connection to many of these sources of feedback as a "relationship." The authors bring attention to the coordination and alignment of these relationships when they say, "With all these relationships in place, there is virtual assurance that the teacher will be bent on learning, be keyed into self-reflection, and interdependently receive support that leads to continuous professional growth" (p.17).

There has been much research on the purposes of teacher evaluation (Darling-Hammond, Wise, & Pease, 1983; Frase, 1992; Haefele, 1993; Millman, 1981; Stiggins & Duke, 1983; Stronge & Tucker, 2003). Traditionally, teacher evaluation was developed for a variety of purposes linked to professional growth and quality assurance. In his *Handbook of Teacher Evaluation*, Jason Millman (1981) likens teacher evaluation purposes to the same purposes as the evaluation of students in the classroom: summative or formative. In their review of the literature, Darling-Hammond, Wise, and Pease (1983) found the purposes for teacher evaluation to include school improvement, determine personnel status, and meet legal mandates.

In *The Case for Commitment To Teacher Growth*, researchers Stiggins and Duke (1988) discuss teacher evaluation at length. They describe the three most common types of evaluations: Induction, Remediation, and Professional Development. Induction is structured to provide mentoring in instructional strategies, determine progress towards tenure, and is used with beginning teachers. Remediation is structured to further develop non-induction teachers in mastering their craft to meet or exceed minimum expectations and is used with more veteran teachers. Professional Development is designed for steady, experienced teachers to elicit professional growth through providing feedback and growth opportunities. In their work, Stiggins and Duke also identified facets of effective teacher

evaluation. Those most closely associated with evaluative feedback include the characteristics of the evaluator and the procedures and context of the feedback. Stiggins and Duke contend that teachers' perceptions of an evaluator's accuracy in observation, patience, and trustworthiness are critical. Further, evaluative feedback details such as time, delivery, and professional assistance offered are important (1988).

Donald Haefele (1993) suggests that a clear sense of purpose should drive teacher evaluation models. He gives the following purposes, asserting evaluation should: remove unqualified persons from selection processes, provide individuals with constructive feedback, recognize and reinforce excellence, provide direction for professional development, produce evidence to withstand scrutiny, assist in the removal of poor teachers, and bring together teachers and administrators in their collective work to reach students. In their book, *Handbook on Teacher Evaluation*, Stronge and Tucker (2003) emphasize the 3 Cs: communication, collaboration, and commitment. They say, "The 3 Cs support the creation of the synergy that can elevate evaluation to a meaningful dialogue about quality instruction for students" (p. 6). For these researchers, for an evaluation model to work well for all parties, the model must: (1) relate the overall teacher evaluation system and individual performance roles to goals of the organization; (2) consider the context of teacher evaluation; (3) base teacher evaluation on clearly defined job duties; (4) use multiple sources of evidence to document teacher performance; (5) design and use a performance assessment rubric to make fair judgments; and (6) facilitate professional growth and improved performance (p. 8).

Teacher Evaluation in Indiana

Most recently in Indiana, teacher evaluation has been a focus of legislators looking to reform education. Effective in the fall of 2012, Indiana Public Law 90 (2011) (formerly known as SEA 1) represents sweeping changes in the evaluation of educators. Key points include the requirement that all Indiana educators are to receive evaluations that are annual, objective and based on multiple measures, thereby allowing them to refine their teaching skills. Thus, school principals are faced with the task of greatly increasing the amount of ongoing feedback they provide to teachers, and teachers are faced with a great increase in the amount of ongoing evaluative feedback they receive.

Indiana P.L. 90 provides a model plan called RISE (2012) that districts can adopt to meet the new legislative requirements. RISE has a rigorous rubric and requires principals to perform a minimum of five observations with feedback per year. Specifically, all teachers must have a minimum of two extended observations per year – one per semester. An extended observation lasts a minimum of 40 minutes. It may be announced or unannounced. It may take place over one class or span two consecutive class periods. Extended observations are accompanied by optional pre-conferences and mandatory post-conferences including written feedback within five school days of the observation. In addition, all teachers will have a minimum of three short observations – at least one per semester. A short observation lasts a minimum of 10 minutes and should not be announced. There are no conferencing requirements around short observations, but a post-observation conference should be scheduled if there are areas of concern. A teacher must receive written feedback following a short observation within two school days. According to RISE, evaluators may choose to visit classrooms much more

frequently than the minimum requirement specified here (Indiana Department of Education, 2012). Many principals leverage classroom walkthroughs to increase the frequency of classroom visits. Classroom walkthroughs are defined to be brief visits (typically no longer than 3-5 minutes) and can be either evaluative or formative. However, in Indiana it is becoming increasingly difficult to delineate between evaluative and formative feedback from principals due to P.L. 90.

While RISE is the model evaluation plan provided by the IDOE, school districts have flexibility in adopting a plan that meets the requirements of IN P.L. 90. According to evaluation plan guidance that is published on the Indiana Department of Education website (2012), district evaluation plans must include an observation rubric that allows for detailed descriptions at each level of performance for each indicator – not just a numerical rating – ensuring that teachers receive detailed, actionable feedback from their observers, including clear expectations for classroom practice. In addition, districts must ensure that evaluation plans include a process for giving feedback, tracking the data, and expectations for the frequency and length of observations that ensures at least two observations per evaluation to allow for professional growth. Also related to feedback, school districts must have a plan to offer additional direct support to new and struggling teachers which could include coaching or mentoring (Indiana Department of Education, 2012).

Clearly, the environment surrounding evaluative feedback models in Indiana has changed greatly. What P.L. 90 requires and what many teachers have grown accustomed to in evaluation models is very different. Hall and Simeral (2008) share ideas that represent growing trends and call for an evaluation system that is authentic. That is, the

principal must observe actual teaching and learning as it happens “in the wild.” Frequent unannounced mini-observations and providing feedback provide the best way to authentically evaluate. They contend that the administrator can gain a large amount of data regarding actual teaching and learning in the natural environment (Hall & Simeral, 2008). Thus, no matter if Indiana school districts have adopted the RISE evaluation plan, a modified RISE evaluation plan, or developed their own evaluation plan that satisfies the requirements of the law, the environment in which teachers and principals find themselves in has blurred the line - if not eliminated the line - between ongoing evaluative feedback from principals and formative feedback from principals.

As noted earlier, formative feedback experiences can be categorized as formal or informal, and due to legislative mandates outlined above, can best be described as feedback delivered from sources other than the principal. Formative and formal feedback would be that which is provided by instructional coaches, mentors, and peers through structured and systematic processes. Formative and informal feedback would be that which is provided by principals, instructional coaches, mentors, and peers, through conversations and general communication. In this review of the literature, three significant types of formative feedback experiences, that at times can either be formal or informal, will be discussed. Those types are instructional coaching, peer observations, and collaboration.

The concept of instructional coaching is gaining traction, and there is variety in coaching philosophies and methods. In fact, the utilization of instructional coaches is among the fastest growing trends in school improvement, and with many educational leaders acting on the research that points to teacher quality as paramount in factors they

can readily control, they are acting on the idea that in-house professional development in the form of coaches should be supported with resources to systematically support teachers in building strengths. For example, the 2005 general fund budget in Boston's public schools included \$7.1 million for their Whole School Improvement and Instructional Coaching Initiative (Hall & Simeral, 2008, p. 20). Instructional coaching can be thought of as a professional development strategy used to provide on-going re-tooling of teacher planning, instruction, and assessment methods.

So, what exactly does an instructional coach do? In their recommendations for building teacher capacity, Hall & Simeral (2008) discuss distinct responsibilities of any instructional coach. These responsibilities include being a peer versus being a supervisor, providing formative feedback versus evaluative feedback, and modeling lessons versus evaluating lessons. At the elementary level, instructional coaching is most often present in the form of a literacy coach or reading specialist. In defining this position, the International Reading Association says a literacy coach/reading specialist is a professional whose goal is to improve reading achievement in an assigned school or district by providing professional development based on historical and current literature and research, working collaboratively with other professionals to build and implement reading programs for individuals and groups of students, and serving as an advocate for students who struggle with reading (IRA, 2010). In her book *Literacy Coaching*, Katherine Casey (2006) points to the following duties of the instructional coach of literacy: designing and facilitating professional development sessions, working alongside teachers in classrooms, demonstrating instructional strategies and guiding teachers as they practice, evaluating the literacy needs of students and collaborating with teachers to

design instruction to fit those needs, and providing teachers with ongoing opportunities to learn from and with each other.

A second type of formative feedback experience in which teachers may participate is peer observation. Teachers can observe their peers for brief amounts of time or for an extended period of time, and the corresponding feedback can be direct (i.e. delivered from one teacher to another) or indirect (i.e. delivered from one teacher to oneself by reflecting upon what is observed). There is literature that points to peer observations as a tool used in a variety of ways and for a variety of purposes. For example, one school may have all third-grade teachers visit each other's classrooms, focusing on alignment. At another school, peer observations may take place after school with the entire staff focusing on the components of the physical learning environment that support student learning (Center for Comprehensive School Reform and Improvement, 2007). If individual teachers are observed through a team approach to the walkthrough process, then written feedback may be shared regarding what was observed in light of a predetermined focus or look-for (Richardson, 2001). In their *Look 2 Learning* walkthrough protocol, Colleagues on Call recommend that teachers identify exemplar student learning that the school desires to reproduce throughout the school. Then, teachers from other classrooms visit these environments in the peer observations process. Finally, they collectively synthesize the observed learning activity into a representation of what was happening at the student level (as cited in Kachur, Stout, & Edwards, 2010, p. 53).

A third type of formative feedback experience in which teachers may participate is collaboration. There is evidence that shows effective schools have greater levels of

teacher-to-teacher collaboration (Hawley, 2002). In *Learning Together, Leading Together*, Shirley Hord (2004) discusses continuous learning that is nurtured through collaboration among teachers in professional learning communities. In identifying five dimensions of professional learning communities, Hord identifies shared practice and states, “Shared practice involves the review of a teacher’s behavior by colleagues and includes feedback and assistance activity to support individual and community improvement” (p. 7). In their renowned book *Professional Learning Communities at Work*, DuFour and Eaker (1998) state, “Professional teachers routinely collaborate with their colleagues. While traditional teachers labor in isolation, the teachers of a professional learning community share ideas about practice” (p. 219). In light of what is known about effective feedback, the sharing of ideas in a professional learning community no doubt provides teachers with formative feedback experiences. As stated previously, these opportunities to participate in formative feedback experiences can be conceptualized as formal or informal, and they result in feedback received by teachers that is received directly from one teacher to another or received indirectly through self-reflection upon what is experienced.

The Effects of Various Types of Feedback

A total feedback system can be described as a result of two distinct processes: the evaluative feedback model and formative feedback experiences. Furthermore, the evaluative feedback model is typically considered a formal process, whereas formative feedback experiences can be considered formal or informal. This section of the review will provide literature and research on the effects of these varying types of feedback.

“Evaluation and supervision can and should be a means of providing feedback and direction for improvement” (Frase, 1992, p. 176). Frase asserted that constructive feedback is effective and principals need to increase the frequency of visits to classrooms in order to have the needed information to provide helpful feedback to teachers.

However, we know not all evaluative feedback models have been found to be effective.

The Professional Teacher Evaluation Model (PTEM) in Tennessee was studied by Wagner and Hill (1996) to investigate the relationship to motivation and professional growth. Of interest to the researchers were the possible different outcomes between the PTEM where goal setting and professional dialogue between teacher and administrator was the protocol and a different evaluation process that leveraged a rigid standards-based checklist approach to the teacher-principal relationship. The researchers found great differences in the outcomes related to the two models. The PTEM model which featured frequent visits, professional goal setting, and increased curricular and instructional dialogue produced the best gains in professional growth. Further, the researchers identified characteristics of evaluation that relate to professional growth and motivation. Those include a culture characterized by a trusting environment, administrators who are facilitators and resource providers, teachers who are mature, responsible, and self-directed, and a continuous process that is individualized, formative, and structured (Wagner & Hill, 1996).

Ovando (2001) conducted a study in Texas investigating the outcomes of the Professional Development System for Teacher Appraisal (PDSTA). The PDSTA can be described as a learner-centered teacher evaluation model, and outcomes of focus were teacher perceptions of professional development and growth. The results of the study

demonstrate positive teacher perceptions of the model. Through the PDSTA, teachers had the opportunity to regularly share their experiences as teachers in a professional manner. The increased dialogue centered around learners resulted in a collaborative teacher-principal relationship where teacher goals and growth opportunities were developed (Ovando, 2001). Ovando (2001) said, “Teachers believe that a learner-centered teacher evaluation may have some potential benefits to enhance teaching and student learning. These include walk-through observations, opportunities for professional growth, feedback, learner-centered dialog, a holistic perspective, and teacher self-evaluation” (p. 228).

More recently in Texas, a study (Powell, 2011) was conducted to investigate the relationship between teacher perceptions of the organizational climate in their schools and their perceptions of their evaluations. Consistent with the literature, the variables that contributed to a more effective evaluation system also contributed to a more positive school climate. Those variables were teacher perceptions of a principal who is more supportive, teacher perceptions of a principal who is less directive, and teacher perceptions of a principal who is less restrictive. The supportive principal is one who models expectations and provides regular and constructive feedback to teachers. A directive principal is categorized as one who very closely monitors teachers and “rules with an iron fist.” A less restrictive principal is one that does not hinder teacher work by burdening teachers with paperwork, committee requirements, routine duties, and other demands that interfere with teacher responsibilities (Hoy, Tarter, & Kottkamp, 1991).

Shifting away from teacher evaluation, the research and literature provide evidence of the effects of formative feedback experiences on teachers. A study that

analyzed data collected through the National Educational Association's Conditions and Resources of Teaching survey (Smylie, 1989) sheds light on the effects of formative feedback from teachers' colleagues. In the study, 1,789 teachers participated by rating 14 sources of learning regarding their relative effectiveness in providing teachers with knowledge and skills. It was found that the most effective source of learning was "direct experience as a teacher" followed by "consultation with other teachers." "Formal teacher evaluation" from an administrator ranked 11 out of the 14 sources (Smylie, 1989). Hence, this study points to the feedback teachers receive from their colleagues as worthy and important.

A study sponsored by the U.S. Department of Education's Office of Special Education Programs led by Billingsley, Carlson, and Klein (2004) that surveyed 1,152 special education teachers seemed to confirm the results reported by Smylie. In this study, teachers responded to questions regarding seven sources of assistance that were most helpful to them in their teaching. The seven sources of assistance were: (1) formal mentoring; (2) regular meetings with new teachers; (3) informal help from building teachers; (4) assistance from building administrators; (5) assistance from consultants or supervisors; (6) inservice or staff development; and (7) informal help from other colleagues. The researchers found that the most helpful source of assistance was "informal help from other colleagues" (54% chose the highest rating, "to a great extent") followed by "informal help from building teachers" (50% chose the highest rating, "to a great extent"). Consequently, this study points to informal feedback as very worthwhile to teachers (Billingsley, Carlson, & Klein, 2004).

In addition to formative feedback that is informal, research supports the idea that formative and formal feedback as exemplified by instructional coaching is linked to increased teacher efficacy (Cantrell & Hughes, 2008; Ross, 1992; Tschannen-Moran & McMaster, 2006). Instructional coaching appears to provide support for teachers as they gain mastery experiences with new techniques, benefit from vicariously experiencing the coach's success through modeled lessons, receive praise and prompts that enable self-reflection, and internalize experiences that impact feelings and attitudes. In his study of teacher efficacy and the effect of coaching where he found student achievement to be higher in classrooms where teachers had a greater sense of teaching efficacy, John Ross (1992) said, "Coaching is a powerful strategy for school improvement" (p. 63).

Summary

In conclusion, the ongoing feedback systems in which teachers and principals participate are complex, and the feedback teachers receive is a result of the evaluative feedback model or formative feedback experiences. Absent in the push from policy makers to increase the evaluative feedback to teachers is consideration to teachers' sense of self-efficacy. The former part of this thorough review of the research and literature defined teacher efficacy and its measure, explored its connection to teaching behaviors and student achievement, identified the sources of building teacher efficacy, and examined the organizational factors that impact it. The latter part of this literature review defined feedback and provided keys to delivering it effectively, shared purposes and ideas behind evaluative feedback models, shared purposes and ideas behind formative

feedback experiences, and examined the effects of evaluative feedback and formative feedback.

It is important to note that this review of the literature exposed the limited empirical research regarding the relationship between feedback associated with peer observation, teacher collaboration, and teacher efficacy. Moreover, the changing environment regarding feedback systems and the importance of teacher efficacy is problematic for school leaders who both administer evaluations and work to support teacher growth by facilitating instructional coaching, peer observation, and/or teacher collaboration.

The literature and research suggests that school leaders should give consideration to teacher efficacy when executing educational leadership. All of Bandura's sources of individuals' self-efficacy - mastery experiences, vicarious experiences, social persuasion, and psychological states - seem to be a viable target for school leaders through feedback systems. Tschannen-Moran, Woolfolk Hoy, and Hoy (1998) note that carefully supported opportunities to experience mastery are especially important during implementation of new strategies during which teachers can experience declines in perceived efficacy. Vicarious experiences where the positive skill is modeled by someone else with whom the observer identifies may contribute to efficacy beliefs and are somewhat easy to provide (Goddard, Hoy, & Woolfolk Hoy, 2000). Social persuasion can take a variety of forms including but not limited to feedback provided by colleagues and administrators. Bandura notes that when people are persuaded verbally that they have the capabilities to master activities, then they are more likely to expend greater effort. However, he also notes that it is more difficult to foster higher efficacy in

individuals by social persuasion alone than to lower it (1994). Finally, it stands to reason that psychological states as indicated by a person's stress level can be a function of feedback systems and the emotional intelligence of the feedback provider. Hence, principals would be remiss to not view feedback systems as a critical tool in developing the self-efficacy of teachers; however, careful consideration should be given to the characteristics of both evaluative and formative feedback to maximize the outcome of increased teacher efficacy.

As noted in the introduction and in this review of the related literature, McCall (2011) conducted a quantitative study that explored teachers' perceptions of teacher evaluation and teachers' sense of self-efficacy in high-performing high schools. The results of his study point to a participatory model of evaluation that emphasizes frequency and feedback leading to higher levels of teacher self-efficacy than an evaluation model without frequent observations and feedback. As a result, questions began to emerge for this researcher regarding the various types of feedback – evaluative and formative – in conjunction with the effects of specific characteristics of feedback. Thus, this mixed-methods study builds upon the quantitative research in McCall's study. McCall examined two high schools with teacher evaluation models differing in frequency of observations, amount of feedback, and teacher participation. This study examines high-performing elementary schools implementing a uniform evaluation model which expects frequent observations and feedback relative to a recently-created, rigorous evaluation rubric. This study extends and adds depth to the previous research by examining teachers' perceptions of specific characteristics of feedback they receive from both the evaluative model and formative feedback experiences. While the results of

McCall's study provides stakeholders support in developing the structure of a teacher evaluation model that can increase teacher self-efficacy, the results of this study provide all evaluators, instructional coaches, and others who provide feedback to teachers with a greater understanding of the most important characteristics of feedback to leverage in improving their schools and increasing teacher self-efficacy.

Outlined in the introduction of this study, there are multiple research questions regarding feedback and teacher efficacy that have guided this study. The literature suggests that formative feedback experiences where teachers frequently participate, are supported, perceive accuracy, and are emotionally intelligent best develop teachers. The research and literature also support these specific characteristics of feedback leading to increased teacher efficacy. The literature suggests feedback from an evaluative feedback model that is timely and ongoing, accurate, relevant, and emotionally intelligent best develops teachers. The research and literature also support these specific characteristics of feedback leading to increased teacher efficacy. Finally, the literature suggests that when both evaluative and formative feedback is well-coordinated and aligned, teachers are best developed. The research and literature also support these specific characteristics of feedback leading to increased teacher efficacy.

This mixed-methods study on the relationship between teachers' perceptions of the feedback they receive and their teaching efficacy in high-performing elementary schools will provide quantitative data and qualitative data that add depth and breadth to the existing literature on the variables. There is little research on the construct of teacher efficacy that is a result of mixed methods; more is needed (Charf, 2009). In an interview with Michael Shaughnessy (2004), leading researcher on teacher efficacy Anita

Woolfolk-Hoy was asked which method of research was best for the concept. In her response, she said, “I believe this concept would benefit from more studies that use both qualitative and quantitative methodologies” (p. 155). The mixed-methods methodology used in this study, in addition to the sample which includes high-performing elementary schools rich with various types of feedback, will be discussed in detail in the next chapter.

CHAPTER 3

METHODOLOGY

This study investigated the relationship between teachers' perceptions of the feedback they receive and teachers' sense of self-efficacy. The focus of the study was the relation between teachers' perceptions of the characteristics of feedback from formative feedback experiences, characteristics of evaluative feedback, and characteristics of the total feedback they receive and teachers' sense of self-efficacy. The purpose of this study was to determine the predictive relationship between teachers' perceptions of the characteristics of feedback they receive and teacher self-efficacy in six high-performing elementary schools in Indiana, rich with evaluative and formative feedback. The specific characteristics of evaluative feedback examined in this study were teacher perceptions of timeliness, accuracy, relevance, and emotional intelligence. The specific characteristics of formative feedback experiences tested in this study were teacher perceptions of participation, accuracy, support, and emotional intelligence. The specific characteristics of the total feedback teachers receive examined in this study were teacher perceptions of alignment and coordination. When the relationship between characteristics of varying types of feedback and teacher self-efficacy is further understood, school leaders can better design and implement a comprehensive

feedback protocol that maximizes the self-efficacy of teachers, leading to the improvement of teaching, learning, and student achievement.

This chapter offers the research methodology used in this study to answer the research questions. First, the research questions and hypotheses are outlined. Next, the population, sample, and settings are discussed. Finally, a presentation of the instrumentation, research design, data collection and recording procedures, and data analysis procedures is included.

Research Questions

This mixed-methods study of teachers' perceptions of the feedback they receive and teachers' sense of self-efficacy in high-performing elementary schools was guided by the following research questions:

1. What are teachers' perceptions of the evaluative feedback, formative feedback experiences, and total feedback they receive?
2. Is there a significant predictive relationship between characteristics of feedback from formative feedback experiences and teacher self-efficacy?
3. Is there a significant predictive relationship between characteristics of feedback from the evaluative model and teacher self-efficacy?
4. Is there a significant predictive relationship between characteristics of the total feedback teachers receive and teacher self-efficacy?
5. Are there predominant themes in teachers' perceptions of feedback that relate to teacher self-efficacy?

Hypotheses

As a result of the research questions, the following hypotheses were tested:

HO₁: There is no statistically significant predictive relationship between teachers' perceptions of participation, accuracy, support, and emotional intelligence of formative feedback experiences as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Instructional Strategies as measured by the TSES.

HO₂: There is no statistically significant predictive relationship between teachers' perceptions of participation, accuracy, support, and emotional intelligence of formative feedback experiences as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Classroom Management as measured by the TSES.

HO₃: There is no statistically significant predictive relationship between teachers' perceptions of participation, accuracy, support, and emotional intelligence of formative feedback experiences as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Student Engagement as measured by the TSES.

HO₄: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is timely and ongoing, accurate, relevant, and emotionally intelligent from the evaluative model as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Instructional Strategies as measured by the TSES.

HO₅: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is timely and ongoing, accurate, relevant, and emotionally intelligent from the evaluative model as measured by the survey; teaching assignment; degree obtained; years teaching in the district and teachers' self-efficacy in Classroom Management as measured by the TSES.

HO₆: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is timely and ongoing, accurate, relevant, and emotionally intelligent from the evaluative model as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Student Engagement as measured by the TSES.

HO₇: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is coordinated and aligned from the total feedback they receive as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Instructional Strategies as measured by the TSES.

HO₈: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is coordinated and aligned from the total feedback they receive as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Classroom Management as measured by the TSES.

HO₉: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is coordinated and aligned from the total feedback they receive as measured by the survey; teaching assignment; degree obtained; years teaching

in the district; and teachers' self-efficacy in Student Engagement as measured by the TSES.

Participants and Settings

The population of interest for this study was teachers in high performing elementary schools in a suburban school district in Indiana, rich with evaluative and formative feedback. The study sampled all 220 elementary school teachers in the district. The sample was a convenience sample chosen due to its size, richness in various feedback, and accessibility to the researcher. In this school district and in all public schools across Indiana, teachers were being evaluated for the first time via a new evaluation model that complies with Indiana Public Law 90. This district chose to develop its own rigorous evaluation rubric and implementation model that complies with the law. The model was approved by all certified teachers in the district by a unanimous vote. Hence, the model was not considered RISE, nor was it considered a modified RISE. It was unique to this district, supported by 100% of the district's teachers, and consistent with the requirements of P.L. 90.

In terms of evaluative feedback required in this district's model, the evaluation document for this district stated for the period of August – September, "Teacher and evaluator meet for the Beginning-of-the Year Conference." Next, the evaluation document stated for the period of August – May of each school year, "The evaluator makes frequent classroom observations and provides feedback." To conclude the school year, the evaluation document stated for the period of April – June, "Evaluator completes

observations and scores Teacher Effectiveness Rubric,” and, “Evaluator completes Summative Evaluation.” In addition, teachers were to be aware of the details of the evaluation rubric, and they were required to discuss with their evaluator their strengths and weaknesses in light of each domain’s competencies, descriptors, and performance ratings. The evaluation document for this district stated, “The teacher is to complete a self-evaluation of the rubric in advance of the summative conference with their primary evaluator.” In preparing to provide a teacher with a summative evaluation designation of highly effective, effective, needs improvement, or ineffective, principals were to follow the evaluation plan which stated, “The primary evaluator compiles ratings and notes from observations, conferences, and other sources of information.” Thus, there was great autonomy afforded to principals for the supervision of instruction and evaluation of teachers in this district, and hence it would be difficult to identify any feedback received by a teacher from a principal in this district as anything but evaluative. This was reflected in final statements from the district’s evaluation plan which said, “At the end of the school year, the primary evaluator should have collected a body of information representing teacher practice from throughout the year. The primary evaluator uses professional judgment to establish final ratings in each competency of the domains of Planning, Instruction, and Involvement.”

While the evaluation model for this district required principals to deliver frequent evaluative feedback to teachers, there were also numerous opportunities for teachers to receive formative feedback. Elementary teachers in this district had 30 minutes of required collaboration time at the start of each school day. In addition, each elementary school in the district had a full-time literacy coach who worked to build the capacity of

teachers in literacy instruction. These literacy coaches reported to a district literacy coordinator, and they were also required to work closely with building principals to support programs and initiatives. All of the district's literacy coaches had demonstrated excellence in literacy instruction, had been trained in instructional coaching best practices, and had been given instruction in partnering with building principals to develop teachers.

The school district in this study was suburban and had a student population of nearly 7,000 students. Socioeconomic data for the district showed that 14% of students were on free or reduced price lunch. Ethnicity data for the district showed that 83.1 % of students were White, 4.7% were Black, 4.2% were Hispanic, 4.1% were Asian, 3.6% were Multiracial, and 0.1% were other ethnicities. 8.4% of students received special education services, and only 1.3% were English Language Learners. As of this study, the school district had most recently received a grade of "A" as determined by performance data collected by the Indiana Department of Education, and all elementary schools in the district had most recently received grades of "B" or higher.

Instruments

The variables of teachers' perceptions of the feedback they receive and teachers' sense of self-efficacy were measured using a survey consisting of four sections. Section I gathered teachers' demographic information including level of education attained, overall years of experience in and out of the district, and grade level taught. Section II consisted of researcher-designed questions that aimed to gather teachers' perceptions of the

characteristics of feedback from formative feedback experiences, the characteristics of evaluative feedback, and the characteristics of the total feedback they receive. The questions were informed by the review of the related literature. Specifically, they targeted the four characteristics of formative feedback, four characteristics of evaluative feedback, and the two characteristics of total feedback outlined in the research hypotheses. These characteristics were: (1) most salient in building the capacity of teachers and (2) most aligned with the efficacy-building sources as identified in the literature review. The questions in this section had a 6-point Likert-like format using the following scale: (1) Strongly Disagree; (2) Disagree; (3) Somewhat Disagree; (4) Somewhat Agree; (5) Agree; and (6) Strongly Agree. For example, in the subsection of Section II designed to measure a teacher's perception of the timeliness of evaluative feedback, respondents were to rate the following statement using the 6-point scale: "The feedback my evaluator provides me is NOT delivered in a prompt and timely fashion." Similarly, in the subsection of Section II designed to measure a teacher's perception of the accuracy of feedback from a formative feedback experience, respondents were to rate the following statement using the 6-point scale: "The feedback I receive from my literacy coach about curriculum and instruction is accurate." A panel of experts from various levels of multiple high-performing school districts reviewed the questions in this section of the survey and made recommendations to ensure clarity, brevity, and content validity. In addition, Cronbach's alpha was used to determine the internal consistency of the questions to gauge reliability.

Section III of the survey utilized the short form of the Teachers' Sense of Efficacy Scale (TSES) to collect data on teachers' sense of self-efficacy. The TSES was

developed by Tschannen-Moran and Hoy (2001) to garner data on teacher self-efficacy in three categories: (1) Efficacy in Instructional Strategies; (2) Efficacy in Classroom Management; and (3) Efficacy in Student Engagement. Tschannen-Moran and Hoy's survey included a 9-point Likert-like scale ranging from "Nothing" to "Some Influence" to "A Great Deal" (Woolfolk Hoy, 2012). For example, a question designed to measure teacher self-efficacy for student engagement, respondents were asked, "How much can you do to motivate students who show low interest in school work?" In their research *Teacher Efficacy: Capturing an Elusive Construct*, Tschannen-Moran and Hoy (2001) discuss the evolution and development of the TSES which was examined for factor structure, reliability, and validity in three separate studies that included both preservice and inservice teachers. The researchers state, "The results of these analyses indicate that the TSES could be considered reasonably valid and reliable. It is of reasonable length and should prove to be a useful tool for researchers interested in exploring the construct of teacher efficacy" (Tschannen-Moran & Woolfolk Hoy, 2001, p. 801). The researchers found the reliability of the 12-item scale (short form) to be .90. Further, the TSES was examined for validity by assessing the correlation of this new measure and other existing measures of teacher efficacy such as the original RAND items and Gibson and Dembo's (1984) efficacy instrument. The researchers state, "Positive correlations with other measures of personal teaching efficacy provide evidence for construct validity" (Tschannen-Moran & Woolfolk Hoy, 2001, p. 801). They add, "The TSES moves beyond previous measures to capture a wider range of teaching tasks. The three dimensions of efficacy for instructional strategies, student engagement, and classroom

management represent the richness of teachers' work lives and the requirements of good teaching" (p. 801).

Section IV of the study presented a series of open-ended questions used to add depth and breadth to the relationship between teachers' perceptions of the feedback they receive and teachers' sense of self-efficacy. Furthermore, the open-ended questions were designed to collect data for answering the research question, "Are there predominant themes in teachers' perceptions of feedback that relate to teacher self-efficacy?" For example, on an open-ended question designed to gather data on teachers' perceptions of evaluative feedback, respondents were asked, "Would you please describe the types of feedback you received from your principal this year that helped you grow more confident in your ability to help all kids learn?" Along with the questions in Section II, the panel of experts reviewed the open-ended questions in this section of the survey and made recommendations. As these open-ended questions were a part of the survey, the result was a mixed methods strategy that can be identified as a concurrent embedded approach. According to Creswell (2009), "A concurrent embedded approach has a primary method that guides the project and a secondary database that provides a supporting role in the procedures. Given less priority, the secondary method is embedded, or nested, within the predominate method" (p. 214). In this study, the primary method was quantitative and the secondary method was qualitative which resulted in the mixed methods, concurrent embedded strategy. Creswell adds, "This model is used so that a researcher can gain broader perspectives as a result of using the different methods as opposed to using the predominant method alone" (p. 215). It is important to note that while the TSES is a suitable instrument for this study, there are concerns with using the TSES to accurately

measure teacher self-efficacy. Tschannen-Moran and Woolfolk Hoy (2001) state, “This new scale needs further testing and validation” (p. 802). Hence, the mixed methods approach selected for this study was an appropriate choice to add valuable qualitative data to the quantitative data to best assess the relationship of teachers’ perceptions of the feedback they receive and teachers’ sense of self-efficacy.

Research Design

For this mixed methods study, a non-experimental descriptive research design was employed. Mixed methods research is a style of inquiry that combines both qualitative and quantitative forms in tandem so that the overall strength of a study is greater than either qualitative or quantitative research (Creswell & Plano Clark, 2007). Survey methodology was utilized because it provided a quantitative description of trends, attitudes, or opinions of a population by studying a sample of that population (Creswell, 2009). The purpose of this study was to determine the predictive relationship between teachers’ perceptions of the characteristics of feedback they receive and teacher self-efficacy in six high-performing elementary schools in Indiana. The independent variables that were teachers’ perceptions of the specific characteristics of evaluative feedback, formative feedback experiences, and the total feedback they receive were identified through the review of related literature. Additional independent variables included degree obtained, years teaching in the district, and teaching assignment. The dependent variable was teachers’ sense of self-efficacy. The relation between variables in this study was examined through the use of multiple regression analysis to discover

predictive relationships between the independent variables and teachers' self-efficacy. According to Newton and Rudestam (1999), "Multiple regression is used for analyzing data when the researcher is interested in exploring the relationship between multiple continuously distributed independent variables and a single dependent variable" (p. 248).

Procedures

Once approval was granted from the Institutional Review Board, the researcher met with the administrators of the district to discuss the study, the benefits to the district from participation, the instruments, and the time commitment from teachers required to conduct the study. Once permission was granted, the researcher introduced himself and the study to teachers, in person, at faculty meetings in each elementary school in the district. Shortly thereafter, the researcher used email to deliver a link to the survey to all 220 elementary school teachers in the district. Qualtrics, a web-based survey software, was used to administer the survey. This technique of delivery and administration ensured anonymity and confidentiality. As a result of collecting the data at one point, the survey was cross-sectional in nature. Furthermore, the survey collected the primary quantitative data through closed-ended and Likert-like items, and it collected the secondary qualitative data through open-ended items. This was done simultaneously in a single survey which resulted in a concurrent embedded strategy of mixed methods.

Data Analysis Procedures

A mixed methods design was used for this study. First, the researcher conducted a multiple regression analysis with beta weights for each independent variable to examine the predictive quality of teachers' perceptions of the feedback they receive, degree obtained, years teaching in the district, and teaching assignment to teachers' sense of self-efficacy. Also, the researcher examined teachers' perceptions of the feedback they receive in elementary schools in the district through descriptive analysis of teacher responses to Section II of the survey. Specific characteristic means, standard deviations, and other descriptive statistics for both Section II and Section III of the survey were examined to find the characteristics that were measured to be most important. Next, the researcher heeded to the recommendation of Creswell and Plano Clark (2007) by carefully reading through the qualitative data to gain a holistic sense before sorting the text into smaller parts. By fully immersing himself in the data and looking for common themes across responses, the researcher identified support to the quantitative data to best answer the research question, "Are there predominant themes in teachers' perceptions of feedback that relate to teacher self-efficacy?" This mixing of the data was performed after statistical analysis of the quantitative data was performed.

SPSS 21.0 was used to perform the statistical analysis. The dependent variable was teacher self-efficacy, and the independent variables were teachers' perceptions of the characteristics of evaluative feedback, formative feedback experiences, and total feedback they receive as outlined in the research hypotheses, as well as degree obtained, years teaching in the district, and teaching assignment.

Summary

In this mixed methods study, non-experimental descriptive research design was used, and quantitative methods for data analysis showed teachers' perceptions of the evaluative feedback, formative feedback experiences, and total feedback they receive. Furthermore, quantitative methods determined if there were significant predictive relationships between teachers' perceptions of the characteristics of the evaluative feedback, formative feedback experiences, and total feedback they receive and teachers' sense of self-efficacy. A concurrent embedded strategy of mixed methods was used to gain a broader perspective as a result of using the different methods as opposed to using the predominant method alone, in addition to providing evidence in identifying any predominate themes in teachers' perceptions of feedback that relate to teacher self-efficacy. In chapter 4, data analysis is reported. In chapter 5, results, conclusions, and recommendations for further research are provided.

CHAPTER 4

REPORT OF DATA AND DATA ANALYSIS

This study investigated the relationship between teachers' perceptions of the feedback they receive and teachers' sense of self-efficacy in six high-performing elementary schools in a single district in Indiana, rich with evaluative and formative feedback. All classroom teachers in all six schools were invited to participate in the study. The researcher delivered an electronic Qualtrics survey that contained demographic questions, researcher-designed feedback questions, and the Teachers' Sense of Efficacy Scale (TSES) via email to all teachers during April 2013. The findings that follow present an analysis of that survey data regarding specific characteristics of evaluative, formative, and total feedback that may be related to teacher efficacy. All statistical analyses were performed using SPSS 21.0 software.

Descriptive Analysis

Of the 220 elementary school teachers sampled in the six schools, 109 teachers completed the survey for a response rate of 49.5%. Tests for assumptions of independence, normality, linearity, and variance showed satisfaction. There were no irregularities in the computation for multi-collinearity; variance inflation factors (VIF) were acceptable.

The study's primary area of focus was the relationship between teachers' perceptions of specific characteristics of the feedback they receive and teachers' sense of self-efficacy. In order to examine that relationship, it was necessary to create the following variables: Timely and Ongoing Evaluative Feedback, Accurate Evaluative Feedback, Relevant Evaluative Feedback, Emotional Intelligent Evaluative Feedback, Participation in Formative Feedback, Accurate Formative Feedback, Support of Formative Feedback, Emotional Intelligent Formative Feedback, Coordinated Total Feedback, Aligned Total Feedback, Teacher Efficacy for Instructional Strategies, Teacher Efficacy for Classroom Management, and Teacher Efficacy for Student Engagement.

Table 1 lists the evaluative feedback items from the items from the survey.

Table 1

Evaluative Feedback Items

Characteristic	Survey Item
Timely and Ongoing	My principal gives me information about my teaching frequently and at various times throughout the year.
Timely and Ongoing	The feedback my principal provides me is NOT delivered in a prompt and timely fashion.
Accurate	The information I receive from my principal is NOT accurate in describing what happens in my classroom.
Accurate	After my principal observes my teaching, the comments he/she provides me are accurate.
Relevant	I am able to meet goals and grow professionally because of the feedback I receive from my principal.
Relevant	When my principal gives me feedback, it is NOT connected to school goals or areas relevant to my teaching.
Emotional Intelligent	My principal provides me comments and questions that are non-threatening and cause me to reflect and consider alternatives.
Emotional Intelligent	The information my principal provides me about the learning in my classroom is fair and respectful.

Table 2 lists the formative feedback experiences items from the survey.

Table 2

Formative Feedback Experiences Items

Characteristic	Survey Item
Participation	I do NOT regularly participate in discussions about my teaching with colleagues in this school.
Participation	My literacy coach works with me throughout the year to help with my instruction.
Accurate	The feedback I receive from my literacy coach about curriculum and instruction is accurate.
Accurate	The information my literacy coach provides me about my students' learning is NOT accurate.
Support	I am supported by the feedback my literacy coach provides me in meeting important school goals.
Support	Discussions I have about my teaching while collaborating with colleagues do NOT support my efforts to improve.
Emotional Intelligent	My literacy coach provides me comments and questions about my teaching that are non-threatening and cause me to reflect and consider alternatives.
Emotional Intelligent	When collaborating with other teachers about my teaching, the information I receive is fair and respectful.

Table 3 lists the total feedback items from the survey.

Table 3

Total Feedback Items

Characteristic	Survey Item
Coordinated	My principal, literacy coach, and other teachers I work with coordinate their efforts to help me improve student achievement.
Coordinated	I do NOT believe that my principal and literacy coach coordinate their efforts to support my professional growth.
Aligned	The feedback my literacy coach and other teachers provides me is NOT aligned to feedback provided by my principal.
Aligned	The information I receive about my teaching from my principal and literacy coach is similar.

Table 4 lists the open-ended items from the survey.

Table 4

Open-ended Items

Type of Feedback	Survey Item
Evaluative	Would you please describe the types of feedback you received from your principal(s) this year that helped you grow more confident in your ability help all kids learn? Please consider the following: How was some information provided from the principal(s) about your teaching more valuable to you than other information? What do you see as the primary characteristics of this feedback from the principal(s) that made it useful to you this year?
Formative	Would you please describe the types of experiences you had with your literacy coach and/or other teachers that you found most helped you improve student learning this year? Please consider the following: How were some encounters with the literacy coach and/or other teachers more valuable to you than other encounters? What do you see as the primary characteristics of these encounters that made them useful to you this year?
Total	Would you please describe how your principal(s), literacy coach, and colleagues work together for school improvement? What do you see as the primary characteristics of this teamwork that supports your ability to produce student achievement?

Table 5 lists the teacher efficacy items from the survey.

Table 5

Teacher Efficacy Items (TSES)

Efficacy Construct	Survey Item
Classroom Management	How much can you do to control disruptive behavior in the classroom?
Classroom Management	How much can you do to get children to follow classroom rules?
Classroom Management	How much can you do to calm a student who is disruptive or noisy?
Classroom Management	How well can you establish a classroom management system with each group of students?
Instructional Strategies	To what extent can you craft good questions for your students?
Instructional Strategies	To what extent can you use a variety of assessment strategies?
Instructional Strategies	To what extent can you provide an alternate explanation or example when students are confused?
Instructional Strategies	How well can you implement alternative teaching strategies in your classroom?
Student Engagement	How much can you do to motivate students who show low interest in school work?
Student Engagement	How much can you do to get students to believe they can do well in school work?
Student Engagement	How much can you do to help your students value learning?
Student Engagement	How much can you assist families in helping their children do well in school?

Prior to gathering descriptive statistics, a reverse scoring of the negatively worded items was performed. Then, new variables were created for each characteristic of feedback by finding the mean value of survey responses that measured each characteristic. In addition, new variables were created for each construct of teacher efficacy by finding the mean value of survey responses that measured each construct.

Thus, there were ten feedback variables and three efficacy variables created. Tables 6 and 7 list the descriptive statistics for the feedback variables and teacher efficacy variables, respectively. Tables 8, 9, 10, and 11 disaggregate the descriptive statistics for the feedback variables and teacher efficacy variables by demographic variables.

Table 6

Descriptive Statistics for Feedback Variables

Variable	Mean	S.D.
Timely & Ongoing – Evaluative	4.68	0.93
Accurate – Evaluative	4.46	1.11
Relevant – Evaluative	4.41	1.05
Emotionally Intelligent – Evaluative	4.49	1.04
Participation – Formative	4.41	1.04
Accurate – Formative	4.84	0.99
Support – Formative	4.70	0.95
Emotional Intelligence – Formative	4.63	0.94
Coordination – Total	4.18	1.23
Alignment – Total	4.24	1.13

Table 7

Descriptive Statistics for Teacher Efficacy Variables

Variable	Mean	S.D.
TSES – Classroom Management	7.59	1.01
TSES – Student Engagement	7.13	1.12
TSES – Instructional Strategies	7.66	0.96

Table 8

Descriptive Statistics for Demographic and Evaluative Feedback Variables

Variable	N	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
		T. & O.	T. & O.	A.	A.	R.	R.	E.I.	E.I.
Grade Taught									
Kindergarten	16	4.47	1.01	3.94	1.39	4.00	1.29	4.06	1.42
Grade 1	16	4.59	1.13	4.28	1.08	4.41	0.97	4.50	0.88
Grade 2	17	4.85	0.84	4.65	1.04	4.74	0.99	4.56	0.79
Grade 3	13	4.35	0.83	3.96	1.05	4.04	1.01	3.85	1.18
Grade 4	15	4.67	0.70	4.57	0.98	4.53	0.74	4.80	0.68
Grade 5	16	4.94	0.95	4.91	0.95	4.63	1.12	4.75	1.06
Special Education	7	4.50	1.08	4.36	1.14	3.93	1.37	4.57	1.27
Special Areas	9	5.06	0.98	5.22	0.71	4.83	0.79	4.94	0.53
Years Teaching in District									
1 Year	10	4.75	0.89	4.95	0.80	4.90	0.52	4.95	0.72
2-5 Years	12	4.88	0.77	4.92	0.76	4.67	0.81	5.21	0.96
6-10 Years	18	4.61	0.83	4.39	0.96	4.22	1.03	4.42	0.83
11-15 Years	19	4.84	0.80	4.79	1.03	4.55	0.91	4.79	0.77
16 or More Years	50	4.58	1.07	4.16	1.23	4.26	1.21	4.13	1.13
Degree Obtained									
Bachelor's	51	4.55	0.93	4.43	1.08	4.43	0.92	4.65	0.91
Master's	49	4.82	0.96	4.48	1.17	4.45	1.21	4.40	1.20
Master +30 or Greater	9	4.67	0.75	4.56	1.07	4.06	0.88	4.06	0.53

Table 9

Descriptive Statistics for Demographic and Formative Feedback Variables

Variable	N	Mean P.	S.D. P.	Mean A.	S.D. A.	Mean S.	S.D. S.	Mean E.I.	S.D. E.I.
Grade Taught									
Kindergarten	16	4.53	0.96	4.94	0.66	4.78	0.75	4.72	0.71
Grade 1	16	4.72	1.09	4.88	1.26	4.88	0.89	4.66	1.00
Grade 2	17	4.47	1.11	5.06	0.56	4.91	0.59	4.74	0.90
Grade 3	13	4.23	1.01	4.31	1.46	4.42	1.08	4.12	0.85
Grade 4	15	4.67	0.84	5.00	0.53	4.83	0.62	4.87	0.95
Grade 5	16	4.06	1.33	4.88	1.16	4.53	1.43	4.72	1.09
Special Education	7	4.07	0.61	4.50	0.91	4.21	1.11	4.57	0.89
Special Areas	9	4.28	1.09	4.89	1.05	4.72	1.09	4.50	1.15
Years Teaching in District									
1 Year	10	4.65	0.97	5.10	0.66	5.10	0.52	4.75	0.68
2-5 Years	12	4.54	0.96	5.21	0.62	4.92	0.90	4.79	1.08
6-10 Years	18	4.33	1.22	4.58	1.18	4.56	1.07	4.64	1.01
11-15 Years	19	4.50	1.17	5.05	1.28	4.79	1.03	4.82	1.04
16 or More Years	50	4.33	0.99	4.71	0.89	4.59	0.95	4.50	0.89
Degree Obtained									
Bachelor's	51	4.54	1.03	4.91	0.97	4.77	0.88	4.74	0.95
Master's	49	4.43	0.97	4.84	0.99	4.69	0.97	4.60	0.92
Master +30 or Greater	9	3.61	1.27	4.44	1.07	4.33	1.20	4.22	0.97

Table 10

Descriptive Statistics for Demographic and Total Feedback Variables

Variable	N	Mean Coor.	S.D. Coor.	Mean Align.	S.D. Align.
Grade Taught					
Kindergarten	16	3.88	1.32	3.94	1.01
Grade 1	16	4.75	1.02	4.31	1.11
Grade 2	17	4.26	1.00	4.24	1.17
Grade 3	13	3.54	1.41	3.81	1.13
Grade 4	15	4.40	1.07	4.43	1.22
Grade 5	16	4.03	1.36	4.25	1.25
Special Education	7	4.00	1.26	4.50	0.91
Special Areas	9	4.50	1.30	4.78	1.03
Years Teaching in District					
1 Year	10	4.85	0.78	4.80	1.16
2-5 Years	12	5.04	0.94	4.83	1.01
6-10 Years	18	4.03	1.05	4.14	1.03
11-15 Years	19	4.05	1.44	4.42	1.27
16 or More Years	50	3.94	1.23	3.96	1.05
Degree Obtained					
Bachelor's	51	4.32	1.16	4.30	1.09
Master's	49	4.15	1.32	4.29	1.19
Master +30 or Greater	9	3.50	0.94	3.67	0.94

Table 11

Descriptive Statistics for Demographic and Teacher Efficacy Variables

Variable	N	Mean TSES C.M.	S.D. TSES C.M.	Mean TSES S.E.	S.D. TSES S.E.	Mean TSES I.S.	S.D. TSES I.S.
Grade Taught							
Kindergarten	16	7.81	0.84	7.80	1.00	7.84	1.07
Grade 1	16	7.36	1.04	7.17	1.04	7.80	0.82
Grade 2	17	7.29	1.36	6.72	0.97	7.21	0.97
Grade 3	13	7.10	0.81	6.65	1.03	7.85	0.82
Grade 4	15	7.30	0.78	6.63	0.91	7.28	0.82
Grade 5	16	8.17	0.86	7.53	1.44	8.06	1.08
Special Education	7	7.75	0.84	7.29	1.21	7.32	1.11
Special Areas	9	8.17	0.75	7.36	0.78	7.86	0.76
Years Teaching in District							
1 Year	10	7.55	0.55	7.63	1.10	7.70	1.21
2-5 Years	12	7.63	0.64	6.92	0.99	7.27	0.95
6-10 Years	18	7.40	0.96	6.81	1.18	7.58	1.02
11-15 Years	19	7.76	1.16	7.17	1.08	7.59	1.04
16 or More Years	50	7.59	1.12	7.19	1.14	7.80	0.86
Degree Obtained							
Bachelor's	51	7.37	0.88	6.84	1.02	7.38	0.95
Master's	49	7.76	1.05	7.41	1.12	7.88	0.86
Master +30 or Greater	9	7.86	1.29	7.28	1.39	8.03	1.16

Correlations

Once descriptive statistics for the variables were found, correlations were performed for the demographic teacher variables and feedback variables. Table 12 displays the data gathered through the Pearson correlation function in SPSS for the demographic teacher variables and the evaluative feedback variables.

Table 12

Correlations: Teacher Variables and Evaluative Feedback Variables

Variable	1.	2.	3.	4.	5.	6.
1. Years Teaching in District	1	.463**	-.077	-.240*	-.161	-.312**
2. Degree Obtained	.463**	1	.101	.032	-.060	-.169
3. Evaluative – Timely and Ongoing	-.077	.101	1	.644**	.738**	.608**
4. Evaluative – Accurate	-.240*	.032	.644**	1	.655**	.757**
5. Evaluative – Relevant	-.161	-.060	.738**	.655**	1	.746**
6. Evaluative – Emotional Intelligent	-.312**	-.169	.608**	.757**	.746**	1

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Of the demographic teacher variables, there was a significant positive correlation between Years Teaching in District and Degree Obtained at the .01 level, and there were significant negative correlations between Years Teaching in District and teachers' perceptions of Accurate Evaluative Feedback and Emotional Intelligent Evaluative Feedback at the .05 and .01 levels, respectively. There were significant positive correlations among all of the evaluative feedback characteristics at the .01 level.

Table 13 displays the data gathered through the Pearson correlation function in SPSS for the demographic teacher variables and the formative feedback variables.

Table 13

Correlations: Teacher Variables and Formative Feedback Variables

Variable	1.	2.	3.	4.	5.	6.
1. Years Teaching in District	1	.463**	-.084	-.127	-.143	-.102
2. Degree Obtained	.463**	1	-.190*	-.107	-.107	-.138
3. Formative – Participation	-.084	-.190*	1	.611**	.719**	.705**
4. Formative – Accurate	-.127	-.107	.611**	1	.826**	.753**
5. Formative – Relevant	-.143	-.107	.719**	.826**	1	.794**
6. Formative – Emotional Intelligent	-.102	-.138	.705**	.753**	.794**	1

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Of the demographic variables, there was a significant negative correlation between Degree Obtained and teachers' perceptions of Participation in Formative Feedback Experiences at the .05 level. There were significant positive correlations among all of the formative feedback characteristics at the .01 level.

Table 14 shows the data gathered through the Pearson correlation function in SPSS for the demographic teacher variables and the total feedback variables.

Table 14

Correlations: Teacher Variables and Total Feedback Variables

Variable	1.	2.	3.	4.
1. Years Teaching in District	1	.463**	-.276**	-.260**
2. Degree Obtained	.463**	1	-.160	-.107
3. Total – Coordinated	-.276**	-.160	1	.720**
4. Total – Aligned	-.260**	-.107	.720**	1

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Of the demographic teacher variables, there were significant negative correlations between Years Teaching in District and teachers' perceptions of both Coordinated Total Feedback and Aligned Total Feedback at the .01 level. Both of the total feedback characteristics were significantly correlated to one another at the .01 level.

Next, correlations were performed for the demographic teacher variables and teacher efficacy variables. Table 15 displays the data gathered through the Pearson correlation function in SPSS for the demographic teacher variables and the teacher efficacy variables.

Table 15

Correlations: Teacher Variables and Teacher Efficacy Variables

Variable	1.	2.	3.	4.	5.
1. Years Teaching in District	1	.463**	.023	-.005	.117
2. Degree Obtained	.463**	1	.194*	.212*	.265**
3. TSES – Classroom Management	.023	.194*	1	.671**	.420**
4. TSES – Student Engagement	-.005	.212*	.671**	1	.584**
5. TSES – Instructional Strategies	.117	.265**	.420**	.584**	1

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Of the demographic categorical variables, there were significant positive correlations between Degree Obtained and teachers' sense of self-efficacy in Classroom Management, Student Engagement, and Instructional Strategies at the .05, .05, and .01 levels, respectively. There were significant positive correlations among all three of the TSES teacher efficacy subscales at the .01 level.

After running correlations for the demographic teacher variables, correlations were performed among the various types of feedback variables. Tables 16, 17, and 18 display these data collected through the Pearson correlation function in SPSS for the feedback variables.

Table 16

Correlations: Evaluative Feedback and Formative Feedback Variables

Variable	1.	2.	3.	4.	5.	6.	7.	8.
1. Evaluative – Timely and Ongoing	1	.644**	.738**	.608**	.308**	.411**	.439**	.385**
2. Evaluative – Accurate	.644**	1	.655**	.757**	.193**	.417**	.406**	.307**
3. Evaluative – Relevant	.738**	.655**	1	.746**	.278**	.355**	.393**	.282**
4. Evaluative – Emotional Intelligent	.608**	.757**	.746**	1	.252**	.438**	.420**	.346**
5. Formative – Participation	.308**	.193**	.278**	.252**	1	.611**	.719**	.705**
6. Formative – Accurate	.411**	.417**	.355**	.438**	.611**	1	.826**	.753**
7. Formative – Relevant	.439**	.406**	.393**	.420**	.719**	.826**	1	.794**
8. Formative – Emotional Intelligent	.385**	.307**	.282**	.346**	.705**	.753**	.794**	1

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

There were significant positive correlations between teachers' perceptions of all four characteristics of evaluative feedback and all four characteristics of formative feedback experiences at the .01 level.

Table 17

Correlations: Evaluative Feedback and Total Feedback Variables

Variable	1.	2.	3.	4.	5.	6.
1. Evaluative – Timely and Ongoing	1	.644**	.738**	.608**	.525**	.564**
2. Evaluative – Accurate	.644**	1	.655**	.757**	.534**	.679**
3. Evaluative – Relevant	.738**	.655**	1	.746**	.547**	.577**
4. Evaluative – Emotional Intelligent	.608**	.757**	.746**	1	.615**	.685**
5. Total – Coordinated	.525**	.534**	.547**	.615**	1	.720**
6. Total – Aligned	.564**	.679**	.577**	.685**	.720**	1

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

There were significant positive correlations between teachers' perceptions of all four characteristics of evaluative feedback and both characteristics of total feedback at the .01 level.

Table 18

Correlations: Formative Feedback and Total Feedback Variables

Variable	1.	2.	3.	4.	5.	6.
1. Formative – Participation	1	.611**	.719**	.705**	.536**	.396**
2. Formative – Accurate	.611**	1	.826**	.753**	.550**	.578**
3. Formative – Relevant	.719**	.826**	1	.794**	.647**	.573**
4. Formative – Emotional Intelligent	.705**	.753**	.794**	1	.535**	.448**
5. Total – Coordinated	.536**	.550**	.647**	.535**	1	.720**
6. Total – Alignment	.396**	.578**	.573**	.448**	.720**	1

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

There were significant positive correlations between teachers' perceptions of all four characteristics of formative feedback experiences and both characteristics of total feedback at the .01 level.

After running correlations for the feedback variables, a final run of correlations was performed among the feedback variables and teacher efficacy variables. Tables 19, 20, and 21 display these data collected through the Pearson correlation function in SPSS for the feedback variables and the teacher efficacy variables.

Table 19

Correlations: Evaluative Feedback Variables and Teacher Efficacy Variables

Variable	1.	2.	3.	4.	5.	6.	7.
1. Evaluative – Timely and Ongoing	1	.644**	.738**	.608**	.174	.133	.042
2. Evaluative – Accurate	.644**	1	.655**	.757**	.341**	.222*	.079
3. Evaluative – Relevant	.738**	.655**	1	.746**	.145	.131	.081
4. Evaluative – Emotional Intelligent	.608**	.757**	.746**	1	.279**	.170	.162
5. TSES – Classroom Management	.174	.341**	.145	.279**	1	.671**	.420**
6. TSES – Student Engagement	.133	.222*	.131	.170	.671**	1	.584**
7. TSES – Instructional Strategies	.042	.079	.081	.162	.420**	.584**	1

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 19 shows there was a significant positive correlation between teachers' perceptions of Accurate Evaluative Feedback and teachers' sense of self-efficacy in Classroom Management at the .01 level. Moreover, there was a significant positive correlation between teachers' perceptions of Accurate Evaluative Feedback and teachers' sense of self-efficacy in Student Engagement at the .05 level. Finally, there was a significant positive correlation between teachers' perceptions of Emotional Intelligent

Evaluative Feedback and teachers' sense of self-efficacy in Classroom Management at the .01 level. There were no significant correlations between teachers' perceptions of Timely and Ongoing Evaluative Feedback and teachers' sense of self-efficacy as measured by the TSES, and there were no significant correlations between teachers' perceptions of Relevant Evaluative Feedback and teachers' sense of self-efficacy as measured by the TSES.

Table 20

Correlations: Formative Feedback Variables and Teacher Efficacy Variables

Variable	1.	2.	3.	4.	5.	6.	7.
1. Formative – Participation	1	.611**	.719**	.705**	.006	.051	-.055
2. Formative – Accurate	.611**	1	.826**	.753**	.053	.090	.035
3. Formative – Relevant	.719**	.826**	1	.794**	.044	.114	.022
4. Formative – Emotional Intelligent	.705**	.753**	.794**	1	.059	.068	-.059
5. TSES – Classroom Management	.006	.053	.044	.059	1	.671**	.420**
6. TSES – Student Engagement	.051	.090	.114	.068	.671**	1	.584**
7. TSES – Instructional Strategies	-.055	.035	.022	-.059	.420**	.584**	1

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 20 shows there were no significant correlations between teachers' perceptions of characteristics of formative feedback experiences and teachers' sense of self-efficacy as measured by the TSES.

Table 21

Correlations: Total Feedback Variables and Teacher Efficacy Variables

Variable	1.	2.	3.	4.	5.
1. Total – Coordinated	1	.720**	.071	.043	-.074
2. Total – Aligned	.720**	1	.215*	.114	.024
3. TSES – Classroom Management	.071	.215*	1	.671**	.420**
4. TSES – Student Engagement	.043	.114	.671**	1	.584**
5. TSES – Instructional Strategies	-.074	.024	.420**	.584**	1

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 21 shows there was a significant positive correlation between teachers' perceptions of Aligned Total Feedback and teachers' sense of self-efficacy in Classroom Management at the .05 level. There were no significant correlations between teachers' perceptions of Coordinated Total Feedback and teachers' sense of self-efficacy as measured by the TSES.

Analysis of Variance

Once the final correlations were performed, a one-way analysis of variance (ANOVA) was used to examine the demographic teacher variables to conclude if there were significant differences regarding teacher efficacy dependent variables between groups. Tables 22, 23, and 24 display these data collected through the ANOVA function in SPSS for the teacher efficacy variables.

Table 22

ANOVA: Categorical Variables and Teacher Efficacy in Classroom Management

Variable	Sum of Squares	df	Mean Square	F	Sig.
Grade Taught					
Between Groups	16.152	7	2.307	2.502	.021*
Within Groups	93.145	101	.922		
Total	109.297	108			
Years Teaching in District					
Between Groups	1.232	4	.308	.296	.880
Within Groups	108.065	104	1.039		
Total	109.297	108			
Degree Obtained					
Between Groups	4.492	2	2.246	2.271	.108
Within Groups	104.805	106	.989		
Total	109.297	108			

**Difference is significant at the 0.01 level (2-tailed).

*Difference is significant at the 0.05 level (2-tailed).

Table 23

ANOVA: Categorical Variables and Teacher Efficacy in Student Engagement

Variable	Sum of Squares	df	Mean Square	F	Sig.
Grade Taught					
Between Groups	19.866	7	2.838	2.480	.022*
Within Groups	115.580	101	1.144		
Total	135.446	108			
Years Teaching in District					
Between Groups	5.102	4	1.276	1.018	.402
Within Groups	130.344	104	1.253		
Total	135.446	108			
Degree Obtained					
Between Groups	8.469	2	4.234	3.535	.033*
Within Groups	126.977	106	1.198		
Total	135.446	108			

**Difference is significant at the 0.01 level (2-tailed).

*Difference is significant at the 0.05 level (2-tailed).

Table 24

ANOVA: Categorical Variables and Teacher Efficacy in Instructional Strategies

Variable	Sum of Squares	df	Mean Square	F	Sig.
Grade Taught					
Between Groups	10.683	7	1.526	1.732	.110
Within Groups	89.007	101	.881		
Total	99.690	108			
Years Teaching in District					
Between Groups	3.007	4	.752	.809	.522
Within Groups	96.684	104	.930		
Total	99.690	108			
Degree Obtained					
Between Groups	7.578	2	3.789	4.360	.015*
Within Groups	92.112	106	.869		
Total	99.690	108			

**Difference is significant at the 0.01 level (2-tailed).

*Difference is significant at the 0.05 level (2-tailed).

The ANOVA showed that there were significant differences between group means for Grade Taught and Degree Obtained. Specifically, there were significant differences in teachers' sense of self-efficacy in Classroom Management and teachers' sense of self-efficacy in Student Engagement between groups of Grade Taught at the .05 level. In addition, there were significant differences in teachers' sense of self-efficacy in Student Engagement and teachers' sense of self-efficacy in Instructional Strategies

between groups of Degree Obtained at the .05 level. These significant differences resulted in the need for additional inspection of these data.

Least significant differences were found using SPSS in order to examine the pairwise comparisons of Grade Taught. The following significant differences in teachers' sense of self-efficacy in Classroom Management between groups for Grade Taught were found: Kindergarten compared to Third Grade; First Grade compared to Fifth Grade and Special Areas; Second Grade compared to Fifth Grade and Special Areas; Third Grade compared to Fifth Grade and Special Areas; and, Fourth Grade compared to Fifth Grade and Special Areas. The following significant differences in teachers' sense of self-efficacy in Student Engagement between groups for Grade Taught were found: Kindergarten compared to Second Grade, Third Grade, and Fourth Grade; Second Grade compared to Fifth Grade; Third Grade compared to Fifth Grade; and, Fourth Grade compared to Fifth Grade. A significant difference in teachers' sense of self-efficacy in Student Engagement between groups for Degree Obtained was found for Bachelor's and Master's. Also, a significant difference in teachers' sense of self-efficacy in Instructional Strategies between groups for Degree Obtained was found for Bachelor's and Master's.

Reliability of Instruments

In order to test the internal consistency of each of the feedback variables, Cronbach's alpha was calculated using SPSS. Table 25 displays the Cronbach's alpha results for each of the feedback variables and teacher efficacy variables.

Table 25

Cronbach's Alpha: Feedback and Teacher Efficacy Variables

Variable	N of Items	Cronbach's Alpha
Evaluative – Timely and Ongoing	2	.605
Evaluative – Accurate	2	.853
Evaluative – Relevant	2	.739
Evaluative – Emotional Intelligent	2	.818
Formative – Participation	2	.249
Formative – Accurate	2	.855
Formative – Support	2	.549
Formative – Emotional Intelligent	2	.391
Total – Coordination	2	.711
Total – Alignment	2	.720
TSES – Classroom Management	4	.888
TSES – Student Engagement	4	.844
TSES – Instructional Strategies	4	.822

Cronbach's alpha results show all subscales of the TSES above .700 with the items measuring teachers' sense of self-efficacy in Classroom Management being the highest ($\alpha = .888$). The Student Engagement subscale was next highest ($\alpha = .844$) and the Instructional Strategies subscale was third-highest ($\alpha = .822$) of the teacher efficacy variables.

Cronbach's alpha results show all evaluative feedback variables above .700 except Timely and Ongoing ($\alpha = .605$). The items that measured this variable were the following: "My principal gives me information about my teaching frequently and at various times throughout the year," and "The feedback my principal provides me is NOT delivered in a prompt and timely fashion." While reverse-coding was performed to account for the negative wording, it is possible that respondents perceive evaluative feedback that is "frequent and at various times" to be different from evaluative feedback that is "prompt and timely." This may account for the Cronbach's alpha that is less than .700.

Cronbach's alpha results show only one of the formative feedback variables above .700, and this variable was Accurate ($\alpha = .855$). Cronbach's alpha for Participation, Support, and Emotional Intelligent were all below .700, $\alpha = .249$, $.549$, and $.391$, respectively. The items that measured the Participation variable were the following: "I do NOT regularly participate in discussions about my teaching with colleagues in this school," and "My literacy coach works with me throughout the year to help with my instruction." While reverse-coding was performed to account for the negative wording, it is possible that respondents perceive formative feedback experiences that include "discussions about my teaching with colleagues" to be different from

formative feedback experiences that include “my literacy coach works with me.” This may account for the Cronbach’s alpha that is less than .700. The items that measured the Support variable were the following: “I am supported by the feedback my literacy coach provides me in meeting important school goals,” and “Discussions I have about my teaching while collaborating with colleagues do NOT support my efforts to improve.” While reverse-coding was performed to account for the negative wording, it is possible that respondents perceive formative feedback experiences that include “feedback my literacy coach provides me” to be different from formative feedback experiences that include “discussions I have about my teaching while collaborating with colleagues.” This may account for the Cronbach’s alpha that is less than .700. Finally, the items that measured the Emotional Intelligent variable of formative feedback experiences were the following: “My literacy coach provides me comments and questions about my teaching that are non-threatening and cause me to reflect and consider alternatives,” and “When collaborating with other teachers about my teaching, the information I receive is fair and respectful.” It is possible that respondents perceive formative feedback experiences that include “my literacy coach provides me comments and questions” to be different from formative feedback experiences that include “collaborating with other teachers about my teaching.” This may account for the Cronbach’s alpha that is less than .700. Table 26 displays descriptive statistics for the items that make up the four variables with Cronbach’s alpha less than .700.

Table 26

Cronbach's Alpha: Descriptive Statistics for Variables with Cronbach's Alpha < .700.

Variable	Cronbach's Alpha	Mean	S.D.
Evaluative – Timely and Ongoing	.605	4.68	0.93
Item “frequent and at various times”	---	4.54	1.04
Item “prompt and timely”	---	4.82	1.16
Formative – Participation	.249	4.41	1.04
Item “discussions about my teaching with colleagues”	---	4.77	1.27
Item “my literacy coach works with me”	---	4.06	1.49
Formative – Support	.549	4.70	0.95
Item “feedback my literacy coach provides me”	---	4.39	1.32
Item “discussions I have about my teaching while collaborating with colleagues.”	---	5.01	0.94
Formative – Emotional Intelligent	.391	4.63	0.94
Item “my literacy coach provides me comments and questions”	---	4.14	1.56
Item “collaborating with other teachers about my teaching”	---	5.13	0.63

Analysis of Research Question 1

In order to answer the first research question: What are teachers' perceptions of the evaluative feedback, formative feedback experiences, and total feedback they receive?, the descriptive and correlation data gathered from the Likert-type scaled questions on the survey were inspected.

Table 6 shows that of teachers' perceptions of the evaluative feedback variables, Timely and Ongoing Evaluative Feedback had the highest mean with 4.68 and had a standard deviation of 0.93. Relevant Evaluative Feedback had the lowest mean with 4.41 and had a standard deviation of 1.05. Of teachers' perceptions of the formative feedback variables, Accurate Formative Feedback had the highest mean with 4.84 and had a standard deviation of 0.99. Participation in Formative Feedback had the lowest mean with 4.41 and had a standard deviation of 1.04. Finally, Table 6 shows that of teachers' perceptions of total feedback, Aligned Total Feedback had the highest mean with 4.24 and had a standard deviation of 1.13. Coordinated Total Feedback had the lowest mean with 4.18 and had a standard deviation of 1.23. Of all of teachers' perceptions of the feedback variables, Coordinated and Aligned Total Feedback had the lowest means and also the highest standard deviations.

Table 8 shows teachers' perceptions of the evaluative feedback variables by demographic group. For Grade Taught, Special Areas teachers perceive all four evaluative feedback variables the highest. Grade 3 teachers perceive Timely and Ongoing Evaluative Feedback the lowest with a mean of 4.35 and a standard deviation of 0.83. Grade 3 teachers also perceive Emotional Intelligent Evaluative Feedback the lowest with a mean of 3.85 and a standard deviation of 1.18. Kindergarten teachers

perceive Accurate Evaluative Feedback the lowest with a mean of 3.94 and a standard deviation of 1.39. Special Education teachers perceive Relevant Evaluative Feedback the lowest with a mean of 3.93 and a standard deviation of 1.37.

Table 8 also shows teachers' perceptions of evaluative feedback by Years Teaching in District. Teachers who indicated 2-5 Years perceive Timely & Ongoing, Relevant, and Emotional Intelligent Evaluative Feedback the highest with means of 4.88, 4.92, and 5.21, respectively. Teachers who indicated 1 Year perceive Accurate Evaluative Feedback the highest with a mean of 4.95. Teachers who indicated 16 or More Years perceive Timely and Ongoing, Accurate, and Emotional Intelligent Evaluative Feedback the lowest with means of 4.58, 4.16, and 4.13, respectively. Teachers who indicated 6-10 Years perceive Relevant Evaluative Feedback the lowest with a mean of 4.22 and standard deviation of 1.03.

Finally, Table 8 shows teachers' perceptions of evaluative feedback by Degree Obtained. Teachers who indicated Master's perceive Timely and Ongoing, Accurate, and Relevant Evaluative Feedback the highest with means of 4.82, 4.48, and 4.45, respectively. Teachers who indicated Bachelor's perceive Emotional Intelligent Evaluative Feedback the highest with mean of 4.65 and a standard deviation of 0.91. Teachers who indicated Bachelor's perceive Timely and Ongoing and Accurate Evaluative Feedback the lowest with means of 4.55 and 4.43, respectively. Teachers who indicated Master's +30 perceive Relevant and Emotional Intelligent Evaluative Feedback the lowest with means of 4.06 and 4.06, respectively.

Table 9 shows teachers' perceptions of the formative feedback variables by demographic group. For Grade Taught, Grade 1 teachers perceive Participation in

Formative Feedback the highest with a mean of 4.72 and a standard deviation of 1.09. Grade 2 teachers perceive both Accurate Formative Feedback and Support of Formative Feedback the highest s of 5.06 and 4.91, respectively. Grade 4 teachers perceive Emotional Intelligent Formative Feedback the highest with a mean of 4.87 and a standard deviation of 0.95. Special Education teachers perceive both Participation in Formative Feedback and Support of Formative Feedback the lowest with means of 4.07 and 4.21, respectively. Grade 3 teachers perceive both Accurate Formative Feedback and Emotional Intelligent Formative Feedback the lowest with means of 4.31 and 4.12, respectively.

Table 9 also shows teachers' perceptions of formative feedback by Years Teaching in District. Teachers who indicated 1 Year perceive both Participation in and Support of Formative Feedback the highest with means of 4.65 and 5.10, respectively. Teachers who indicated 2-5 Years perceive Accurate Formative Feedback the highest with a mean of 4.92. Teachers who indicated 11-15 Years perceive Emotional Intelligent Formative Feedback the highest with a mean of 4.82 and a standard deviation of 1.04. Teachers who indicated 6-10 Years perceive Participation in, Accurate, and Support of Formative Feedback the lowest with means of 4.33, 4.58, and 4.56, respectively. Teachers who indicated 16 or More Years perceive Emotional Intelligent Formative Feedback the lowest with a mean of 4.50 and standard deviation of 0.89.

Finally, Table 9 shows teachers' perceptions of formative feedback by Degree Obtained. Teachers who indicated Bachelor's perceive all four formative feedback variables the highest. Teachers who indicated Master's +30 perceive all four formative feedback variables the lowest.

Table 10 shows teachers' perceptions of the total feedback variables by demographic group. For Grade Taught, Special Areas teachers perceive both total feedback variables the highest. Grade 3 teachers perceive both total feedback variables the lowest.

Table 10 also shows teachers' perceptions of total feedback by Years Teaching in District. Teachers who indicated 2-5 Years perceive both total feedback variables the highest. Teachers who indicated 16 or More Years perceive both total feedback variables the lowest.

Finally, Table 10 shows teachers' perceptions of total feedback by Degree Obtained. Teachers who indicated Bachelor's perceive both total feedback variables the highest. Teachers who indicated Master's +30 perceive both total feedback variables the lowest.

Table 12 shows correlations between the demographic teacher variables and teachers' perceptions of evaluative feedback. Not surprisingly, there was a significant positive correlation between Years Teaching in District and Degree Obtained at the .01 level. However, it was surprising that there were significant negative correlations between Years Teaching in District and teachers' perceptions of Accurate evaluative feedback and Emotional Intelligent evaluative feedback at the .05 and .01 levels, respectively. The negative relationship for Years Teaching in District and Accurate evaluative feedback was relatively weak ($r = -.240$), and the negative relationship for Years Teaching in District and Emotional Intelligent evaluative feedback was moderately strong ($r = -.312$).

Table 13 shows correlations between the demographic teacher variables and teachers' perceptions of formative feedback. Surprisingly, there was a significant negative correlation between Degree Obtained and teachers' perceptions of Participation in Formative Feedback at the .05 level. It was important to consider that the reliability of the Participation in Formative Feedback variable was poor (Cronbach's $\alpha = .249$). Thus, further examination was warranted. An item analysis of this variable grouped by Degree Obtained shows that for all groups within Degree Obtained, the mean responses for the item that included "discussions about my teaching with colleagues" were higher than the mean responses for the item that included "my literacy coach works with me." In addition, a paired samples t-test performed for the entire sample in SPSS for the two items revealed a statistically significant difference in the means with $t = -4.13$, $df = 108$, and $p < .001$.

Table 14 shows correlations between the demographic teacher variables and teachers' perceptions of total feedback. It was surprising that there were significant negative correlations between Years Teaching in District and teachers' perceptions of both Coordinated Total Feedback and Aligned Total Feedback at the .01 level. The negative relationship for Years Teaching in District and Coordinated Total Feedback was relatively weak ($r = -.276$), and the negative relationship for Years Teaching in District and Aligned Total feedback was relatively weak ($r = -.260$).

Tables 16, 17, and 18 show correlations performed among the various types of feedback variables. There were significant positive correlations between all evaluative, formative, and total feedback variables. The strongest significant correlation was between Accurate Formative Feedback and Relevant Formative Feedback ($r = .826$), and

the weakest significant correlation was between Accurate Evaluative Feedback and Participation in Formative Feedback ($r = .193$).

Analysis of Research Question 2

In order to answer the second research question: Is there a significant predictive relationship between characteristics of feedback from formative feedback experiences and teacher self-efficacy?, hierarchical multiple regression was performed for HO₁, HO₂, and HO₃. The purpose of the study was to determine the predictive relationship between teachers' perceptions of the characteristics of feedback they receive and teacher self-efficacy. Hierarchical multiple regression was chosen because it allows for the control of variables in one step of regression, and it works to identify the strength of all independent variables in another step of regression. Prior to running all regressions, the categorical Grade Taught data was transformed into a new variable called Teaching Assignment. Grades K-5 were placed into one group, and Special Areas and Special Education were placed in another group.

HO₁: There is no statistically significant predictive relationship between teachers' perceptions of participation, accuracy, support, and emotional intelligence of formative feedback experiences as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Instructional Strategies as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of formative feedback (Participation, Accurate, Support, and Emotional Intelligent) they receive and demographic data significantly predicted

teachers' sense of self-efficacy in Instructional Strategies. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model explained 7.0% of the variance ($R^2=.070$, $F(3, 105)=2.641$, $p=.053$). After entry of the formative feedback predictor variables at Step 2, the total variance explained by the model as a whole was 8.9% ($R^2=.089$, $F(7, 101)=1.405$, $p=.211$). As a result of $p > .05$, we fail to reject the null hypothesis and determine that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Instructional Strategies.

Table 27

Pearson Product Coefficient for the Formative Feedback Predictors and Teacher Efficacy in Instructional Strategies

	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change	p F Change
Model 1	.265	.070	.044	.940	.070	2.641	.053
Model 2	.298	.089	.026	.948	.019	.515	.725

Table 28

Summary for Multiple Regression for Formative Feedback Predictors and Teacher Efficacy in Instructional Strategies

	Unstandardized Coefficients		Standardized Coefficients		
	β	Std. Error	β	t	p
Model 1					
(Constant)	7.054	.441		15.977	.000
Teaching Assignment	-.020	.257	-.008	-.079	.937
Years Teaching in District	-.006	.076	-.009	-.082	.934
Degree Obtained	.405	.160	.269	2.527	.013
Model 2					
(Constant)	6.883	.725		9.489	.000
Teaching Assignment	.001	.262	.000	.003	.998
Years Teaching in District	.008	.077	.011	.102	.919
Degree Obtained	.381	.165	.253	2.304	.023
Formative – Participation	-.038	.135	-.041	-.281	.780
Formative – Accurate	.123	.171	.126	.715	.476
Formative – Support	.128	.206	.127	.623	.535
Formative – Emotional Intelligent	-.194	.176	-.189	-1.098	.275

Table 29

Analysis of Variance for Formative Feedback Predictors and Teacher Efficacy in Instructional Strategies

	Sum of Squares	df	Mean Square	F	p
Model 1					
Regression	6.994	3	2.331	2.641	.053
Residual	92.696	105	.883		
Total	99.690	108			
Model 2					
Regression	8.848	7	1.264	1.405	.211
Residual	90.842	101	.899		
Total	99.690	108			

HO₂: There is no statistically significant predictive relationship between teachers' perceptions of participation, accuracy, support, and emotional intelligence of formative feedback experiences as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Classroom Management as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of formative feedback (Participation, Accurate, Support, and Emotional Intelligent) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Classroom Management. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model

explained 6.9% of the variance ($R^2=.069$, $F(3, 105)=2.610$, $p=.055$). After entry of the formative feedback predictor variables at Step 2, the total variance explained by the model as a whole was 7.8% ($R^2=.078$, $F(7, 101)=1.226$, $p=.296$). As a result of $p > .05$, we fail to reject the null hypothesis and determine that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Classroom Management.

Table 30

Pearson Product Coefficient for the Formative Feedback Predictors and Teacher Efficacy in Classroom Management

	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change	p F Change
Model 1	.263	.069	.043	.98421	.069	2.610	.055
Model 2	.280	.078	.014	.99871	.009	.243	.913

Table 31

Summary for Multiple Regression for Formative Feedback Predictors and Teacher Efficacy in Classroom Management

	Unstandardized Coefficients		Standardized Coefficients		
	β	Std. Error	β	t	p
Model 1					
(Constant)	6.640	.462		14.358	.000
Teaching Assignment	.463	.270	.164	1.719	.089
Years Teaching in District	-.042	.079	-.057	-.534	.595
Degree Obtained	.357	.168	.226	2.125	.036
Model 2					
(Constant)	6.095	.764		7.980	.000
Teaching Assignment	.478	.276	.169	1.733	.086
Years Teaching in District	-.037	.081	-.050	-.453	.651
Degree Obtained	.371	.174	.235	2.129	.036
Formative – Participation	-.011	.142	-.012	-.080	.936
Formative – Accurate	.026	.181	.025	.144	.886
Formative – Support	-.003	.217	-.003	-.013	.990
Formative – Emotional Intelligent	.091	.186	.085	.492	.624

Table 32

Analysis of Variance for Formative Feedback Predictors and Teacher Efficacy in Classroom Management

	Sum of Squares	df	Mean Square	F	p
Model 1					
Regression	7.586	3	2.529	2.610	.055
Residual	101.711	105	.969		
Total	109.297	108			
Model 2					
Regression	8.557	7	1.222	1.226	.296
Residual	100.740	101	.997		
Total	109.297	108			

HO₃: There is no statistically significant predictive relationship between teachers' perceptions of participation, accuracy, support, and emotional intelligence of formative feedback experiences as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Student Engagement as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of formative feedback (Participation, Accurate, Support, and Emotional Intelligent) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Student Engagement. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model explained

6.3% of the variance ($R^2=.063$, $F(3, 105)=2.334$, $p=.078$). After entry of the formative feedback predictor variables at Step 2, the total variance explained by the model as a whole was 8.1% ($R^2=.081$, $F(7, 101)=1.226$, $p=.275$). As a result of $p > .05$, we fail to reject the null hypothesis and determine that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Student Engagement.

Table 33

Pearson Product Coefficient for the Formative Feedback Predictors and Teacher Efficacy in Student Engagement

	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change	p F Change
Model 1	.250	.063	.036	1.09969	.063	2.334	.078
Model 2	.284	.081	.017	1.11036	.018	.498	.737

Table 34

Summary for Multiple Regression for Formative Feedback Predictors and Teacher Efficacy in Student Engagement

	Unstandardized Coefficients		Standardized Coefficients		
	β	Std. Error	β	t	p
Model 1					
(Constant)	6.511	.517		12.600	.000
Teaching Assignment	.201	.301	.064	.669	.505
Years Teaching in District	-.099	.088	-.121	-1.119	.266
Degree Obtained	.475	.188	.270	2.532	.013
Model 2					
(Constant)	5.640	.849		6.642	.000
Teaching Assignment	.252	.307	.080	.823	.413
Years Teaching in District	-.083	.091	-.102	-.922	.359
Degree Obtained	.487	.194	.277	2.514	.013
Formative – Participation	.018	.158	.016	.111	.912
Formative – Accurate	.003	.201	.002	.014	.989
Formative – Support	.171	.241	.146	.710	.479
Formative – Emotional Intelligent	-.035	.207	-.029	-.170	.865

Table 35

Analysis of Variance for Formative Feedback Predictors and Teacher Efficacy in Student Engagement

	Sum of Squares	df	Mean Square	F	p
Model 1					
Regression	8.469	3	2.823	2.334	.078
Residual	126.978	105	1.209		
Total	135.446	108			
Model 2					
Regression	10.923	7	1.560	1.266	.275
Residual	124.523	101	1.233		
Total	135.446	108			

Analysis of Research Question 3

In order to answer the third research question: Is there a significant predictive relationship between characteristics of feedback from the evaluative model and teacher self-efficacy?, hierarchical multiple regression was performed for HO₄, HO₅, and HO₆.

HO₄: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is timely and ongoing, accurate, relevant, and emotionally intelligent from the evaluative model as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Instructional Strategies as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of evaluative feedback (Timely and Ongoing, Accurate, Relevant, and Emotional Intelligent) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Instructional Strategies. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model explained 7.0% of the variance ($R^2=.070$, $F(3, 105)=2.641$, $p=.053$). After entry of the evaluative feedback predictor variables at Step 2, the total variance explained by the model as a whole was 15.0% ($R^2=.150$, $F(7, 101)=2.552$, $p=.018$). As a result of $p < .05$, we reject the null hypothesis and determine that there is a significantly predictive relationship between the predictor variables and teachers' self-efficacy in Instructional Strategies. Furthermore, it was found in Table 37 that Emotional Intelligent Evaluative Feedback significantly predicted teacher self-efficacy in Instructional Strategies ($\beta=.429$, $p=.008$), and Degree Obtained significantly predicted teacher self-efficacy in Instructional Strategies ($\beta=.405$, $p=.013$).

Table 36

Pearson Product Coefficient for the Evaluative Feedback Predictors and Teacher Efficacy in Instructional Strategies

	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change	p F Change
Model 1	.265	.070	.044	.93959	.070	2.642	.053
Model 2	.388	.150	.091	.91580	.080	2.381	.056

Table 37

Summary for Multiple Regression for Evaluative Feedback Predictors and Teacher Efficacy in Instructional Strategies

	Unstandardized Coefficients		Standardized Coefficients		
	β	Std. Error	β	t	p
Model 1					
(Constant)	7.054	.441		15.977	.000
Teaching Assignment	-.020	.257	-.008	-.079	.937
Years Teaching in District	-.006	.076	-.009	-.082	.934
Degree Obtained	.405	.160	.269	2.527	.013
Model 2					
(Constant)	6.266	.658		9.529	.000
Teaching Assignment	-.054	.254	-.020	-.213	.832
Years Teaching in District	.034	.077	.049	.445	.657
Degree Obtained	.511	.165	.339	3.104	.002
Evaluative – Timely & Ongoing	-.156	.150	-.152	-1.038	.302
Evaluative – Accurate	-.134	.134	-.155	-1.004	.318
Evaluative – Relevant	-.021	.151	-.023	-.140	.889
Evaluative – Emotional Intelligent	.429	.158	.464	2.711	.008

Table 38

Analysis of Variance for Evaluative Feedback Predictors and Teacher Efficacy in Instructional Strategies

	Sum of Squares	df	Mean Square	F	p
Model 1					
Regression	6.994	3	2.331	2.641	.053
Residual	92.696	105	.883		
Total	99.690	108			
Model 2					
Regression	14.983	7	2.140	2.552	.018
Residual	84.707	101	.839		
Total	99.690	108			

HO₅: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is timely and ongoing, accurate, relevant, and emotionally intelligent from the evaluative model as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Classroom Management as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of evaluative feedback (Timely and Ongoing, Accurate, Relevant, and Emotional Intelligent) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Classroom Management. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model

explained 6.9% of the variance ($R^2=.069$, $F(3, 105)=2.610$, $p=.055$). After entry of the evaluative feedback predictor variables at Step 2, the total variance explained by the model as a whole was 19.7% ($R^2=.197$, $F(7, 101)=3.529$, $p=.002$). As a result of $p < .05$, we reject the null hypothesis and determine that there is a significantly predictive relationship between the predictor variables and teachers' self-efficacy in Classroom Management. The introduction of evaluative feedback predictor variables explained an additional 12.7% variance in teachers' self-efficacy in Classroom Management, after controlling for the demographic variables (R^2 Change=.127, $F(4, 101)=3.994$; $p=.005$).

Table 39

Pearson Product Coefficient for the Evaluative Feedback Predictors and Teacher Efficacy in Classroom Management

	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change	p F Change
Model 1	.263	.069	.043	.98421	.069	2.610	.055
Model 2	.443	.197	.141	.93247	.127	3.994	.005

Table 40

Summary for Multiple Regression for Evaluative Feedback Predictors and Teacher Efficacy in Classroom Management

	Unstandardized Coefficients		Standardized Coefficients		
	β	Std. Error	β	t	p
Model 1					
(Constant)	6.640	.462		14.358	.000
Teaching Assignment	.463	.270	.164	1.719	.089
Years Teaching in District	-.042	.079	-.057	-.534	.595
Degree Obtained	.357	.168	.226	2.125	.036
Model 2					
(Constant)	5.247	.670		7.836	.000
Teaching Assignment	.323	.259	.114	1.247	.215
Years Teaching in District	.051	.078	.069	.644	.521
Degree Obtained	.317	.168	.201	1.891	.061
Evaluative – Timely & Ongoing	-.077	.153	-.071	-.502	.617
Evaluative – Accurate	.257	.136	.284	1.887	.062
Evaluative – Relevant	-.167	.154	-.176	-1.091	.278
Evaluative – Emotional Intelligent	.271	.161	.280	1.682	.096

Table 41

Analysis of Variance for Evaluative Feedback Predictors and Teacher Efficacy in Classroom Management

	Sum of Squares	df	Mean Square	F	p
Model 1					
Regression	7.586	3	2.529	2.610	.055
Residual	101.711	105	.969		
Total	109.297	108			
Model 2					
Regression	21.478	7	3.068	3.529	.002
Residual	87.819	101	.869		
Total	109.297	108			

HO₆: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is timely and ongoing, accurate, relevant, and emotionally intelligent from the evaluative model as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Student Engagement as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of evaluative feedback (Timely and Ongoing, Accurate, Relevant, and Emotional Intelligent) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Student Engagement. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model

explained 6.3% of the variance ($R^2=.063$, $F(3, 105)=2.334$, $p=.078$). After entry of the evaluative feedback predictor variables at Step 2, the total variance explained by the model as a whole was 10.3% ($R^2=.103$, $F(7, 101)=1.652$, $p=.130$). As a result of $p > .05$, we fail to reject the null hypothesis and determine that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Student Engagement.

Table 42

Pearson Product Coefficient for the Evaluative Feedback Predictors and Teacher Efficacy in Student Engagement

	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change	p F Change
Model 1	.250	.063	.036	1.09969	.063	2.334	.078
Model 2	.320	.103	.041	1.09695	.040	1.131	.346

Table 43

Summary for Multiple Regression for Evaluative Feedback Predictors and Teacher Efficacy in Student Engagement

	Unstandardized Coefficients		Standardized Coefficients		
	β	Std. Error	β	t	p
Model 1					
(Constant)	6.511	.517		12.600	.000
Teaching Assignment	.201	.301	.064	.669	.505
Years Teaching in District	-.099	.088	-.121	-1.119	.266
Degree Obtained	.475	.188	.270	2.532	.013
Model 2					
(Constant)	5.530	.788		7.020	.000
Teaching Assignment	.135	.305	.043	.442	.659
Years Teaching in District	-.042	.092	-.051	-.453	.651
Degree Obtained	.458	.197	.261	2.325	.022
Evaluative – Timely & Ongoing	-.084	.180	-.070	-.467	.641
Evaluative – Accurate	.146	.160	.145	.908	.366
Evaluative – Relevant	.003	.181	.003	.015	.988
Evaluative – Emotional Intelligent	.134	.190	.124	.705	.482

Table 44

Analysis of Variance for Evaluative Feedback Predictors and Teacher Efficacy in Student Engagement

	Sum of Squares	df	Mean Square	F	p
Model 1					
Regression	8.469	3	2.823	2.334	.078
Residual	126.978	105	1.209		
Total	135.446	108			
Model 2					
Regression	13.912	7	1.987	1.652	.130
Residual	121.534	101	1.203		
Total	135.446	108			

Analysis of Research Question 4

In order to answer the fourth research question: Is there a significant predictive relationship between characteristics of the total feedback teachers receive and teacher self-efficacy?, hierarchical multiple regression was performed for HO₇, HO₈, and HO₉.

HO₇: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is coordinated and aligned from the total feedback they receive as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Instructional Strategies as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of the total feedback (Coordinated and Aligned) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Instructional Strategies. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model explained 7.0% of the variance ($R^2=.070$, $F(3, 105)=2.641$, $p=.053$). After entry of the total feedback predictor variables at Step 2, the total variance explained by the model as a whole was 8.3% ($R^2=.083$, $F(5, 103)=1.872$, $p=.106$). As a result of $p > .05$, we fail to reject the null hypothesis and determine that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Instructional Strategies.

Table 45

Pearson Product Coefficient for the Total Feedback Predictors and Teacher Efficacy in Instructional Strategies

	R	R ²	Adjusted R ²	Std. Error of the Estimate	R ² Change	F Change	p F Change
Model 1	.265	.070	.044	.93959	.070	2.641	.053
Model 2	.289	.083	.039	.94193	.013	.739	.480

Table 46

Summary for Multiple Regression for Total Feedback Predictors and Teacher Efficacy in Instructional Strategies

	Unstandardized Coefficients		Standardized Coefficients		
	β	Std. Error	β	t	p
Model 1					
(Constant)	7.054	.441		15.977	.000
Teaching Assignment	-.020	.257	-.008	-.079	.937
Years Teaching in District	-.006	.076	-.009	-.082	.934
Degree Obtained	.405	.160	.269	2.527	.013
Model 2					
(Constant)	7.034	.613		11.467	.000
Teaching Assignment	-.073	.262	-.027	-.280	.780
Years Teaching in District	-.005	.078	-.007	-.067	.946
Degree Obtained	.393	.161	.261	2.442	.016
Total – Coordinated	-.117	.109	-.149	-1.076	.284
Total – Aligned	.138	.119	.161	1.160	.249

Table 47

Analysis of Variance for Total Feedback Predictors and Teacher Efficacy in Instructional Strategies

	Sum of Squares	df	Mean Square	F	p
Model 1					
Regression	6.994	3	2.331	2.641	.053
Residual	92.696	105	.883		
Total	99.690	108			
Model 2					
Regression	8.305	5	1.661	1.872	.106
Residual	91.385	103	.887		
Total	99.690	108			

HO₈: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is coordinated and aligned from the total feedback they receive as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Classroom Management as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of the total feedback (Coordinated and Aligned) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Classroom Management. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model explained 6.9% of the variance ($R^2=.069$,

$F(3, 105)=2.610, p=.055$). After entry of the total feedback predictor variables at Step 2, the total variance explained by the model as a whole was 11.9% ($R^2=.119, F(5, 103)=2.794, p=.021$). As a result of $p < .05$, we reject the null hypothesis and determine that there is a significantly predictive relationship between the predictor variables and teachers' self-efficacy in Classroom Management. Furthermore, it was found in Table 49 that Aligned Total Feedback significantly predicted teacher self-efficacy in Classroom Management ($\beta=.270, p=.029$), and Degree Obtained significantly predicted teacher self-efficacy in Classroom Management ($\beta=.344, p=.040$).

Table 48

Pearson Product Coefficient for the Total Feedback Predictors and Teacher Efficacy in Classroom Management

	R	R ²	Adjusted R ²	Std. Error of the Estimate	R ² Change	F Change	p F Change
Model 1	.263	.069	.043	.98421	.069	2.610	.055
Model 2	.346	.119	.077	.96665	.050	2.925	.058

Table 49

Summary for Multiple Regression for Total Feedback Predictors and Teacher Efficacy in Classroom Management

	Unstandardized Coefficients		Standardized Coefficients		
	β	Std. Error	β	t	p
Model 1					
(Constant)	6.640	.462		14.358	.000
Teaching Assignment	.463	.270	.164	1.719	.089
Years Teaching in District	-.042	.079	-.057	-.534	.595
Degree Obtained	.357	.168	.226	2.125	.036
Model 2					
(Constant)	5.922	.630		9.406	.000
Teaching Assignment	.362	.269	.128	1.347	.181
Years Teaching in District	-.010	.080	-.014	-.125	.901
Degree Obtained	.344	.165	.218	2.079	.040
Total – Coordinated	-.099	.111	-.121	-.887	.377
Total – Aligned	.270	.122	.302	2.220	.029

Table 50

Analysis of Variance for Total Feedback Predictors and Teacher Efficacy in Classroom Management

	Sum of Squares	df	Mean Square	F	p
Model 1					
Regression	7.586	3	2.529	2.610	.055
Residual	101.711	105	.969		
Total	109.297	108			
Model 2					
Regression	13.052	5	2.610	2.794	.021
Residual	96.245	103	.934		
Total	109.297	108			

HO₉: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is coordinated and aligned from the total feedback they receive as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Student Engagement as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of the total feedback (Coordinated and Aligned) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Student Engagement. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model explained 6.3% of the variance ($R^2=.063$,

$F(3, 105)=2.334, p=.078$). After entry of the total feedback predictor variables at Step 2, the total variance explained by the model as a whole was 7.5% ($R^2=.075, F(5, 103)=1.663, p=.150$). As a result of $p > .05$, we fail to reject the null hypothesis and determine that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Student Engagement.

Table 51

Pearson Product Coefficient for the Total Feedback Predictors and Teacher Efficacy in Student Engagement

	R	R ²	Adjusted R ²	Std. Error of the Estimate	R ² Change	F Change	p F Change
Model 1	.250	.063	.036	1.09969	.063	2.334	.078
Model 2	.273	.075	.030	1.10309	.012	.677	.510

Table 52

Summary for Multiple Regression for Total Feedback Predictors and Teacher Efficacy in Student Engagement

	Unstandardized Coefficients		Standardized Coefficients		p
	β	Std. Error	β	t	
Model 1					
(Constant)	6.511	.517		12.600	.000
Teaching Assignment	.201	.301	.064	.669	.505
Years Teaching in District	-.099	.088	-.121	-1.119	.266
Degree Obtained	.475	.188	.270	2.532	.013
Model 2					
(Constant)	6.079	.718		8.462	.000
Teaching Assignment	.148	.307	.047	.484	.630
Years Teaching in District	-.080	.091	-.097	-.870	.386
Degree Obtained	.469	.189	.267	2.486	.015
Total – Coordinated	-.041	.127	-.045	-.326	.745
Total – Aligned	.142	.139	.143	1.021	.309

Table 53

Analysis of Variance for Total Feedback Predictors and Teacher Efficacy in Student Engagement

	Sum of Squares	df	Mean Square	F	p
Model 1					
Regression	8.469	3	2.823	2.334	.078
Residual	126.978	105	1.209		
Total	135.446	108			
Model 2					
Regression	10.116	5	2.023	1.663	.150
Residual	125.330	103	1.217		
Total	135.446	108			

Analysis of Research Question 5

In order to answer the fifth research question: Are there predominant themes in teachers' perceptions of feedback that relate to teacher self-efficacy?, open-ended questions were included in the survey instrument to gain qualitative information regarding the relationship between teachers' perceptions of the feedback they receive and their teaching efficacy. The open-ended item that corresponded to teachers' perceptions of evaluative feedback was, "Would you please describe the types of feedback you received from your principal(s) this year that helped you grow more confident in your ability help all kids learn? Please consider the following: How was some information provided from the principal(s) about your teaching more valuable to you than other

information? What do you see as the primary characteristics of this feedback from the principal(s) that made it useful to you this year?” Among all responses, six categories emerged after multiple read-throughs: Emotional Intelligent, Timely and Ongoing, Accurate, Relevant and Specific, Meeting and Dialogue, and Praise and Affirmation. The responses were coded by category, and both positive and negative statements are listed here:

Emotional Intelligent

“The primary characteristic of this type of feedback would be that we have a positive, trusting relationship and speak professionally to each other in a natural way.”

“My principal made me realize that I am very focused on planning lessons.”

“Feedback is fair, prompt, respectful, and easy to understand.”

“This principal has very different relationships with different people in our school.”

“His comments this year made me feel extremely valued.”

“I trust that our principal knows that we are doing our best.”

“She makes it very easy to understand that any suggestions that I receive from her are valuable.”

“He helps me know what others see when they come into my room and I am teaching.”

“I felt he scored my observations according to his need to have scores in ranges of above average, average, and areas to work on.”

“My strengths were not emphasized or even seemingly understood.”

“My principal is easy to talk with.”

“It hasn't been a reflective tool that allows for me as a professional to question my methods or think of new strategies suggested by my principal, because there weren't any.”

“It just makes everyone nervous about when the 30 seconds will occur. Would anyone do this to a doctor, nurse, or anyone else in any profession?”

“My principal does not jump to conclusions if she is in my classroom and sees something interesting happening. She has often asked me questions in my evaluations, so that I am able to explain what the students were doing and why. I appreciate her openness.”

“I saw it as a demeaning and threatening way to assess my skills.”

“Perhaps, if the observation comments could occasionally begin on a positive note, I might feel less anxious to receive them. I feel like I am being judged, rather than supported.”

“Open door policy that allows free movement of ideas between administrator and teacher.”

“My administrator has been very open and approachable when I wanted to discuss an evaluation.”

“The feedback usually includes strengths my principal observed, as well as reflection questions about how I can improve.”

“She grounds me and shows me examples of things I've done.”

“If he suggests something, it is always done in a nonthreatening way.”

“She always asks us to reflect on a certain part of the lesson, this too is helpful.”

“Overall, the comments have been helpful in terms of a reflection piece for me.”

“The questions often make me feel like I need to justify or explain what I'm doing.”

“I think principals need to understand that just because they are the principal does not make them experts in every field. They should listen to the advice of their more experienced teachers. This is not happening.”

“As they are used, I feel walkthroughs have become threatening and non-supportive in nature. It has come to be known as ‘catch them (teachers) doing it wrong.’”

Timely and Ongoing

“Feedback is prompt.”

“My principal provides me personally with very little feedback.”

“Comments have been made on my many classroom observations.”

“I do like the way the software keeps track of how many times certain things are observed.”

“Informal feedback in the form of a note or quick comment is more timely.”

“Comments are made in the form of observations. These observations make me aware of what is going on in the classroom.”

“An ongoing recap of what was seen in the classroom.”

“The electronic notification gave me immediate feedback.”

“The feedback causes personal and professional reflection upon the teaching strategies occurring on a daily basis.”

“It was helpful to see his perception of what was going on when I was questioning the students, trying new activities or strategies, and conducting lessons.”

“Evaluations from Standards for Success, and I feel that they are very beneficial in understanding what my principal perceives is going on in my classroom.”

“The new method of feedback (daily walkthroughs) provides some ways to show what is happening in my classroom.”

“The feedback I have received from my principal this year has been very minimal.”

“The main way this information was more useful this year than in the past, is the frequency with which administrators visited my classroom.”

“I do not feel that I received feedback this year that has led me to grow professionally. I very rarely received comments.”

“I think the ‘snapshot’ approach to evaluation and assessment of teacher professionals is useless.”

“I received feedback via the computer generated walk-thru observations that he made (25) as of this week.”

“They have been very thorough in consistently coming into the classroom and providing feedback in a timely manner.”

“I liked the quick response from the various walkthroughs.”

“I appreciated when my principal left me comments at the end of the checklist.”

“The immediate feedback provided through the SFS system is effective and valuable because it comes soon after the evaluation when the lesson and the observation are still fresh in my mind.”

“The iPad drop-in evaluations usually have a comment and several indicators marked, which let me know what he saw.”

“The computer responses of checking and observing in the room are good too. It shows what areas I am hitting most.”

“I like the instant feedback from an observation.”

“No feedback except a little feedback going over the school evaluations we had to do early in the school year.”

“The walk through observations provided feedback as to what the students were doing and what I was doing.”

“Communication through the quick walkthroughs has provided me confidence in what I am doing.”

“The frequent visits were helpful when written feedback was provided.”

Accurate

“My principal made me realize that I did have very involved plans.”

“There were times that I hoped things would be noticed that weren't.”

“He sometimes misses things that I am doing that could have been marked.”

“I find it extremely discouraging that my principal does not seem to notice positive situations I have worked hard to create.”

“There are often best practices that she does not acknowledge which are clearly taking place in the classroom at that time.”

“I feel like the feedback from principals was a very small portion of what was really going on.”

“I no longer feel confident in my ability to reach students, because my most effective teaching style does not match observations.”

“It wasn't as helpful when I did a new lesson that I was excited about, and he observed for 15 - 20 minutes, but the only comments he made were about the noisy behavior of the kids at the very end of a math class prior to this activity.”

“At times I feel that the feedback is not an accurate look at what is happening in my room because the "before and after" moments are not observed.”

“I might have had a terrific lesson with many open-ended activities for students. But then, the principal comes in when a follow-up worksheet is given. All that the principal sees and writes is "worksheet" and is off.”

“Observations are accurate.”

“Because the principal didn't observe the previous lessons, she didn't understand the place in which I expected student understanding to be.”

“Although the snapshots can be somewhat accurate at the time, there is still so much more to the classroom environment, atmosphere, tone, attitude, and student/teacher performance.”

Relevant and Specific

“My evaluations have no written feedback or reflective questions for me to improve my teaching.”

“My principal gave me opportunities for professional growth. Several of these opportunities challenged me to try different teaching techniques and activities in the classroom.”

“We talked about how to move my students even farther than I normally do.”

“The most valuable information I gain from my principal happens when we discuss my goals.”

“I also received feedback in an initial meeting to set my year goal and in a midterm evaluation meeting. My goal was related to transitions, but the principal has not been able to observe me in this part on my teaching.”

“At times, I'd like a bit more direction on what is seen that is good and what needs more attention.”

“Constructive criticism that offers solutions to problems or support in difficult situations is more effective than criticism for criticism's sake.”

“Suggestions for improvement.”

“My principal constantly shares ideas and strategies to help me with my students who are low achievers and have behavior issues.”

“I don't feel as if the feedback has been specific enough to be of much help to me in the classroom.”

“My principal has been very helpful in providing feedback and guidance in the area of classroom management.”

“I have been very disappointed in the overall feedback I have received from principals in this district. There is little substance to it and it generally lacks advice about what the next step in improvement is.”

“I was given help in the area of reading with suggestions and ideas and that helped my focus and made a difference in my reading instruction.”

“I like to hear ideas of how I can improve.”

“This type of feedback doesn't pose new ideas or suggestions.”

“My principal has many years of experience to draw from and gives useful feedback I can apply in the classroom.”

“Explaining what can be done better.”

“Feedback is subject-rich and focused on the issues at hand.”

“When I was given a 3 on an area, I was also able to see where I was at and what needed to change to move up to a 4.”

“My principal also offers suggestions for improvement.”

“This year it was nice to receive information that related to standards.”

“Comments from the walk-throughs give us very little feedback about our teaching.”

“We talked about ideas to make my goal for myself happen.”

“I am not sure that their understanding of what happens daily in a classroom environment is relevant for today’s teacher and learner.”

“At these times we can discuss issues regarding to my teaching and how they fit with the overall goal of the school and district.”

“Helped me to set up the correct framework for the reading block by assigning the Literacy Coach to my room to model and help me establish what needed to be done.”

“As a first year teacher this was very disappointing. I would expect a principal to help set out a plan for a teacher to achieve goals that need to be worked on.”

“Goal planning was the most helpful.”

Meeting and Dialogue

“She met with me and we went over my plans.”

“At the beginning of the school year, my principal and I met. This was the first time that I have ever received his honest and pointed comments about my teaching.”

“Oral discussion and face to face discussion is most beneficial.”

“The most valuable information I gain from my principal happens when we meet.”

“Formal evaluations are not threatening, but instead are a platform for conversations that led to better induction overall.”

“I thoroughly enjoy brainstorming with my principal.”

“My principal then later in the year asked how it was working and we were able to have a discussion.”

“I still prefer conversation.”

“Mid-year Evaluation meeting to go over how I would rate myself in each domain and how the principals rated me - beneficial to compare ideas.”

“I know my administrator values me as a teacher because they tell me in conversations we have together.”

“The one to one discussion is always helpful.”

“She was willing to sit down with me to discuss areas of concern I had and she offered support.”

“Multiple 1-1 meetings concerning students’ academic and behavioral needs.”

“They provided a mid-year time to sit down and discuss.”

“Meeting face to face with my principal to talk about the evaluation mid-year was the most valuable feedback to me.”

“I appreciated being able to talk in person and not just the computer responses.”

“Direct meetings with my principal have also proved valuable.”

Praise and Affirmation

“I enjoy and appreciate quick, verbal praises.”

“Positive comments are nice to receive.”

“Helps me understand and validate my strengths.”

“He is always positive.”

“I think the feedback confirmed that I am a good teacher.”

“The positive feedback was more helpful because it was uplifting and motivational.”

“The best feedback has been positive recognition of the work that I am doing and what the children are accomplishing.”

“The positives of the visit.”

“Positive affirmation of things that I do well gives me confidence that I am doing a good job and motivates me to continue doing those things.”

“The feedback was given in a positive way and I was also given praise and encouragement along the way.”

“Positive remarks I receive give me motivation to keep performing well.”

“He takes the time to notice the things that are going well.”

“I received positive feedback from my principal.”

“My principal provides positive feedback.”

“There has been little positive feedback from the principal.”

“The feedback usually includes strengths and positives my principal observed.”

“My principal gave positive feedback, which reinforced the great things that I was already doing and made me more confident.”

“He also occasionally may leave a note in my mailbox with encouraging comments about something he saw as he observed in my class room or hallway. Whatever he comments on, his comments are always positive and constructive.”

“I get very positive feedback.”

“I received notes that were positive affirmations of my teaching.”

The open-ended item that corresponded to teachers' perceptions of formative feedback experiences was, “Would you please describe the types of experiences you had with your literacy coach and/or other teachers that you found most helped you improve student learning this year? Please consider the following: How were some encounters with the literacy coach and/or other teachers more valuable to you than other encounters? What do you see as the primary characteristics of these encounters that made them useful to you this year?” Among all responses, six categories emerged after multiple read-throughs: Interactions with Literacy Coach, Support from Literacy Coach, Emotional Intelligence of Literacy Coach, Collaboration with Colleagues, Support from Colleagues, and Emotional Intelligence of Colleagues. The responses were coded by category, and both positive and negative statements are listed here:

Interactions with Literacy Coach

“I enjoy the modeling and team teaching from our literacy coach.”

“My literacy coach has spent time in my room observing students and my teaching.”

“The most valuable experience is when my literacy coach comes in and models lessons for me.”

“There has not been a classroom visit once during the year to observe and I am not approached about the progress of my students nor questioned about needing assistance.”

“My literacy coach has never watched me teach.”

“I appreciated the Reading book we are going through and discussing.”

“Authentic conversations/collaborations have been helpful.”

“I have worked with my literacy coach in the following ways: whole staff discussion, small group book club discussion to advance my thinking, and ongoing visits to my classroom to observe for planning future professional development.”

“I do not have much interaction with our literacy coach. She has never been in to see me teach.”

“One to one encounters were much more valuable than whole staff encounters which often turn to complaining about too many changes.”

“She has also given me feedback on my students and on my teaching after observing.”

“I didn't experience much contact with our literacy coach this year.”

“My literacy coach modeled my writer's and reader's workshop at the beginning of the year. This was a great help in understanding how to manage my time and classroom.”

“I have not had many experiences with the literacy coach this year. I feel like there has been very little coaching this year.”

“The modeling done by the literacy coach has been most beneficial.”

“My literacy coach has been in to help me with guided reading groups and to demonstrate how to effectively run a guided reading group.”

“I have worked with her and a small group of teachers doing a book study.”

“I learn best through modeling and follow up discussions.”

“My literacy coach has not been in my room this school year.”

“She has observed me teaching guided reading and she has been in my class often.”

“We have co-taught an entire unit this year.”

“She led a discussion of a book with us that was valuable for my teaching.”

“Feedback from observation of my lessons.”

“The literacy coach did not come into my room this year.”

“Literacy coach is not involved in observations or feedback, she is seldom in the building and often does not meet with RTI students due to "meetings" away from the building.”

“The literacy coach provides us with a lot of data and material to read for discussions. Other than that there has not been much contact with the literacy coach.”

“Having meetings where the literacy coach shares best practices has been helpful as well as having her model lessons in my classroom.”

“She is usually available to meet with answers to questions.”

“The literacy coach and other grade level teachers in our building meet often to discuss student learning strategies.”

“The literacy coach is in my room to model teaching and observe my teaching with the goal of improving my teaching so that students have a greater success.”

“The model teaching has proved the most beneficial.”

“Appreciated when literacy coach modeled strategies and worked with students during time in my classroom.”

“The literacy coach came into my room for 6 weeks and modeled the reading block.”

Support from Literacy Coach

“I am able to grow professionally from the partnership I have with our literacy coach.”

“We discuss an area of concern that I have and then come up with ways to improve.”

“Help me eliminate some of my workload for literacy instruction.”

“The literacy coach has helped with students that struggle.”

“The literacy coach has provided resources to assist with teaching reading and writing.”

“The literacy goal with the literacy coach was helpful. It is helpful to have someone help you be accountable and to also provide support for the things you want to learn or improve on.”

“Our literacy coach has not always been as supportive, however.”

“She is extremely helpful to our classroom and in guidance with our lower readers.”

“Our literacy coach is very knowledgeable, helpful, and works very hard to meet both the needs of the staff as well as the students.”

“I see my literacy coach as a resource.”

“My literacy coach was by far the most helpful. She gave me immediate ideas and feedback.”

“Brainstorming instructional and assessment strategies with her.”

“She is able to make a ton of connections for our kids through incorporating the special area teachers into the classroom and things they are learning in the classroom into the special areas. It is bridging a gap that was there and it is amazing to see the connections come together for the teachers and their students.”

“She has helped to develop a writing continuum with us to help us focus instruction for our students.”

“She provides me with new information when I ask questions.”

“It seems like we have been given a lot of information all at once. I find her saying to us, as a group, “What do you think?” and then we are told what we aren't doing correctly! It is confusing.”

“I find that our literacy coach is very supportive and always willing to give feedback and suggestions.”

“She was a great help in understanding how to manage my time and classroom.”

“The coach will search for materials in a timely fashion and discuss the direction of teaching with the new materials giving support to the classroom teacher.”

“I was given a lot of assistance at the start of the year from the literacy coach.”

“She has also helped me with ideas on how to push struggling readers and their abilities have grown.”

“Our literacy coach has worked with me on pointing me in the right direction for various things such as word work, reading strategy mini-lessons, etc.”

“I do not get support from the literacy coach because I have a special education program.”

“She always has tips, suggestions, and materials that are helpful.”

“She has been very supportive and I have learned a lot from her.”

“If I am searching for a resource, our literacy coach is very willing to share what she has...or to go find other resources for us!”

“Teaching techniques are discussed frequently but the encounter I find most valuable usually centers around helping a particular child.”

“My literacy coach has been actively engaged in my literacy curriculum.”

“When assessing and choosing the best program for a child's education the literacy coach helps provide feedback expertise in what areas of improvement the child has.”

“I went to her with concerns but didn't feel was given much added supplemental resources.”

“None of which have affected my student learning, one way or the other, this year.”

“Our literacy coach is open to helping in many ways. It is very helpful when she also does a backup running record to help determine the exact reading level for a child and her perspective on their reading progress.”

“My literacy coach asks me questions to help me better understand what I am doing that is working and where I could improve.”

“She gave me suggestions on how I could improve my teaching to better gain student learning. I found this very helpful in reaching my goals as a teacher.”

“My literacy coach is so knowledgeable and professional. She is always ready to jump in and help or gather some resources.”

“The literacy coach shares best practices and that has been helpful.”

“The literacy coach has offered information in staff and grade level meetings that have been very valuable to our overall teaching of reading.”

“Our literacy specialist is one of the best things to happen to our school.”

“The literacy coach discusses student learning strategies.”

“Our literacy coach helps us tremendously with knowing what to try next.”

“She has shown us how to get lessons from the common core, follow the framework, construct mini-lessons, reading group lessons, and exit slips. She has worked hard to improve teachers classrooms.

“The literacy coach never gives teachers specific feedback, but asks us how we think it's going. I am not a proponent of this position.”

“In our discussions we can focus on what I need.”

“The literacy coach has supported me in goals throughout the year.”

“Our literacy coach meets with us regularly and is always available to work with us. It is nice having an additional resource.”

“The coach has always provided me with good information from a best practices stand point. This has helped me to see the importance of the information and also makes me more willing to implement.”

“Appreciated when we met with literacy coach to plan and implement school goals within our classroom as related to literacy.”

“I was able to set the correct framework for my classroom.”

“I really enjoyed the sharing of professional material with my literacy coach. She always had material to share as I worked with students.”

“When the coach has had experience with the children you are needing help with, her ideas and feedback become very helpful.”

“My experience is that when you disagree with anyone in the building that has an administrative capacity you could be considered not being a team player.”

“She was always good to talk to here and there for specific student concerns.”

Emotional Intelligence of Literacy Coach

“A friendly, trusting relationship allows us to share and speak to each other in a natural, helpful way.”

“Our literacy coach has had very little experience in first grade so she's finding that what she thinks will work doesn't always work, but I appreciate the fact that she admits that we went through the process and tried it and now we need to revise again.”

“The literacy coach provided praise of my reading workshop and made me feel like I am on the right track and gave me confidence to keep it up and to keep growing and learning.”

“Her guidance without judgment has helped me to improve student learning.”

“She also complemented me when I did well and gave my good strategies on how to help my struggling students.”

“My literacy coach was very encouraging as I tried new things.”

“The literacy coach is open-minded to various teaching styles thereby allowing the classroom teacher to develop comfortably.”

“She is helpful because she has been a teacher and she can relate to me and my job.”

“I feel comfortable taking a question to her and allowing her to process through the situation with me.”

“She is not very approachable and is rude to fellow colleagues.”

“She is not very approachable.”

“My literacy coach asks me questions to help me better understand what I am doing that is working and where I could improve.”

“She is truly a team player and makes you feel comfortable about asking her for support. Any comments or help are always done with a supportive non-threatening attitude.”

“She is always willing to listen.”

“She has worked hard to improve teachers classrooms and also build them up.”

“Our literacy coach comes off as very condescending and there is a tight relationship between her and the principal that is not professional.”

“Her positive attitude toward what I do is appreciated.”

Collaboration with Colleagues

“My most beneficial encounters are with my teammates, when we have uninterrupted, scheduled time to discuss, plan, and brainstorm our current grade level happenings.”

“I believe that change happens from the bottom up. So, the small group book study with other teachers that I am in has been the most helpful in improving my teaching.”

“I value my team and garner great insight from our meetings/time together.”

“Authentic conversations/collaborations have been helpful.”

“The most valuable experiences have come when meeting with my team members.”

“Time for grade level planning and collaboration is the most beneficial.”

“I wish we had more collaboration time to truly collaborate with our peers because they are in "the trenches" with us!”

“Meetings with my team members are far more valuable than those with the literacy coach.”

“I collaborate with teachers on a daily basis in my building who have my special education students in their room.”

“I work very closely with one of my grade level teammates to plan instruction.”

“Communication across grade levels and special areas.”

“There is too much information to share and not enough time to share, talk and grow. We need to know each other's strengths and passions. No teacher can live behind cinder brick walls. Not an island.”

“I interact with my grade level team every single day.”

“The sharing of ideas that started conversations were the most helpful.”

“Regarding other teachers, I find our discussions at lunch and team meetings to be productive and helpful!”

“Being able to discuss issues concerning students, instructional strategies, and planning with colleagues is most helpful.”

“The majority of the teachers in our building collaborate well.”

“Other teachers brainstorming together.”

“I have valuable encounters with my team before school and after school when we collaborate.”

“The most useful professional development that I receive comes from my own team who I meet with in collaboration every day.”

“Conversations and planning with my colleagues.”

“I have had a few opportunities to observe other teachers in other grade levels teaching. I think that is incredibly useful.”

“Open collaboration, appropriate use of time when interacting with teaching staff.”

“Discussions with my grade level team.”

“Colleagues have been very helpful as we collaborate.”

“I enjoy having time to collaborate with other teachers.”

“Grade level teachers in our building meet often.”

“Just being able to talk to them about what we are seeing in class.”

“Team members were very helpful when planning student learning activities.”

“I collaborate with my team every day and have received a lot of useful information from them.”

Support from Colleagues

“We have tried MANY new things this year, without them I don't know if I could have done it.”

“Everyone in my building is supportive.”

“This sharing of information, ideas and support has continued throughout the school year. I am sure my teammates will continue to share and support my teaching over the next few years as well.”

“Other teachers in my building are extremely supportive.”

“Our teachers are extremely supportive of one another.”

“We constantly share ideas and strategies to help our students have a consistent experience from one room to another.”

“My colleagues give me many ideas on how to try it a different way to get a better result.”

“Other teachers push my thinking to try new ideas.”

“I've seen all of us stretch and grow together more than any year in the past.”

“My team is very supportive and understands the challenges that are faced in our grade level.”

“My colleagues are the best and I appreciate all of the things and help they give me.”

“The majority of the teachers in our building work well to help and support each other.”

“My fellow teachers are very familiar with the children in my classroom and are always willing to give feedback as I am for them.”

“We offer each other ideas and support for various teaching and discipline situations.”

“We have truly depended on each other this year! My kindergarten colleagues are the ones who most helpful in improving/affecting student learning.”

“My team is always available to answer my questions, share advice, and even provide some extra resources for instruction that I do not have in my classroom yet.”

“They know my students as well as my teaching style the best, and gave me valuable suggestions when I needed them.”

“We have very open lines of communication and a great understanding of each class situation. I think this understanding causes us to have a greater ability to provide helpful and relevant feedback.”

“Team members also working together to implement activities for students at a variety of learning levels.”

“They have been extremely encouraging and helpful to me getting through this first year.”

“I do however, get a lot of support from other teachers especially the other special area staff.”

“They are able to provide another view with which to gather information. They can provide ideas that I can't always think up on my own.”

Emotional Intelligence of Colleagues

“Our staff has excellent rapport.”

“My colleagues always offer kind/encouraging feedback.”

“Some teachers see teaching as a competition and always carry an attitude that they are the “expert” and make other teachers feel like they do not know what they are doing.”

“We support each other emotionally. We are like family.”

The open-ended item that corresponded to teachers' perceptions of total feedback was, “Would you please describe how your principal(s), literacy coach, and colleagues work together for school improvement? What do you see as the primary characteristics of this teamwork that supports your ability to produce student achievement?” Among all responses, four categories emerged after multiple read-throughs: Structured Coordination, Sense of Coordination, Alignment, and School Climate. The responses were coded by category, and both positive and negative statements are listed here:

Structured Coordination

“We all meet to discuss student data and ways to improve.”

“Through a combination of staff meetings, committee meetings, and informal conversations we all work together for school improvement.”

“The principal is not often available to meet to answer questions or talk with as is the literacy coach.”

“Data review and cross-grade discussion is beneficial.”

“I am not sure because I haven't observed them working together at our primary level.”

“There are several committees our school has created that allow the professionals to meet bi-weekly.”

“Meeting as school improvement teams and then reporting back to grade level teams allows us to discuss school goals and how to accomplish them.”

“I know they work together often to craft staff professional development times as well as other meetings.”

“The literacy coach works with the literacy school improvement team.”

“Staff in our building collaborates on a daily basis.”

“Well for our school improvement plan we have committees that meet twice a month to improve lang. arts, math, science, technology, and the climate in our building.”

“We need team structure with the time to collaborate and build responsible, independent, problem-finding, solution-creating students.”

“The some of the most powerful professional development is when I can see expectations different grades have for writing narrative or essays and it helps me align my instruction.”

“My colleagues, principal, and literacy coach have frequent collaboration meetings.”

“I feel we try very hard in our individual grade level but we never come together as a whole community. We need to work more between grade levels.”

“We have a team, which I am a member of, the School Improvement Team. We collaborate several times a month with reps from the entire school.”

“They meet a lot behind closed doors with several selected teachers who seem also to be part of the in group. They discuss school improvement by looking at data of tests.”

“We have a school improvement team that works with committees to coordinate curriculum.”

“We have a lot of time for collaboration. We cross collaborate, as well, which has been helpful.”

“We have very good committees in place in our building that support good teaching.”

“Changes that are implemented are shared during SIT meetings or at staff meetings.”

“Those people meet together frequently to discuss what is going on and what can be done differently.”

“We work together through data study, book readings, research, and keeping an open mind for what is best for kids.”

“We are consistently meeting to see where students are, what they need, and how to get there.”

“Our entire school staff does an excellent job of tracking student growth and helping to provide interventions to these students.”

“The three groups listed above have just never met at the same time.”

“Several times we met as a staff after reading a given book on our own, broke into small groups for a guided discussion, and then came back together to share ideas. This was very beneficial.”

“We are all scheduled to the hilt on committees and subcommittees. I'm not sure any of these meetings help produce student achievement.”

“As teachers, we must have enough time to collaborate with one another to explore a wide range of materials and must have enough available materials.”

“We have school improvement teams that meet every week to discuss various topics to help improve the environment of the school. It does seem like the teacher's input is somewhat devalued.”

“Lots and lots of collaboration.”

“I do not think this happens enough.”

“We work toward together through collaboration. That constant discussion moves our instruction forward.”

Sense of Coordination

“We willingly share ideas and work together. I give the most credit to my colleagues (including myself) who are willing to put in countless hours beyond the school day in an effort to make this happen.”

“The principal and literacy coach work to help us in any way they can once we have identified that student.”

“When we are given a problem as a staff, we always seem to come together for ideas and suggestions to improve or address any issues.”

“Our building has great teachers and we all work together with the principal and literacy coach. I do think that the opinions of all teachers are valued and no one takes over.”

“Our staff and building administrators are very divided. It seems to be the principal and literacy coach work as one unit, while the staff feels alienated from them and often rely on each other for support.”

“The staff works together for student success.”

“I work closely with my principal, literacy coach, and grade level team to improve.”

“I think that everyone is here for the kids and we strive as a building to work as a team.”

“The three groups work diligently to plan and implement strong learning strategies for the students. They work as a team.”

“I do not see that there is much if any coordination of feedback between these groups. I do appreciate the support I gain from each of these sources, but their roles are vastly different.”

“The cohesiveness of my colleagues and literacy coach is very evident throughout the building from day to day. I feel we are given the ability to express our ideas, questions, and concerns, but our principal has the overall say.”

“I think working together, sharing ideas, and learning from one another are the primary characteristics of good teamwork.”

“The characteristics of the teamwork I see and experience include a high level of support and brainstorming in order to produce student achievement.”

“I didn't see the principal and literacy coach work collaboratively at all.”

“It seems like the principal and literacy coach are on one team, and the teachers on another.”

“They work together and my principal totally supports what our literacy specialist does. You can see they coordinate and believe the same things.”

“The principal and coach may work together, but I don't really see a teamwork between them and the teachers in the building.”

“Everyone works their tails off and everyone does what is best for students. Our kids are the whole school, not just our class, so when we can help with someone, we do!”

“Everyone works together to talk about the students and support each other in ways to help students.”

“The principal pretty much handed everything over to the literacy coach to do.”

“I don't believe there is teamwork in this building. There is a small group of people making decisions and not asking the rest of the staff for their input.”

“There may be teamwork at the management level, but there is very little "teamwork" in a supportive, relaxed nature with teachers.”

Alignment

“Our principal and literacy coach work well together and have common visions for our school. Their feedback is similar, positive and effective.”

“They are both committed to make every student successful!!”

“Everyone at my school is working towards one common goal which is student learning.”

“Many times principals have not taught the grade level you are presently teaching or have been removed from the classroom for years. What looks good on paper isn't always the best approach for the classroom.”

“The literacy school improvement team defines goals, provides support, and addresses challenges for school improvement.”

“The principal and literacy coach meet and tell the teachers what to do.”

“We work together as a team toward a common goal of improving school environment and student academics.”

“Discussions are very detailed with specific strategies in place at the end.”

“I do appreciate the support I gain from each of these sources, but their roles are vastly different.”

“When added together, they support my ability to help my students achieve by letting me know where I am doing well or other ideas I can try.”

“I feel that the staff of my school works hard to produce student achievement through a variety of strategies.”

“The team shares common goals and work toward them.”

“I see them collaborating, but the literacy coach knows so much more about classroom experiences than the administrators.”

“I think these individuals work well on the overall goals of the building and problem solving through different situations.”

“Administration and literacy coach try to incorporate appropriate and current concepts and ideas.”

“I get a mixed feeling on how my colleagues view our school improvement. It seems that our teachers are split in half.”

“This makes it much easier for me as a teacher because everything you hear from all areas matches.”

“They are unified in the goals and objectives for our staff.”

“There are very specific goals created.”

Climate

“The primary characteristics of a positive teamwork approach are honesty, fairness, and transparency.”

“Respect for all staff and students runs deep and is fiercely protected whenever necessary.”

“Teamwork occurs in our building when there is trust, respect of ones ideas, and a willingness of all parties to listen to each other.”

“Overall we are successful because we are all cooperative and learn from each other.”

“It is the most stressful environment in which I ever worked in the 20 plus years I have worked in this school system.”

“I find myself having to avoid the negativity that seems to be consuming many of the staff in my building.”

“I feel the primary characteristics that support the ability to produce student achievement is communication, cooperation, hard work, and positive attitudes from teachers to try a new approach. There must be a level of trust among the teachers and principal as well.”

“When disagreements occur, all present are respectful of each other and the situations.”

“Positive, encouraging, supportive attitudes that promote a successful environment.”

“It usually does not feel like the characteristics of teamwork are present in our building among the entire staff. The climate at our school has changed a great deal.”

“My colleagues are not threatening - our interactions are more open and helpful. The other two individuals are threatening, as if they are the judges and I am inferior.”

“The fellow members of our school team are respectful and encouraging. I always feel comfortable asking questions. The school atmosphere in our building has allowed me to grow as a teacher in each situation.”

“School climate that encourages lifelong learning, ongoing conversations about brain-based research and best practices.”

“There are just too many things to think about. Change is good, but trying to do it all at once, is futile. Oh, and then, with whatever I have left, I go home to be an effective wife and mother.”

“We work in a very comfortable atmosphere in our building. That helps a teacher feel comfortable in sharing ideas and good teaching practices.”

“I think being willing to share and listen to other ideas.”

“I don't see a lot of the principal doing any building self confidence in the building. Everyone is discouraged and climate is poor.”

“First of all, I think it helps that we call each other "family." We are always there for each other to support student achievement as well as our personal lives. When you have people who care you are able to perform and support others too.”

“When everyone works together with a respectful, nonthreatening approach, many things can be accomplished.”

Once responses were placed in categories, a division process was used for all respondents to identify the following efficacy groups within each construct of teacher efficacy: Low Efficacy, Low-Middle Efficacy, High-Middle Efficacy, and High Efficacy. For example, a Low Efficacy group of respondents ($N = 21$) was formed for teacher self-efficacy in Instructional Strategies, and the size of this group was close to the size of the Low-Middle Efficacy group of respondents ($N = 30$) for teacher self-efficacy in Instructional Strategies. It was impossible for all four efficacy groups to be the same size while having clear efficacy differences between groups due to the number of teachers with the same efficacious levels as measured by the TSES. Thus, efforts were made to best balance the efficacy groups while including all respondents. Finally, the Low Efficacy and Low-Middle Efficacy combined groups were compared to the High-Middle and High Efficacy combined groups to find differences in where they placed relative importance to the characteristics of feedback. In summary, the qualitative analysis was aimed at gaining a greater understanding of the predominant themes in teachers' perceptions of feedback that relate to teacher self-efficacy. The following nine tables illustrate the data.

Table 54

Qualitative Data: Characteristics of Evaluative Feedback and Teacher Self-Efficacy for Instructional Strategies

Efficacy Group	Teacher N	Emotional Intelligence N & %	Timely & Ongoing N & %	Accurate N & %	Relevant & Specific N & %	Meeting & Dialogue N & %	Praise & Affirm. N & %
Low	21	7; 33%	8; 38%	3; 14%	5; 24%	2; 10%	1; 5%
Low-Middle	30	6; 20%	7; 23%	2; 7%	9; 30%	3; 10%	10; 33%
High-Middle	30	5; 17%	8; 27%	4; 13%	9; 30%	7; 23%	5; 17%
High	28	8; 29%	7; 25%	3; 11%	4; 14%	7; 25%	4; 14%
Total	109	26; 24%	30; 28%	12; 11%	27; 25%	19; 17%	20; 18%

Timely and Ongoing Evaluative Feedback was most often mentioned through the analysis of all evaluative feedback responses. 28% of respondents noted this type of feedback – a total of 23 positive statements and 7 negative statements. Accurate Evaluative Feedback was least often mentioned. Only 11% of respondents noted this type of feedback – a total of 2 positive statements and 10 negative statements. Further inspection of the evaluative feedback responses that illuminates the relationship between teachers' perceptions of feedback and teachers' self-efficacy in Instructional Strategies shows that for the combined Low/Low-Middle groups of teachers, the three characteristics most often mentioned were ordered the following: Timely and Ongoing and Relevant and Specific were nearly tied, followed closely by Emotional Intelligent. For the combined High-Middle/High groups of teachers, the characteristics most often mentioned were ordered the following: Timely and Ongoing, Meeting and Dialogue, and

Relevant and Specific and Emotional Intelligent were tied. Thus, the data indicate that for the teachers with lower efficacy in Instructional Strategies, Relevant and Specific Evaluative Feedback was of more relative importance – a total of 11 positive statements and 3 negative statements. In addition, the data indicate that for the teachers with higher efficacy in Instructional Strategies, the characteristic of Meeting and Dialogue for Evaluative Feedback was of more relative importance – a total of 14 statements, all of which were positive.

Table 55

Qualitative Data: Characteristics of Evaluative Feedback and Teacher Self-Efficacy for Classroom Management

Efficacy Group	Teacher N	Emotional Intelligence N & %	Timely & Ongoing N & %	Accurate N & %	Relevant & Specific N & %	Meeting & Dialogue N & %	Praise & Affirm. N & %
Low	26	6; 23%	7; 27%	4; 15%	4; 15%	0; 0%	5; 19%
Low-Middle	24	4; 17%	5; 21%	3; 13%	9; 38%	2; 8%	3; 13%
High-Middle	31	7; 23%	10; 32%	2; 6%	7; 23%	8; 26%	8; 26%
High	28	9; 32%	8; 29%	3; 11%	7; 25%	9; 32%	4; 14%
Total	109	26; 24%	30; 28%	12; 11%	27; 25%	19; 17%	20; 18%

As noted before, Timely and Ongoing Evaluative Feedback was most often mentioned through the analysis of all evaluative feedback responses, and Accurate Evaluative Feedback was least often mentioned. Further inspection of the evaluative feedback responses that illuminates the relationship between teachers' perceptions of

feedback and teachers' self-efficacy in Classroom Management shows that for the combined Low/Low-Middle groups of teachers, the three characteristics most often mentioned were ordered the following: Relevant and Specific and Timely and Ongoing were tied, followed by Emotional Intelligent. For the combined High-Middle/High groups of teachers, the three characteristics most often mentioned were ordered the following: Timely and Ongoing, and Meeting and Dialogue and Emotional Intelligent were tied. Thus, the data indicate that for the teachers with lower efficacy in Classroom Management, Relevant and Specific Evaluative Feedback was of more relative importance – a total of 10 positive statements and 3 negative statements. In addition, the data indicate that for the teachers with higher efficacy in Classroom Management, the characteristic of Meeting and Dialogue for Evaluative Feedback was of more relative importance – a total of 17 statements, all of which were positive.

Table 56

Qualitative Data: Characteristics of Evaluative Feedback and Teacher Self-Efficacy for Student Engagement

Efficacy Group	Teacher N	Emotional Intelligence N & %	Timely & Ongoing N & %	Accurate N & %	Relevant & Specific N & %	Meeting & Dialogue N & %	Praise & Affirm. N & %
Low	28	10; 36%	8; 29%	3; 11%	6; 21%	3; 11%	2; 7%
Low-Middle	27	5; 19%	7; 26%	3; 11%	9; 33%	3; 11%	8; 30%
High-Middle	31	3; 10%	11; 35%	3; 10%	8; 26%	6; 19%	5; 16%
High	23	8; 35%	4; 17%	3; 13%	4; 17%	7; 30%	5; 12%
Total	109	26; 24%	30; 28%	12; 11%	27; 25%	19; 17%	20; 18%

As noted, Timely and Ongoing Evaluative Feedback was most often mentioned through the analysis of all evaluative feedback responses, and Accurate Evaluative Feedback was least often mentioned. Further inspection of the evaluative feedback responses that illuminates the relationship between teachers' perceptions of feedback and teachers' self-efficacy in Student Engagement shows that for the combined Low/Low-Middle groups of teachers, the three characteristics most often mentioned were the following: Relevant and Specific, Timely and Ongoing, and Emotional Intelligent all tied. For the combined High-Middle/High groups of teachers, the characteristics most often mentioned were ordered the following: Timely and Ongoing, Meeting and Dialogue, and Relevant and Specific and Emotional Intelligent were tied. Thus, the data indicate that for the teachers with lower efficacy in Student Engagement, there were no characteristics of evaluative feedback that were of clear, relative importance. In addition, the data indicate that for the teachers with higher efficacy in Student Engagement, the characteristic of Meeting and Dialogue for Evaluative Feedback was of more relative importance – a total of 13 statements, all of which were positive.

Table 57

Qualitative Data: Characteristics of Formative Feedback Experiences and Teacher Self-Efficacy for Instructional Strategies

Efficacy Group	Teacher N	Interactions w/ Lit. Coach N & %	Support from Lit. Coach N & %	E.I. of Lit. Coach N & %	Collab. w/ Colleagues N & %	Support from Colleagues N & %	E.I. of Colleagues N & %
Low	21	3; 14%	10; 48%	3; 14%	5; 24%	2; 10%	0; 0%
Low-Middle	30	8; 27%	16; 53%	5; 17%	7; 23%	8; 27%	1; 3%
High-Middle	30	10; 33%	12; 40%	5; 17%	10; 33%	7; 23%	2; 7%
High	28	12; 43%	15; 54%	4; 14%	8; 29%	5; 18%	1; 4%
Total	109	32; 29%	53; 49%	17; 16%	30; 28%	24; 22%	4; 4%

Support from Literacy Coach was most often mentioned through the analysis of all formative feedback responses. 49% of respondents noted this type of feedback – a total of 46 positive statements and 7 negative statements. Emotional Intelligence of Literacy Coach and Emotional Intelligence of Colleagues were least often mentioned. Only 20% of respondents noted these characteristics of feedback combined – a total of 18 positive statements and 3 negative statements. Further inspection of the formative feedback responses that illuminates the relationship between teachers' perceptions of feedback and teachers' self-efficacy in Instructional Strategies shows that for the combined Low/Low-Middle groups of teachers, the three characteristics most often mentioned were ordered the following: Support from Literacy Coach, Collaboration with Colleagues, and Interactions with Literacy Coach. For the combined High-Middle/High

groups of teachers, the three characteristics most often mentioned were ordered the following: Support from Literacy Coach, Interactions with Literacy Coach, and Collaboration with Colleagues. Thus, the data indicate that for the teachers with lower efficacy in Instructional Strategies, there were no characteristics of formative feedback experiences that were of clear, relative importance. In addition, the data indicate that for the teachers with higher efficacy in Instructional Strategies, formative feedback experiences that provide for Interactions with Literacy Coach were of more relative importance – a total of 16 positive statements and 6 negative statements.

Table 58

Qualitative Data: Characteristics of Formative Feedback Experiences and Teacher Self-Efficacy for Classroom Management

Efficacy Group	Teacher N	Interactions w/ Lit. Coach N & %	Support from Lit. Coach N & %	E.I. of Lit. Coach N & %	Collab. w/ Colleagues N & %	Support from Colleagues N & %	E.I. of Colleagues N & %
Low	26	9; 35%	10; 38%	4; 15%	8; 31%	2; 8%	0; 0%
Low-Middle	24	8; 33%	14; 58%	6; 25%	4; 17%	7; 29%	1; 4%
High-Middle	31	9; 29%	15; 48%	3; 10%	9; 29%	6; 19%	2; 6%
High	28	7; 25%	14; 50%	4; 33%	9; 32%	7; 25%	1; 4%
Total	109	33; 29%	53; 49%	17; 16%	30; 28%	22; 20%	4; 4%

As noted previously, formative feedback experiences that include Support from Literacy Coach were most often mentioned through the analysis of all formative feedback responses, and formative feedback experiences which demonstrate Emotional

Intelligence of Literacy Coach and of Colleagues were least often mentioned. Further inspection of the formative feedback responses that illuminates the relationship between teachers' perceptions of feedback and teachers' self-efficacy in Classroom Management shows that for the combined Low/Low-Middle groups of teachers, the three characteristics most often mentioned were ordered the following: Support from Literacy Coach, Interactions with Literacy Coach, and Collaboration with Colleagues. For the combined High-Middle/High groups of teachers, the three characteristics most often mentioned were ordered the following: Support from Literacy Coach, Collaboration with Colleagues, and Interactions with Literacy Coach. Thus, the data indicate that for the teachers with lower efficacy in classroom management, there were no characteristics of formative feedback experiences that were of clear, relative importance. In addition, the data indicate that for the teachers with higher efficacy in classroom management, there were no characteristics of formative feedback experiences that were of clear, relative importance.

Table 59

Qualitative Data: Characteristics of Formative Feedback Experiences and Teacher Self-Efficacy for Student Engagement

Efficacy Group	Teacher N	Interactions w/ Lit. Coach N & %	Support from Lit. Coach N & %	E.I. of Lit. Coach N & %	Collab. w/ Colleagues N & %	Support from Colleagues N & %	E.I. of Colleagues N & %
Low	28	10; 36%	13; 46%	4; 14%	6; 21%	3; 11%	0; 0%
Low-Middle	27	8; 30%	13; 48%	5; 19%	8; 30%	6; 22%	0; 0%
High-Middle	31	6; 19%	14; 45%	6; 19%	9; 29%	9; 29%	2; 6%
High	23	9; 39%	13; 57%	2; 9%	7; 30%	4; 17%	2; 9%
Total	109	33; 29%	53; 49%	17; 16%	30; 28%	22; 20%	4; 4%

As noted, formative feedback experiences that include Support from Literacy Coach were most often mentioned through the analysis of all formative feedback responses, and formative feedback experiences which demonstrate Emotional Intelligence of Literacy Coach and of Colleagues were least often mentioned. Further inspection of the formative feedback responses that illuminates the relationship between teachers' perceptions of feedback and teachers' self-efficacy in Student Engagement shows that for the combined Low/Low-Middle groups of teachers, the three characteristics most often mentioned were ordered the following: Support from Literacy Coach, Interactions with Literacy Coach, and Collaboration with Colleagues. For the combined High-Middle/High groups of teachers, the three characteristics most often mentioned were ordered the following: Support from Literacy Coach, Collaboration with

Colleagues, and Interactions with Literacy Coach. Thus, the data indicate that for the teachers with lower efficacy in Student Engagement, there were no characteristics of formative feedback experiences that were of clear, relative importance. In addition, the data indicate that for the teachers with higher efficacy in Student Engagement, there were no characteristics of formative feedback experiences that were of clear, relative importance.

Table 60

Qualitative Data: Characteristics of Total Feedback and Teacher Self-Efficacy for Instructional Strategies

Efficacy Group	Teacher N	Structured Coordination N & %	Sense of Coordination N & %	Alignment N & %	Climate N & %
Low	21	7; 33%	4; 19%	4; 19%	2; 10%
Low-Middle	30	8; 27%	7; 23%	2; 7%	5; 17%
High-Middle	30	10; 33%	4; 13%	5; 17%	6; 20%
High	28	8; 29%	7; 25%	8; 29%	6; 21%
Total	109	33; 30%	22; 20%	19; 17%	19; 17%

Structured Coordination of Total Feedback was most often mentioned through the analysis of all total feedback responses. 30% of respondents noted this type of total feedback – a total of 25 positive statements and 8 negative statements. All three other characteristics of total feedback were fairly balanced through analysis of all total feedback responses. Further inspection of the total feedback responses that illuminates the relationship between teachers' perceptions of feedback and teachers' self-efficacy in

Instructional Strategies shows that for the combined Low/Low-Middle groups of teachers, the two characteristics most often mentioned were ordered the following: Structured Coordination and Sense of Coordination. For the combined High-Middle/High groups of teachers, the characteristics most often mentioned were ordered the following: Structured Coordination, and Alignment, Climate, and Sense of Coordination all nearly tied. Thus, the data indicate that for the teachers with lower efficacy in Instructional Strategies, there were no characteristics of total feedback that were of clear, relative importance. In addition, the data indicate that for the teachers with higher efficacy in Instructional Strategies, there were no characteristics of total feedback that were of clear, relative importance.

Table 61

Qualitative Data: Characteristics of Total Feedback and Teacher Self-Efficacy for Classroom Management

Efficacy Group	Teacher N	Structured Coordination N & %	Sense of Coordination N & %	Alignment N & %	Climate N & %
Low	26	11; 42%	3; 12%	3; 12%	2; 8%
Low-Middle	24	9; 38%	3; 13%	5; 21%	1; 4%
High-Middle	31	4; 13%	7; 23%	7; 23%	8; 26%
High	28	9; 32%	9; 32%	4; 14%	8; 29%
Total	109	33; 30%	22; 20%	19; 17%	19; 17%

As noted, Structured Coordination of Total Feedback was most often mentioned through the analysis of all total feedback responses, and all three other characteristics of

total feedback were fairly balanced through analysis of all total feedback responses. Further inspection of the total feedback responses that illuminates the relationship between teachers' perceptions of feedback and teachers' self-efficacy in Classroom Management shows that for the combined Low/Low-Middle groups of teachers, the two characteristics most often mentioned were ordered the following: Structured Coordination and Alignment. For the combined High-Middle/High groups of teachers, the two characteristics most often mentioned were the following: Climate and Sense of Coordination tied. Thus, the data indicate that for the teachers with lower efficacy in Classroom Management, Structured Coordination of Total Feedback was of more relative importance – a total of 15 positive statements and 5 negative statements. In addition, the data indicate that for the teachers with higher efficacy in Classroom Management, the characteristics of Climate and Sense of Coordination for Total Feedback were of more relative importance – a total of 13 positive statements and 3 negative statements for the former, and a total of 11 positive statements and 5 negative statements for the latter.

Table 62

Qualitative Data: Characteristics of Total Feedback and Teacher Self-Efficacy for Student Engagement

Efficacy Group	Teacher N	Structured Coordination N & %	Sense of Coordination N & %	Alignment N & %	Climate N & %
Low	28	8; 29%	2; 7%	5; 18%	3; 11%
Low-Middle	27	11; 41%	5; 19%	4; 15%	1; 4%
High-Middle	31	8; 26%	8; 26%	5; 16%	9; 29%
High	23	6; 26%	7; 30%	5; 22%	6; 26%
Total	109	33; 30%	22; 20%	19; 17%	19; 17%

As noted previously, Structured Coordination of Total Feedback was most often mentioned through the analysis of all total feedback responses, and all three other characteristics of total feedback were fairly balanced through analysis of all total feedback responses. Further inspection of the total feedback responses that illuminates the relationship between teachers' perceptions of feedback and teachers' self-efficacy in Student Engagement shows that for the combined Low/Low-Middle groups of teachers, the two characteristics most often mentioned were ordered the following: Structured Coordination and Alignment. For the combined High-Middle/High groups of teachers, the characteristics most often mentioned were ordered the following: Climate and Sense of Coordination were tied, followed by Structured Coordination. Thus, the data indicate that for the teachers with lower efficacy in Student Engagement, Structured Coordination of Total Feedback was of more relative importance – a total of 13 positive statements and

6 negative statements. In addition, the data indicate that for the teachers with higher efficacy in Student Engagement, the characteristics of Climate and Sense of Coordination for Total Feedback were of more relative importance – a total of 11 positive statements and 4 negative statements for each characteristic.

Summary

The analysis of the data collected in this study provided several findings. With respect to the first research question: What are teachers' perceptions of the evaluative feedback, formative feedback experiences, and total feedback they receive?, teacher responses from the survey's demographic and feedback items were analyzed. Of the feedback variables, Timely and Ongoing Evaluative Feedback, Accurate Formative Feedback, and Alignment of Total Feedback had the highest means for each type of feedback. Conversely, Relevant Evaluative Feedback, Participation in Formative Feedback, and Coordinated of Total Feedback had the lowest means for each type of feedback. Of all of teachers' perceptions of the feedback variables, Accurate Formative Feedback had the highest mean with 4.84 (standard deviation of 0.99), and Coordinated and Aligned Total Feedback had the lowest means (4.18 and 4.24, respectively) and also the highest standard deviations (1.23 and 1.13 respectively).

Teachers' perceptions of the feedback they receive did show differences among some demographic groups. Inspection of means and standards deviation shows varying teacher perceptions of feedback by Grade Taught, Years Teaching in District, and Degree Obtained. Correlations show, surprisingly, that there were significant negative relationships between Years Teaching in District and teachers' perceptions of Accurate

Evaluative Feedback and Emotional Intelligent Evaluative Feedback at the .05 and .01 levels, respectively. In addition, correlations show, surprisingly, there was a significant negative relationship between Degree Obtained and teachers' perceptions of Participation in Formative Feedback at the .05 level. Finally, it was surprising that there were significant negative relationships between Years Teaching in District and teachers' perceptions of both Coordinated Total Feedback and Aligned Total Feedback at the .01 level. Not surprisingly, there were significant positive relationships between all evaluative, formative, and total feedback variables.

With respect to the second research question: Is there a significant predictive relationship between characteristics of feedback from formative feedback experiences and teacher self-efficacy?, hierarchical multiple regression was performed for HO₁, HO₂, and HO₃. As a result of $p > .05$, we failed to reject each null hypothesis and determine that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Instructional Strategies, Classroom Management, and Student Engagement.

With respect to the third research question: Is there a significant predictive relationship between characteristics of feedback from the evaluative model and teacher self-efficacy?, hierarchical multiple regression was performed for HO₄, HO₅, and HO₆. As a result of $p < .05$, we rejected the null hypothesis and determined that there is a significantly predictive relationship between the predictor variables and teachers' self-efficacy in Instructional Strategies. Furthermore, it was found that Emotional Intelligent Evaluative Feedback significantly predicted teacher self-efficacy toward Instructional Strategies ($\beta = .429$, $p = .008$), and Degree Obtained significantly predicted teacher self-

efficacy toward Instructional Strategies ($\beta=.405$, $p=.013$). As a result of $p < .05$, we rejected the null hypothesis and determined that there is a significantly predictive relationship between the predictor variables and teachers' self-efficacy in Classroom Management. The introduction of evaluative feedback predictor variables explained additional 12.7% variance in teachers' self-efficacy in Classroom Management, after controlling for the demographic variables (R^2 Change=.127, $F(4, 101)=3.994$; $p=.005$). Finally, as a result of $p > .05$, we failed to reject the null hypothesis and determined that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Student Engagement.

With respect to the fourth research question: Is there a significant predictive relationship between characteristics of the total feedback teachers receive and teacher self-efficacy?, hierarchical multiple regression was performed for HO_7 , HO_8 , and HO_9 . As a result of $p > .05$, we failed to reject the null hypothesis and determined that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Instructional Strategies. As a result of $p < .05$, we rejected the null hypothesis and determined that there is a significantly predictive relationship between the predictor variables and teachers' self-efficacy in Classroom Management. Furthermore, it was found that Aligned Total Feedback significantly predicted teacher self-efficacy toward Classroom Management ($\beta=.270$, $p=.029$), and Degree Obtained significantly predicted teacher self-efficacy toward Classroom Management ($\beta=.344$, $p=.040$). Finally, as a result of $p > .05$, we failed to reject the null hypothesis and determined that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Student Engagement.

With respect to the fifth research question: Are there predominant themes in teachers' perceptions of feedback that relate to teacher self-efficacy?, an analysis of the open-ended questions designed to gain qualitative information on the relationship between teachers' perceptions of the feedback they receive and their teaching efficacy was performed. For evaluative feedback, the data show that for the teachers with lower efficacy in instructional strategies, Relevant and Specific evaluative feedback was of more relative importance. In addition, the data show that for the teachers with higher efficacy in Instructional Strategies, the characteristic of Meeting and Dialogue for Evaluative Feedback was of more relative importance. Also for evaluative feedback, the data show that for the teachers with lower efficacy in Classroom Management, Relevant and Specific Evaluative Feedback was of more relative importance. In addition, the data show that for the teachers with higher efficacy in Classroom Management, the characteristic of Meeting and Dialogue for Evaluative Feedback was of more relative importance. Finally for evaluative feedback, the data show that for the teachers with lower efficacy in Student Engagement, there were no characteristics of evaluative feedback that were of clear, relative importance. In addition, the data indicate that for the teachers with higher efficacy in Student Engagement, the characteristic of Meeting and Dialogue for Evaluative Feedback was of more relative importance.

For formative feedback experiences, the data show that for the teachers with lower efficacy in Instructional Strategies, there were no characteristics of formative feedback experiences that were of clear, relative importance. In addition, the data indicate that for the teachers with higher efficacy in Instructional Strategies, formative feedback experiences that provide for Interactions with Literacy Coach were of more relative

importance. Also for formative feedback experiences, the data show that for both the teachers with lower efficacy and higher efficacy in Classroom Management, there were no characteristics of feedback that were of clear, relative importance. Finally for formative feedback experiences, the data show that for both the teachers with lower efficacy and higher efficacy in Student Engagement, there were no characteristics of feedback that were of clear, relative importance.

For total feedback, the data show that for both the teachers with lower efficacy and higher efficacy in Instructional Strategies, there were no characteristics of feedback that were of clear, relative importance. Also for total feedback, the data show that for the teachers with lower efficacy in Classroom Management, Structured Coordination of Total Feedback was of more relative importance. In addition, the data show that for the teachers with higher efficacy in Classroom Management, the characteristics of Climate and Sense of Coordination for Total Feedback were of more relative importance. Finally for total feedback, the data show that for the teachers with lower efficacy in Student Engagement, Structured Coordination of Total Feedback was of more relative importance. In addition, the data show that for the teachers with higher efficacy in Student Engagement, the characteristics of Climate and Sense of Coordination for Total Feedback were of more relative importance.

Chapter 4 presented descriptive data, correlations, multiple regressions, and an analysis of qualitative data to answer the five research questions. Chapter 5 will summarize the previous 4 chapters, discuss results, present conclusions and implications regarding the results, provide recommendations for the field of education, and offer promising future research.

CHAPTER 5

SUMMARY AND DISCUSSION

Chapter 5 will provide a review of the previous four chapters. First, there will be an introduction. Next, a review of the literature and methodology used in the study will be shared. Finally, an analysis of data, findings, implications, and suggestions for future research will be provided.

Introduction

The push for educational reform is present in every state through mandates and regulations in an effort to prepare students to compete in our changing society (Danielson, 2007; Darling-Hammond, 2005; DuFour & Eaker, 1998). In Indiana, legislators put into law a plan for a common evaluation plan for educators based on a rigorous rubric and objective measures of student performance. Furthermore, it is required that at the conclusion of each year all teachers are provided a summative evaluation and placed into one of four categories: Highly Effective, Effective, Improvement Necessary, Ineffective (Indiana Department of Education, 2012). At the same time, professional learning communities and instructional coaches are among the most recent trends in education aimed at providing teachers with formative opportunities to improve. Lost in the mix for heightened accountability, increased evaluative feedback, and formative feedback

opportunities is the impact that specific characteristics of feedback will have on teacher self-efficacy. It is vital that the effect of teachers' perceptions of the specific characteristics of feedback they receive has on their teaching efficacy is further understood.

Review of the Literature

How people feel, think, motivate themselves and ultimately act is together a result of one's self-efficacy beliefs (Bandura, 1994). Thus, teaching behaviors are an outcome of teacher self-efficacy. Teachers with a higher sense of efficacy are less likely to criticize a student following an incorrect response and more likely to persist with a student in a failure situation. Also, highly efficacious teachers are more likely to leverage small group instruction as opposed to stand-and-deliver, whole group instruction (Gibson and Dembo, 1984). Instructional risk-taking, which embraces a willingness to try a variety of materials and approaches with the desire to find and implement better ways of teaching are associated with teacher efficacy (Fuchs, Fuchs, & Bishop, 1992). Highly efficacious teachers have higher expectations for their students and tend to display greater perseverance with struggling students (Chase, Germundsen, Brownstein, & Distad, 2001). Formative feedback opportunities such as instructional coaching are more successful with teachers who demonstrate higher levels of self-efficacy before participating (Cantrell & Hughes, 2008). In addition, personal reflection and the pursuit of feedback from the principal and colleagues are more likely with teachers who are highly efficacious (Runhaar, Sanders, & Yang, 2010). Finally, teachers with high levels

of teacher efficacy significantly influence student achievement (Dembo & Gibson, 1985; Saklofske, Michayluk, & Randhawa, 1988).

Bandura (1977) identifies four sources of information that work to build one's self-efficacy beliefs: mastery experiences, vicarious experiences, social persuasion, and psychological and emotional states. While Bandura's four sources give broad explanations regarding the development of efficacy, school leaders can look to the research and literature for more specific organizational factors that play a role in developing individual levels of efficacy. Ciani, Summers, and Easter (2007) studied the relationships between academic context and the motivational beliefs and classroom practices of teachers in high schools. The study found that when schools overly emphasize the importance of high test scores and academic competition (high performance school goal structure), teachers feel less self-efficacy for using a variety of instructional strategies. Also, it was found in a study of middle schools that there were significant relationships between general teaching efficacy and three leadership behaviors: models behavior, provides contingent rewards (i.e. recognize and praise efforts), and inspires group purpose (Hipp, 1995). Research also shows that when school administrators display close attentiveness to the instructional process and support effective teaching, it is likely that teachers will have more respect for and confidence in the principal, leading to greater teacher efficacy. Specifically, principals impact teacher efficacy by offering improvement assistance through coaching and praise, goal conferencing that empowers teachers to make decisions, and creating structures where teachers are able to observe other successful teachers (Ebmeier, 2003). Professional development programs that include instructional coaching where teachers practice new

programs or strategies are also linked to increased teacher efficacy (Cantrell & Hughes, 2008; Henson, 2001; Ross, 1992; Ross, 1994).

With teacher efficacy and student achievement linked to leadership behaviors as described above, it is important to understand the varying types of feedback that school leaders can leverage in building the capacity of teachers. Feedback can be evaluative in nature, or it can be formative in nature. Hattie and Timperley (2007) describe feedback as information provided by an agent regarding aspects of one's performance.

Characteristics of feedback are numerous and can include goal-referenced; tangible and transparent; actionable; user-friendly; timely; ongoing; and consistent (Wiggins, 2012). Some of the most effective feedback can be characterized as emotional intelligent if the feedback honors a relationship, is delivered in a manner that is trust-building, and addresses a receiver's feelings (Hall & Simeral, 2008; Mortiboys, 2012). The above characteristics of feedback can be evident in both formal and informal structures.

Teacher evaluation is a formal feedback structure, and there has been much research on the purposes of teacher evaluation (Darling-Hammond, Wise, & Pease, 1983; Frase, 1992; Haefele, 1993; Millman, 1981; Stiggins & Duke, 1983; Stronge & Tucker, 2003). Stiggins and Duke assert that teachers' perceptions of an evaluator's accuracy in observation, patience, and trustworthiness are important, in addition to timeliness, delivery, and professional assistance offered (1988). Stronge and Tucker (2003) emphasize the 3 Cs of teacher evaluation: communication, collaboration, and commitment. They claim these characteristics of an evaluation system work together to elevate the process to a meaningful dialogue about quality instruction for students. Yet, teacher evaluation is merely one structure where teachers receive feedback. Feedback

can be delivered to a teacher from other colleagues. Instructional coaching that provides feedback can be a powerful tool for professional development (Casey 2006, Hall & Simeral, 2008). Also, collaboration among teachers in professional learning communities provides teachers with valuable feedback (DuFour & Eaker, 1998; Hawley, 2002; Hord, 2004).

Research on the outcomes of varying types of feedback systems is varied. Evaluation systems where goal setting exists and there is regular professional dialogue between teacher and administrator that is structured in a process which is learner-centered produce the most professional growth and are perceived most favorably by teachers (Ovando, 2001; Wagner & Hill, 1996). Research also suggests that teachers find interactions with their peers through collaboration and mentoring as most beneficial in growing professionally (Billingsley, Carlson, & Klein, 2004; Smylie, 1989). Furthermore, research supports the notion that formative and formal feedback provided by instructional coaching results in increased teacher efficacy (Cantrell & Hughes, 2008; Ross, 1992; Tschannen-Moran & McMaster, 2006).

Purpose

The purpose of this study was to extend previous research regarding teachers' perceptions of the characteristics of the feedback they receive in six high-performing elementary schools in Indiana, rich with evaluative and formative feedback. In addition, teaching assignment, degree obtained, and years teaching in the district were controlled for to best determine the predictive power of the independent variables on teacher's sense of self-efficacy. In pursuit of improved student achievement in today's era of school

accountability, high performing schools must examine all processes they use to develop teachers and assure quality. Currently in Indiana, both teachers and administrators are responding to legislative mandates that require the following of more uniform, rigorous evaluation guidelines. This study provides evidence for the development of feedback protocols that maximize the self-efficacy of teachers, improve teaching and learning, and increase student achievement.

Methodology

A concurrent embedded strategy of mixed methods design was used for this study. The predictive quality of teachers' perceptions of the characteristics of feedback they receive on teachers' sense of self-efficacy was analyzed using hierarchical multiple regression. Beta weights for each variable were calculated and tested for significance. Open-ended questions were analyzed using qualitative methods. Additionally, teachers' perceptions of the feedback they receive as well as their perceptions of their teaching efficacy were examined through using analysis of their responses to the survey. Subscale means and standard deviations were examined to determine ratings of the characteristics for teachers in the district.

Settings and Participants

The population of interest for this study was teachers in high performing elementary schools in a suburban school district in Indiana, rich with evaluative and formative feedback. The study sampled all 220 elementary school teachers in the district. The sample was a convenience sample chosen due to its size, richness in various

feedback, and accessibility to the researcher. In this school district and in all public schools across Indiana, teachers were being evaluated for the first time via a new evaluation model that complies with Indiana Public Law 90 at the time of the study. This district chose to develop its own rigorous evaluation rubric and implementation model that complies with the law. In this district, there was great autonomy afforded to principals for the supervision of instruction and evaluation of teachers in this district

The school district in this study was suburban and had a student population of nearly 7,000 students. Socioeconomic data for the district showed that 14% of students were on free or reduced price lunch. Ethnicity data for district showed that 83.1 % of students were White, 4.7% were Black, 4.2% were Hispanic, 4.1% were Asian, 3.6% were Multiracial, and 0.1% were other ethnicities. 8.4% of students received special education services, and only 1.3% were English Language Learners. As of this study, the school district had most recently received a grade of “A” as determined by performance data collected by the Indiana Department of Education, and all elementary schools in the district had most recently received grades of “B” or higher.

Procedures

Once approval was granted from the Institutional Review Board, the researcher met with the administrators of the district to discuss the study, the benefits to the district from participation, the instruments, and the time commitment from teachers required to conduct the study. Once permission was granted, the researcher introduced himself and the study to teachers, in person, at faculty meetings in each elementary school in the district. Shortly thereafter, the researcher used email to deliver a link to the survey to all

220 elementary school teachers in the district. Qualtrics, a web-based survey software, was used to administer the survey. This technique of delivery and administration ensured anonymity and confidentiality. As a result of collecting the data at one point, the survey was cross-sectional in nature. Furthermore, the survey collected the primary quantitative data through closed-ended and Likert-like items, and it collected the secondary qualitative data through open-ended items. This was done simultaneously in a single survey which resulted in a concurrent embedded strategy of mixed methods.

Research Questions

This mixed-methods study of teachers' perceptions of the feedback they receive and teachers' sense of self-efficacy in high-performing elementary schools is guided by the following research questions:

1. What are teachers' perceptions of the evaluative feedback, formative feedback experiences, and total feedback they receive?
2. Is there a significant predictive relationship between characteristics of feedback from formative feedback experiences and teacher self-efficacy?
3. Is there a significant predictive relationship between characteristics of feedback from the evaluative model and teacher self-efficacy?
4. Is there a significant predictive relationship between characteristics of the total feedback teachers receive and teacher self-efficacy?
5. Are there predominant themes in teachers' perceptions of feedback that relate to teacher self-efficacy?

Data Analysis

SPSS 21.0 was used to perform the statistical analysis. The dependent variable was teacher self-efficacy and the independent variables were perceptions of feedback, teaching assignment, degree obtained, and years teaching in the district. Qualitative methods were used to analyze the responses to the open-ended questions.

Results and Hypotheses Testing

Research Question 1: What are teachers' perceptions of the evaluative feedback, formative feedback experiences, and total feedback they receive?

Teacher responses from the survey's demographic and feedback items were analyzed. Of the feedback variables, Timely and Ongoing Evaluative Feedback, Accurate Formative Feedback, and Aligned Total Feedback had the highest means for each type of feedback. Conversely, Relevant Evaluative Feedback, Participation in Formative Feedback, and Coordinated Total Feedback had the lowest means for each type of feedback. Of all of teachers' perceptions of the feedback variables, Accurate Formative Feedback had the highest mean with 4.84 (standard deviation of 0.99), and Coordinated and Aligned Total Feedback had the lowest means (4.18 and 4.24, respectively) and also the highest standard deviations (1.23 and 1.13 respectively). Teachers' perceptions of the feedback they receive did show differences among some demographic groups. Inspection of means and standards deviation shows varying teacher perceptions of feedback by Grade Taught, Years Teaching in District, and Degree Obtained. Correlations show, surprising, that there were significant negative relationships between Years Teaching in District and teachers' perceptions of Accurate

Evaluative Feedback and Emotional Intelligent Evaluative Feedback at the .05 and .01 levels, respectively. In addition, correlations show, surprisingly, there was a significant negative relationship between Degree Obtained and teachers' perceptions of Participation in Formative Feedback at the .05 level. Finally, it was surprising that there were significant negative relationships between Years Teaching in District and teachers' perceptions of both Coordinated Total Feedback and Aligned Total Feedback at the .01 level. Not surprisingly, there were significant positive relationships between all evaluative, formative, and total feedback variables.

Research Question 2: Is there a significant predictive relationship between characteristics of feedback from formative feedback experiences and teacher self-efficacy?

To answer this question, HO₁, HO₂, and HO₃ were tested.

HO₁: There is no statistically significant predictive relationship between teachers' perceptions of participation, accuracy, support, and emotional intelligence of formative feedback experiences as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Instructional Strategies as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of formative feedback (Participation, Accurate, Support, and Emotional Intelligent) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Instructional Strategies. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model explained

7.0% of the variance ($R^2=.070$, $F(3, 105)=2.641$, $p=.053$). After entry of the formative feedback predictor variables at Step 2, the total variance explained by the model as a whole was 8.9% ($R^2=.089$, $F(7, 101)=1.405$, $p=.211$). As a result of $p > .05$, we fail to reject the null hypothesis and determine that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Instructional Strategies.

HO₂: There is no statistically significant predictive relationship between teachers' perceptions of participation, accuracy, support, and emotional intelligence of formative feedback experiences as measured by the survey; Teaching Assignment, Degree Obtained, and Years Teaching in the District; and teachers' self-efficacy in Classroom Management as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of formative feedback (Participation, Accurate, Support, and Emotional Intelligent) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Classroom Management. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: teaching assignment, degree obtained, and years teaching in the district. This model explained 6.9% of the variance ($R^2=.069$, $F(3, 105)=2.610$, $p=.055$). After entry of the formative feedback predictor variables at Step 2, the total variance explained by the model as a whole was 7.8% ($R^2=.078$, $F(7, 101)=1.226$, $p=.296$). As a result of $p > .05$, we fail to reject the null hypothesis and determine that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Classroom Management.

HO₃: There is no statistically significant predictive relationship between teachers' perceptions of participation, accuracy, support, and emotional intelligence of formative feedback experiences as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Student Engagement as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of formative feedback (Participation, Accurate, Support, and Emotional Intelligent) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Student Engagement. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model explained 6.3% of the variance ($R^2=.063$, $F(3, 105)=2.334$, $p=.078$). After entry of the formative feedback predictor variables at Step 2, the total variance explained by the model as a whole was 8.1% ($R^2=.081$, $F(7, 101)=1.226$, $p=.275$). As a result of $p > .05$, we fail to reject the null hypothesis and determine that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Student Engagement.

Research Question 3: Is there a significant predictive relationship between characteristics of feedback from the evaluative model and teacher self-efficacy?

To answer this question, HO₄, HO₅, and HO₆ were tested.

HO₄: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is timely and ongoing, accurate, relevant, and emotionally

intelligent from the evaluative model as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Instructional Strategies as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of evaluative feedback (Timely and Ongoing, Accurate, Relevant, and Emotional Intelligent) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Instructional Strategies. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model explained 7.0% of the variance ($R^2=.070$, $F(3, 105)=2.641$, $p=.053$). After entry of the evaluative feedback predictor variables at Step 2, the total variance explained by the model as a whole was 15.0% ($R^2=.150$, $F(7, 101)=2.552$, $p=.018$). As a result of $p < .05$, we reject the null hypothesis and determine that there is a significantly predictive relationship between the predictor variables and teachers' self-efficacy in Instructional Strategies. Furthermore, it was found in Table 37 that Emotional Intelligent Evaluative Feedback significantly predicted teacher self-efficacy in Instructional Strategies ($\beta=.429$, $p=.008$), and Degree Obtained significantly predicted teacher self-efficacy in Instructional Strategies ($\beta=.405$, $p=.013$).

HO₅: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is timely and ongoing, accurate, relevant, and emotionally intelligent from the evaluative model as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Classroom Management as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of evaluative feedback (Timely and Ongoing, Accurate, Relevant, and Emotional Intelligent) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Classroom Management. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model explained 6.9% of the variance ($R^2=.069$, $F(3, 105)=2.610$, $p=.055$). After entry of the evaluative feedback predictor variables at Step 2, the total variance explained by the model as a whole was 19.7% ($R^2=.197$, $F(7, 101)=3.529$, $p=.002$). As a result of $p < .05$, we reject the null hypothesis and determine that there is a significantly predictive relationship between the predictor variables and teachers' self-efficacy in Classroom Management. The introduction of evaluative feedback predictor variables explained an additional 12.7% variance in teachers' self-efficacy in Classroom Management, after controlling for the demographic variables (R^2 Change=.127, $F(4, 101)=3.994$; $p=.005$).

HO₆: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is timely and ongoing, accurate, relevant, and emotionally intelligent from the evaluative model as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Student Engagement as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of evaluative feedback (Timely and Ongoing, Accurate, Relevant, and Emotional Intelligent) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Student Engagement. In the first step of

hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model explained 6.3% of the variance ($R^2=.063$, $F(3, 105)=2.334$, $p=.078$). After entry of the evaluative feedback predictor variables at Step 2, the total variance explained by the model as a whole was 10.3% ($R^2=.103$, $F(7, 101)=1.652$, $p=.130$). As a result of $p > .05$, we fail to reject the null hypothesis and determine that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Student Engagement.

Research Question 4: Is there a significant predictive relationship between characteristics of the total feedback teachers receive and teacher self-efficacy?

To answer this question, HO_7 , HO_8 , and HO_9 were tested.

HO_7 : There is no statistically significant predictive relationship between teachers' perceptions of feedback that is coordinated and aligned from the total feedback they receive as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Instructional Strategies as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of the total feedback (Coordinated and Aligned) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Instructional Strategies. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model explained 7.0% of the variance ($R^2=.070$,

$F(3, 105)=2.641, p=.053$). After entry of the total feedback predictor variables at Step 2, the total variance explained by the model as a whole was 8.3% ($R^2=.083, F(5, 103)=1.872, p=.106$). As a result of $p > .05$, we fail to reject the null hypothesis and determine that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Instructional Strategies.

HO₈: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is coordinated and aligned from the total feedback they receive as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Classroom Management as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of the total feedback (Coordinated and Aligned) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Classroom Management. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model explained 6.9% of the variance ($R^2=.069, F(3, 105)=2.610, p=.055$). After entry of the total feedback predictor variables at Step 2, the total variance explained by the model as a whole was 11.9% ($R^2=.119, F(5, 103)=2.794, p=.021$). As a result of $p < .05$, we reject the null hypothesis and determine that there is a significantly predictive relationship between the predictor variables and teachers' self-efficacy in Classroom Management. Furthermore, it was found in Table 49 that Aligned Total Feedback significantly predicted teacher self-efficacy in Classroom

Management ($\beta=.270$, $p=.029$), and Degree Obtained significantly predicted teacher self-efficacy in Classroom Management ($\beta=.344$, $p=.040$).

HO₉: There is no statistically significant predictive relationship between teachers' perceptions of feedback that is coordinated and aligned from the total feedback they receive as measured by the survey; teaching assignment; degree obtained; years teaching in the district; and teachers' self-efficacy in Student Engagement as measured by the TSES.

Hierarchical multiple regression was performed in SPSS to test if teachers' perceptions of the characteristics of the total feedback (Coordinated and Aligned) they receive and demographic data significantly predicted teachers' sense of self-efficacy in Student Engagement. In the first step of hierarchical multiple regression, the three demographic predictor variables were entered: Teaching Assignment, Degree Obtained, and Years Teaching in the District. This model explained 6.3% of the variance ($R^2=.063$, $F(3, 105)=2.334$, $p=.078$). After entry of the total feedback predictor variables at Step 2, the total variance explained by the model as a whole was 7.5% ($R^2=.075$, $F(5, 103)=1.663$, $p=.150$). As a result of $p > .05$, we fail to reject the null hypothesis and determine that there is no significantly predictive relationship between the predictor variables and teachers' self-efficacy in Student Engagement.

Research Question 5: Are there predominant themes in teachers' perceptions of feedback that relate to teacher self-efficacy?

An analysis of the open-ended questions designed to gain qualitative information on the relationship between teachers' perceptions of the feedback they receive and their

teaching efficacy was performed. For evaluative feedback, the data show that for the teachers with lower efficacy in Instructional Strategies, Relevant and Specific Evaluative Feedback was of more relative importance. In addition, the data show that for the teachers with higher efficacy in Instructional Strategies, the characteristic of Meeting and Dialogue for Evaluative Feedback was of more relative importance. Also for evaluative feedback, the data show that for the teachers with lower efficacy in Classroom Management, Relevant and Specific Evaluative Feedback was of more relative importance. In addition, the data show that for the teachers with higher efficacy in Classroom Management, the characteristic of Meeting and Dialogue for Evaluative Feedback was of more relative importance. Finally for evaluative feedback, the data show that for the teachers with lower efficacy in Student Engagement, there were no characteristics of evaluative feedback that were of clear, relative importance. In addition, the data indicate that for the teachers with higher efficacy in Student Engagement, the characteristic of Meeting and Dialogue for Evaluative Feedback was of more relative importance.

For formative feedback experiences, the data show that for the teachers with lower efficacy in Instructional Strategies, there were no characteristics of formative feedback experiences that were of clear, relative importance. In addition, the data indicate that for the teachers with higher efficacy in Instructional Strategies, formative feedback experiences that provide for Interactions with Literacy Coach were of more relative importance. Also for formative feedback experiences, the data show that for both the teachers with lower efficacy and higher efficacy in Classroom Management, there were no characteristics of feedback that were of clear, relative importance. Finally for

formative feedback experiences, the data show that for both the teachers with lower efficacy and higher efficacy in Student Engagement, there were no characteristics of feedback that were of clear, relative importance.

For total feedback, the data show that for both the teachers with lower efficacy and higher efficacy in Instructional Strategies, there were no characteristics of feedback that were of clear, relative importance. Also for total feedback, the data show that for the teachers with lower efficacy in Classroom Management, Structured Coordination of Total Feedback was of more relative importance. In addition, the data show that for the teachers with higher efficacy in Classroom Management, the characteristics of Climate and Sense of Coordination for Total Feedback were of more relative importance. Finally for total feedback, the data show that for the teachers with lower efficacy in Student Engagement, Structured Coordination of Total Feedback was of more relative importance. In addition, the data show that for the teachers with higher efficacy in Student Engagement, the characteristics of Climate and Sense of Coordination for Total Feedback were of more relative importance.

Findings

In Indiana, teacher evaluation has been under scrutiny by legislators looking to reform education. Effective in the fall of 2012, Indiana Public Law 90 (2011) (formerly known as SEA 1) ushered in substantial change in the evaluation of teachers. Highlights of the law include the requirement that all Indiana educators are to receive evaluations that are annual, objective and based on multiple measures, thus allowing them to improve.

As a result, administrators are faced with the requirement of greatly increasing the amount of feedback they give to teachers, and teachers are faced with a pronounced increase in the amount of evaluative feedback they receive. In the school district of study, the expectation for evaluative feedback frequency was stated in their plan as, “The evaluator makes frequent classroom observations and provides feedback.” In preparing to provide a teacher with a summative evaluation designation of highly effective, effective, needs improvement, or ineffective, principals were to follow the evaluation plan which stated, “The primary evaluator compiles ratings and notes from observations, conferences, and other sources of information.” Thus, there was abundant autonomy provided to principals for the supervision of instruction and evaluation of teachers in this district, hence blurring the lines significantly between evaluative and formative feedback from a principal. The evaluation plan from the district said, “At the end of the school year, the primary evaluator should have collected a body of information representing teacher practice from throughout the year. The primary evaluator uses professional judgment to establish final ratings in each competency of the domains of Planning, Instruction, and Involvement.”

Also in this district where principals were required to provide ample feedback that teachers no doubt perceived as evaluative, there were copious opportunities for teachers to receive formative feedback. Elementary teachers in this district had 30 minutes of required collaboration time at the start of each school day. Moreover, each elementary school in the district had a full-time literacy coach who worked – often alongside the principal – to assist teachers in improving their instruction. All of the district’s literacy

coaches had been successful classroom teachers, trained in instructional coaching best practices, and provided leadership coaching to partner with principals to support teachers.

An examination of data from the survey reveals positive teacher perceptions for all of the feedback characteristics. Reliability testing showed appropriate levels for all characteristics except Timely and Ongoing Evaluative Feedback and three of the four formative feedback characteristics: Participation, Support, and Emotional Intelligent. The formative feedback characteristics were most unreliable. Item analysis of the pairs of survey questions linked to each of these characteristics shows teachers' perceptions more positive for colleagues as opposed to literacy coach in all three cases. This is supported by the data gained from the open-ended questions. Of the 109 total responses to the formative feedback question, 104 mentioned the literacy coach (85 positive and 19 negative), and 59 mentioned colleagues (58 positive and 1 negative). It is not surprising that in the current environment of accountability and increased pressure on teachers that colleagues are viewed more positively than other sources of feedback.

An examination of the data from the survey also shows that teachers in this district are generally highly efficacious. The means of the teacher efficacy subscales are as follows: Classroom Management – 7.59, Student Engagement – 7.13, and Instructional Strategies – 7.66. All three subscale means correspond to the category “Quite a Bit” on the TSES. This is good news for the district as research in the review of literature shows the positive outcomes produced by highly efficacious teachers. However, inspection of the subscales of the TSES with respect to demographic group shows some differences between groups of Grade Taught and Degree Obtained. While it is difficult to make inferences why this is the case between groups of Grade Taught, it is

not surprising that the differences between groups of Degree Obtained shows that more formal education a teacher possesses is related to higher teacher self-efficacy.

Hierarchical multiple regression shows that factors of Teaching Assignment, Degree Obtained, Years Teaching in the District, and characteristics of formative feedback experiences did not have a significant predictive relationship to any of the subscales of the TSES. When these results are considered in light of the sources of teacher efficacy contained in the literature review, it is surprising and leads to questions. For example, why is it that in a district where formative feedback experiences are abundant and align with many efficacy building sources there is not clear evidence of greater teacher efficacy? The answer may be found in an examination of the prerequisite conditions needed for such formative experiences to be most successful such as trust and school climate. Furthermore, it is possible that the climate of Indiana schools due to legislative mandates has had an undermining effect on efficacy building sources such as psychological and emotional states. Research shows that experiencing delight or anxiety when carrying out a task has an impact on the development of self-efficacy beliefs, and it is not just the intensity of these internal reactions, but how the individual processes them (Bandura 1977, 1996). Finally, the unreliability of three of four of the formative feedback survey items as discussed in chapter 4 certainly contributed to these regression results.

Hierarchical multiple regression shows that factors of Teaching Assignment, Degree Obtained, Years Teaching in the District, and characteristics of evaluative feedback did have a significant predictive relationship to teacher self-efficacy for Instructional Strategies and Classroom Management and did not for Student Engagement.

However, of all four evaluative feedback characteristics, regression found only the Emotional Intelligent characteristic to significantly predict teacher self-efficacy (Instructional Strategies). When coupled with the analysis of the open-ended evaluative feedback question, a clearer picture of the relationship between teachers' perceptions of feedback and their teaching efficacy is seen. For all three subscales of the TSES, the characteristic of Meeting and Dialogue for evaluative feedback was of more relative importance for the highly efficacious teachers. In an environment where, for the very first year, frequent observations and frequent feedback is mandated for all certified teaching staff, these findings support the notion that principals should leverage personal relationships and time-intensive approaches to build the self-efficacy of teachers. This is supported by research that suggests active principal supervision in the form of frequent classroom observations and conferencing activities in itself does not directly influence confidence, trust, and/or support of the principal. Increased teacher efficacy is obtained only through the extent to which teachers believe the principal is interested in and committed to supporting teaching. Principal actions that demonstrate this include conferencing, offering improvement assistance through a positive relationship, and increased dialogue centered around learners in a collaborative teacher-principal relationship (Ebmeier, 2003; Ovando, 2001).

Hierarchical multiple regression shows that factors of Teaching Assignment, Degree Obtained, Years Teaching in the District, and characteristics of total feedback did have a significant predictive relationship to teacher self-efficacy for Classroom Management and did not for Instructional Strategies and Student Engagement. Of the two total feedback characteristics, regression found only the Aligned characteristic to

significantly predict teacher self-efficacy (Classroom Management). When coupled with the analysis of the open-ended evaluative feedback question, a clearer picture of the relationship between teachers' perceptions of feedback and their teaching efficacy is seen. For the Classroom Management subscale of the TSES, the characteristics of Climate and Sense of Coordination for evaluative feedback were of more relative importance for the highly efficacious teachers. In this study, qualitative analysis shows Climate referring to a general measure of the quality of relationships among staff and Sense of Coordination referring to a general sense of working together through unstructured processes. In an environment where there are fresh mandates for the evaluation of all certified teaching staff, these findings support the notion that leaders should work to ensure teachers are hearing the same things from those who are in place to support their growth, and the school environment should be fertile ground for quality relationships. This is supported by literature that suggests administrators and instructional coaches have common responsibilities such as developing relationships, observing teachers, analyzing assessment data, providing resources, and challenging teachers (Hall & Simeral, 2008).

An examination of the data from the open-ended questions of the survey shows that teachers with different levels of self-efficacy perceived useful and helpful feedback differently. As explained in the analysis of research question 5, lower efficacious and more highly efficacious teachers place more relative importance on different characteristics of evaluative, formative, and total feedback. The qualitative data show that for all three questions, more highly efficacious teachers describe characteristics of feedback that honor relationships, require more personal attention, and promote climate

and positive feelings as most important in supporting their efficacy. In contrast, the qualitative data show that less highly efficacious teachers describe characteristics of feedback that are more directive, specific, and structured as most important in supporting their efficacy. Taking this into consideration, principals should be mindful of differentiating their feedback to teachers based on a teacher's sense of self-efficacy. Marcus Buckingham and Curt Coffman point to differentiation in leadership in their book *First, Break All the Rules* which was based on extensive research in over 400 companies. The authors state, "Despite their differences, great managers do share one thing: Before they do anything else, they first break all the rules of conventional wisdom. They consistently disregard the Golden Rule. And, yes, they even play favorites" (1999, p. 11). Differentiation in leadership, where a principal customizes feedback based on the capacity and self-efficacy of a teacher, demands astute attention to the individual teacher he or she supervises and no doubt requires a commitment to developing and sustaining meaningful relationships. Ultimately, a leader must know his or her people.

Implications and Suggestions for Future Research

This study of the relationship between teachers' perceptions of the feedback they receive and their teaching efficacy in high-performing elementary schools provided a greater understanding of current practices while reaching conclusions that offer ideas for promising future research. All schools in the district of study have been successful. However, in an era of continuous improvement where schools are expected to be better today than they were yesterday, all programs, policies, and initiatives must be inspected

to achieve the goal of optimal student achievement. It stands to reason that these high-performing elementary schools would be successful irrespective of close attention to specific characteristics of evaluative, formative, and total feedback. Nonetheless, a school's ascent into superior achievement both regionally and nationally could be a result of maximizing the efficacy of teachers. As a result of the findings of this study, schools that offer rich opportunities for formative feedback experiences would be remiss to not assess their climate to identify areas needed for improvement as well as monitor teacher perceptions of the variety of formative experiences offered. Also, when delivering evaluative feedback principals should adhere to the tenants of emotional intelligence which include offering reflective questions in a non-threatening approach. In addition, principals and instructional coaches who work together to build the capacity of teachers should work to use the same language and prescribe similar solutions to best align the feedback they deliver. Finally, the findings in this study imply that differentiation in leadership shows promise in best building the self-efficacy of teachers leading to greater student achievement.

As this study finds, teachers perceive formative feedback experiences with teacher colleagues differently from those with an instructional coach. Future studies could focus on a more in-depth qualitative inspection of these varying types of formative feedback experiences and teacher efficacy. As more schools and districts leverage in-house professional development efforts to support teachers, there will be many opportunities for inquiry into the methods that are most related to teacher efficacy. Evident in this study is a significant negative correlation between Years Teaching in District and teachers' perceptions of both Coordinated and Aligned Total Feedback.

Future studies could further explore teachers' perceptions of the teamwork between principals and teacher leaders. Also, since this study suggests that climate and emotional intelligence are factors that impact teacher efficacy, future studies could look more closely at the construct of emotional intelligence, its interplay with school climate, and its connectedness to efficacy-building sources such as social persuasion and psychological and emotional states. Disaggregation of the data with respect to demographic variables could be beneficial in establishing connections to various groups of teachers.

Limitations and Threats to Validity

There are a number of limitations to this study. First, the participants were not randomly selected. Since this study focused solely on high-performing elementary schools within one school district in Indiana, the span of the research is too narrow to be generalized to other schools and districts. Also, the results of this study were limited by the researcher-selected characteristics of varying types of feedback. While the review of the research and literature informed these selections, they were ultimately based on the researcher's interpretation of what could be most important in relating to increased teacher efficacy. Also limiting the study is the fact that the teachers in the schools were highly efficacious in general. The schools in this district have had a history of success, likely due to having students who most often come from supportive, relatively affluent families. Furthermore, the research design provided for a single survey approach to the sample. Thus, this study could only make conclusions on relationships and not causations due to the chicken or egg problem that is unavoidable. Another limitation to

this study is the possibility of very different principal-teacher relationships in the various schools. Different perceptions of leadership could further impact a school's climate that is already under the pressure of legislative mandates to teacher evaluation. As a result, teachers' perceptions of the measured characteristics of evaluative, formative, and/or total feedback they receive could have been impacted.

Conclusion

As reform efforts are prescribed in every state through mandates and regulations in an effort to better prepare students to compete in a global economy, and as states like Indiana implement new evaluation plans for teachers based on a rigorous rubric and objective measures of student achievement, close attention to the ripple effects must be involved. While efforts such as professional learning communities and instructional coaches are aimed at building teacher capacity, maximum results can only be achieved when school leaders balance how they leverage their evaluative power while promoting these formative experiences.

More highly efficacious teachers can demonstrate greater effectiveness and have more positive influence on student learning than teachers who are less efficacious. This study explored teachers' perceptions of the characteristics of the feedback they receive in six high-performing elementary schools in Indiana, rich with evaluative and formative feedback. So while the chicken or egg problem remains, this study has been successful in yielding needed clarity on the relationship between teachers' perceptions of various types of feedback they receive and their teaching efficacy.

REFERENCES

REFERENCES

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist, 28*, 117-148.
- Bandura, A. (1994). Self-efficacy. *Encyclopedia of Human Behavior, 4*, 71-81. New York: Academic Press. (Reprinted in H. Freidman [Ed.], *Encyclopedia of Mental Health*. San Diego: Academic Press, 1998).
- Bandura, A. (1996). *Self-efficacy in changing societies*. New York: Cambridge University Press.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman.
- Billingsley, B., Carlson, E., & Klein, S. (2004). The working conditions and induction support of early career special educators. *Exceptional Children, 70*(3), 333-347.
- Buckingham, M., & Coffman, C. (1999). *First, break all the rules*. New York: Simon & Schuster.
- Cantrell, S. C., & Hughes, H. K. (2008). Teacher efficacy and content literacy implementation: An exploration of the effects of extended professional development with coaching. *Journal of Literacy Research, 40*, 95-127.

- Casey, K. (2006). *Literacy coaching: The essentials*. Portsmouth, NH: Heinemann.
- Center for Comprehensive School Reform and Improvement/Learning Point Associates
Newsletter. (2007). *Using the classroom walk-through as an instructional
leadership strategy*. Retrieved from
<http://www.eric.ed.gov/PDFS/ED495741.pdf>.
- Charf, M. R. (2009). Explaining perceptions of principal leadership behaviors that
enhance middle school teacher self-efficacy: a mixed methods study. *Proquest*.
(UMI No. 3365839).
- Chase, B., Germundsen, R., Brownstein, J. C., & Distad, L. S. (2001). Making the
connection between increased student learning and reflective practice.
Educational Horizons, 143-147.
- Ciani, K. D., Summers, J. S., & Easter, M. A. (2007). A “top-down” analysis of high
school teacher motivation. *Contemporary Educational Psychology*, 33(2008),
533-560.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods
approaches (3rd ed)*. Thousand Oaks, CA: Sage.
- Creswell, J. W. & Plano Clark, V. L. (2007). *Designing and conducting mixed methods
research*. Thousand Oaks, CA: Sage.
- Danielson, C. (2007). *Enhancing professional practice: A framework for teaching (2nd
ed.)*. Alexandria, VA: Association for Supervision and Curriculum
Development.

- Danielson, C. & McGreal, T. L. (2000). *Teacher evaluation: To enhance professional practice*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Darling-Hammond, L. & Bransford, J. (Ed.). (2005). *Preparing teacher for a changing world: What teachers should learn and be able to do*. San Francisco, CA: Jossey-Bass.
- Darling-Hammond, L., Wise, A. E., & Pease, S. R. (1983). Teacher Evaluation in the Organizational Context: A Review of the Literature. *Review of Educational Research, 53*(3), 285-328.
- Dembo, M., & Gibson, S. (1985). Teachers' sense of efficacy: An important factor in school improvement. *The Elementary School Journal, 86*(2), 173-184.
- DuFour, R., & Eaker, R. (1998). *Professional learning communities as work: best practices for enhancing student achievement*. Bloomington, IN: National Educational Service.
- Ebmeier, H. (2003). How supervision influences teacher efficacy and commitment: An investigation of a path model. *Journal of Curriculum and Supervision, 18*(2), 110-141.
- Frase, L. E. (1992). Constructive feedback on teaching is missing. *Education, 113*(2), 176-181.
- Fuchs, L. S., Fuchs, D., & Bishop, N. (1992). Instructional adaptation for students at risk. *Journal of Educational Research, 86*, 70-84.
- Gibson, S., & Dembo, M. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76*(4), 569-582.

- Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. (2000). Collective teacher efficacy: its meaning, measure, and impact on student achievement. *American Educational Research Journal, 37*(2), 479-507.
- Goleman, D. (1998). *Working with emotional intelligence*. London: Bloomsbury.
- Guskey, T. R., & Passaro, P. D. (1994). Teacher efficacy: A study of construct dimensions. *American Educational Research Journal, 31*, 627-643.
- Haefele, D. L. (1993). Evaluating teachers: a call for change. *Journal of Personnel Evaluation in Education, 7*(1), 21-31.
- Hall, P., & Simeral, A. (2008). *Building teachers' capacity for success: A collaborative approach for coaches and school leaders*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research, 77*(1), 81-112.
- Hawley, W. D. (Ed.). (2007). *The keys to effective schools: educational reform as continuous improvement*. Thousand Oaks, CA: Corwin Press.
- Henry Ford Quotes. (n.d.). *Quotes.net*. Retrieved from <http://www.quotes.net/quote/6037>.
- Henson, R. K. (2001). The effects of participation in teacher research on teacher efficacy. *Teaching and Teacher Education, 17*, 819-836.
- Hipp, K. A. (1995). Exploring the relationship between principals' leadership behaviors and teachers' sense of efficacy in Wisconsin middle schools. *Proquest*. (UMI No. 9527144).

- Hord, S. M. (Ed.). (2004). *Learning together, leading together*. New York, NY: Teachers College Press.
- Hoy, W. K., Tarter, C. J., & Kottkamp, R. B. (1991). *Open schools, healthy schools: measuring organizational climate*. Newbury Park, CA: Corwin Press.
- Hoy, W. K., & Woolfolk, A. (1993). Teachers' sense of efficacy and the organizational health of schools. *The Elementary School Journal*, 93(4), 355-372.
- Indiana Department of Education. (2012). *Evaluation law and guidance*. Retrieved from <http://www.doe.in.gov/improvement/educator-effectiveness/evaluation-law-and-guidance>.
- International Reading Association. (2010). *Standards for reading professionals*. Retrieved from http://www.readoregon.org/pdf/IRAstandards_2010.pdf.
- Kachur, D. S., Stout, J. A., & Edwards, C. L. (2010). *Classroom walkthroughs to improve teaching and learning*. Larchmont, NY: Eye on Education.
- LeDuc, V. (2009). The relation between teachers' perceptions about feedback they receive about their teaching from their principals and colleagues and their perceptions of collective efficacy. *Proquest*. (UMI No. 3368385).
- Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.
- McCall, J. (2011). Teachers' perceptions' of evaluation and teachers' sense of self-efficacy in high-performing high schools. *Proquest*. (UMI No. 3507267).

- Midgley, C., Feldlaufer, H., & Eccles, J. S. (1989). Change in teacher efficacy and student self- and task-related beliefs in mathematics during the transition to junior high school. *Journal of Educational Psychology, 81*(2), 247-258.
- Millman, J. (Ed.). (1981). *Handbook of teacher evaluation*. Beverly Hills, CA: Sage.
- Mortiboys, A. (2012). *Teaching with emotional intelligence* (2nd ed.). New York, NY: Routledge.
- Newton, R. R. & Rudestam, K. E. (1999). *Your statistical consultant: Answers to your data analysis questions*. Thousand Oaks, CA: Sage
- Ovando, M. N. (2001). Teachers' perceptions of a learner-centered teacher evaluation system. *Journal of Personnel Evaluation in Education, 15*(3), 213-231.
- Powell, E. D. (2011). The relationship between elementary school climate and teacher perceptions about evaluation. *Proquest*. (UMI No. 3489244).
- Reeves, D. B. (2006). Leading to change: Preventing 1,000 failures. *Educational Leadership, 64*(3), 88-89.
- Richardson, J. (2001). Seeing through new eyes: Walkthroughs offer new way to view schools. *NSDC Tools for Schools*, October/November.
- RISE. (2012). *Rise evaluation and development system*. Retrieved from <http://www.riseindiana.org/>.
- Ross, J. A. (1992). Teacher efficacy and the effects of coaching on student achievement. *Canadian Journal of Education, 17*, 51-65.
- Ross, J. A. (1994). The impact of an inservice to promote cooperative learning on the stability of teacher efficacy. *Teaching and Teacher Education, 10*, 381-394.

- Runhaar, P., Sanders, K., & Yang, H. (2010). Stimulating teachers' reflection and feedback asking: An interplay of self-efficacy, learning goal orientation, and transformational leadership. *Teaching and Teacher Education, 26*, 1154-1161.
- Saklofske, D., Michayluk, J., & Randhawa, B. (1988). Teachers' efficacy and teaching behaviors. *Psychological Reports, 63*(2), 407-414.
- Salovey, P. & Mayer, J. (1997). What is emotional intelligence? In Salovey, P. & Sluyter, D. (Eds.), *Emotional development and emotional intelligence: Implications for educators* (3-31). New York, NY: Basic Books.
- Shaughnessy, M. F. (2004). An interview with Anita Woolfolk: The educational psychology of teacher efficacy. *Educational Psychology, 16*(2), 153-176.
- Smylie, M. A. (1989). Teachers' views of the effectiveness of sources of learning to teach. *The Elementary School Journal, 89*(5), 543-558.
- Stiggins, R. J., & Duke, D. L. (1988). *The case for commitment to teacher growth: research on teacher evaluation*. Albany: State University of New York Press.
- Stronge, J. H., & Tucker, P. D. (2003). *Handbook on teacher evaluation: assessing and improving performance*. Larchmont, N.Y.: Eye On Education.
- Tschannen-Moran, M., Hoy, W. (2000). A multidisciplinary analysis of the nature, meaning, and measurement of trust. *Review of Educational Research, 70*, 547-593.
- Tschannen-Moran, M., & McMaster, P. (2006, April). *Sources of self-efficacy beliefs: Four professional development models and their relationship to self-efficacy and implementation of a new teaching strategy*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: capturing an elusive construct. *Teaching and teacher education*, 17(7), 783-805.
- Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K., (1998). Teacher efficacy: Its meaning and measure. *American Educational Research Journal*, 68(2), 202-248.
- Wagner, N. C., & Hill, M. S. (1996, November). *Linking teacher evaluation, professional growth, and motivation: a multiple-site case study*. Paper presented at the Annual Meeting of the Southern Regional Council on Educational Administration, Savannah, GA.
- Wood, A. N. (2011). High-school teachers' experiences with formative feedback and its predictive relationship to self-efficacy and job satisfaction. *Proquest*. (UMI No. 3460647).
- Wiggins, G. (2012). 7 keys to effective feedback. *Educational Leadership*, 70(1), 11-16.
- Woolfolk Hoy, A. (2012). *Instruments*. Retrieved from <http://people.ehe.osu.edu/ahoy/research/instruments/>.

APPENDICES

Appendix A

Feedback and Efficacy Survey

Dear Elementary Teacher,

I am the Assistant Principal at Summit Middle School and a doctoral candidate in Educational Leadership at Purdue University-West Lafayette. Dr. Marilyn A. Hirth is my major professor and is guiding my research.

I am requesting your help in completing my dissertation by allowing me to study your perceptions of the feedback you receive. More precisely, I am interested in your perceptions of specific characteristics of feedback you receive from your principal(s), literacy coach, and other colleagues. For this study, feedback is defined as *information delivered to a person regarding the performance of a task*. The study is also interested in your perceptions of your teaching efficacy.

I am asking for 15 minutes of your time to complete an online survey which consists of 39 questions. While the survey may seem long, please know that your answer to each question is valuable and will contribute to the results. Neither the district nor any building or individual within the district will be identified in the study. All data will be anonymous, confidential, and reported out as a total quantity.

The survey has been built around the work of Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: capturing an elusive construct. *Teaching and teacher education*, 17(7), 783-805.

Furthermore, because of changes in evaluation due to legislation, when answering questions concerning feedback from your principal(s), please consider the feedback to be all information given to you from your principal(s) about your teaching. Also, please view the questions from the standpoint of your experience rather than concerns of any future changes in policies or laws.

If you have any questions regarding the survey or the study, please contact me through email or by phone. Questions about the study in general may be directed toward my research supervisor, Dr. Marilyn A. Hirth, at 765-494-0319.

Again, please base your responses on your experiences this school year and not on a possible future. I very much appreciate your time and effort in completing this survey.

Thank you,

Josh St. John
jstjohn@sacs.k12.in.us
260-431-2591

Dr. Marilyn A. Hirth
Associate Professor of Educational Studies
Purdue University
mahirth@purdue.edu

This survey has 4 sections. Its purpose is to gain a better understanding of the types of feedback teachers receive and teachers' efficacy for teaching. Please answer openly and honestly. All responses are *anonymous* and *confidential*. Section I has 4 questions regarding teacher demographics.

Including the current year, how many years have you taught in the district?

1 Year 2-5 Years 6-10 Years 11-15 Years 16 Or More Years

How many years have you taught outside of this district?

0 Years 1-5 Years 6-10 Years 11-15 Years 16 Or More Years

What is the highest degree level you have obtained?

Bachelor's Master's Master's + 30 or more Doctorate

What grade are you teaching this school year?

Kindergarten First Second Third Fourth Fifth Multiple (Sp Ed) Multiple (Special Areas)

Section II - Teachers' Perceptions of the Feedback They Receive

This part of Section II of the survey has 8 prompts. The prompts are designed to gather information on the characteristics of feedback teachers have received from their **principal or assistant principal** during the **current** school year. Please answer openly and honestly. There are no correct or incorrect answers. Your responses are *anonymous* and *confidential*.

My principal gives me information about my teaching frequently and at various times throughout the year.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

I am able to meet goals and grow professionally because of the feedback I receive from my principal.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

The information I receive from my principal is **NOT** accurate in describing what happens in my classroom.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

My principal provides me comments and questions that are non-threatening and cause me to reflect and consider alternatives.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

The feedback my principal provides me is **NOT** delivered in a prompt and timely fashion.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

After my principal observes my teaching, the comments he/she provides me are accurate.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

When my principal gives me feedback, it is **NOT** connected to school goals or areas relevant to my teaching.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

The information my principal provides me about the learning in my classroom is fair and respectful.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

This part of Section II of the survey has 8 prompts. The prompts are designed to gather information on the characteristics of feedback teachers have received from their **literacy coach and other teachers** during the **current** school year. Please answer openly and honestly. There are no correct or incorrect answers. Your responses are *anonymous* and *confidential*.

The feedback I receive from my literacy coach about curriculum and instruction is accurate.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

I am supported by the feedback my literacy coach provides me in meeting important school goals.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

I do **NOT** regularly participate in discussions about my teaching with colleagues in this school.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

My literacy coach provides me comments and questions about my teaching that are non-threatening and cause me to reflect and consider alternatives.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

Discussions I have about my teaching while collaborating with colleagues do **NOT** support my efforts to improve.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

My literacy coach works with me throughout the year to help with my instruction.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

The information my literacy coach provides me about my students' learning is **NOT** accurate.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

When collaborating with other teachers about my teaching, the information I receive is fair and respectful.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

This part of Section II of the survey has 4 prompts. The prompts are designed to gather information on the characteristics of the **TOTAL** feedback teachers have received during the **current** school year. **TOTAL** feedback is defined as the cumulative feedback from the principal(s), literacy coach, and teachers. Please answer openly and honestly. There are no correct or incorrect answers. Your responses are *anonymous* and *confidential*.

My principal, literacy coach, and other teachers I work with coordinate their efforts to help me improve student achievement.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

The feedback my literacy coach and other teachers provides me is **NOT** aligned to feedback provided by my principal.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

The information I receive about my teaching from my principal and literacy coach is similar.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

I do **NOT** believe that my principal and literacy coach coordinate their efforts to support my professional growth.

Strongly Disagree Disagree Somewhat Disagree Somewhat Agree Agree Strongly Agree

Section III - Teacher Efficacy

Section III of the survey has 12 questions. They are designed to gain a better understanding of the kinds of things that create challenges for teachers. Please indicate your opinion about each of the questions by marking any one of the nine responses which range from "Nothing" to "A Great Deal" as each represents a degree on the continuum. Please answer openly and honestly. There are no correct or incorrect answers. Your responses are *anonymous* and *confidential*.

How much can you do to control disruptive behavior in the classroom?

Nothing Very Little Some Influence Quite A Bit A Great Deal

How much can you do to motivate students who show low interest in school work?

Nothing Very Little Some Influence Quite A Bit A Great Deal

How much can you do to get students to believe they can do well in school work?

Nothing Very Little Some Influence Quite A Bit A Great Deal

How much can you do to help your students value learning?

Nothing Very Little Some Influence Quite A Bit A Great Deal

To what extent can you craft good questions for your students?

Nothing Very Little Some Influence Quite A Bit A Great Deal

How much can you do to get children to follow classroom rules?

Nothing Very Little Some Influence Quite A Bit A Great Deal

How much can you do to calm a student who is disruptive or noisy?

Nothing Very Little Some Influence Quite A Bit A Great Deal

How well can you establish a classroom management system with each group of students?

Nothing Very Little Some Influence Quite A Bit A Great Deal

To what extent can you use a variety of assessment strategies?

Nothing Very Little Some Influence Quite A Bit A Great Deal

To what extent can you provide an alternate explanation or example when students are confused?

Nothing Very Little Some Influence Quite A Bit A Great Deal

How much can you assist families in helping their children do well in school?

Nothing Very Little Some Influence Quite A Bit A Great Deal

How well can you implement alternative teaching strategies in your classroom?

Nothing Very Little Some Influence Quite A Bit A Great Deal

Section IV - Types of Feedback and Teacher Efficacy (open-ended)

Section IV of the survey has 3 open-ended questions. They are designed to gain a better understanding of teachers' perceptions of the feedback they receive at their schools. Please answer openly and honestly. There are

no correct or incorrect answers. Your responses are *anonymous* and *confidential*.

Would you please describe the types of feedback you received from your **principal(s)** this year that helped you grow more confident in your ability help all kids learn? Please consider the following: How was some information provided from the **principal(s)** about your teaching more valuable to you than other information? What do you see as the primary characteristics of this feedback from the **principal(s)** that made it useful to you this year?

/

Would you please describe the types of experiences you had with your **literacy coach and/or other teachers** that you found most helped you improve student learning this year? Please consider the following: How were some encounters with the **literacy coach and/or other teachers** more valuable to you than other encounters? What do you see as the primary characteristics of these encounters that made them useful to you this year?

/

Would you please describe how your **principal(s), literacy coach, and colleagues work together** for school improvement? What do you see as the primary characteristics of this **teamwork** that supports your ability to produce student achievement?

Appendix B

Permission to Use the Teachers' Sense of Efficacy Scale



ANITA WOOLFOLK HOY, Ph.D.

PROFESSOR
PSYCHOLOGICAL STUDIES IN EDUCATION

Dear

You have my permission to use the *Teachers' Sense of Efficacy Scale* in your research. A copy of both the long and short forms of the instrument as well as scoring instructions can be found at:

<http://www.coe.ohio-state.edu/ahoy/researchinstruments.htm>

Best wishes in your work,

A handwritten signature in cursive script that reads 'Anita Woolfolk Hoy'.

Anita Woolfolk Hoy, Ph.D.
Professor

VITA

VITA

Joshua D. St. John

Education:

- Pd.D. Educational Leadership, Purdue University, December 2013
- M.A. Educational Administration, Ball State University, May 2006
- B.S. Mathematics Teaching, Indiana Purdue Fort Wayne, May 1999

Professional Experience:

- | | |
|----------------|---|
| 2013 – Present | Principal – Summit Middle School
Southwest Allen County Schools |
| 2010 – 2013 | Assistant Principal/AD – Summit Middle School
Southwest Allen County Schools |
| 2007 – 2010 | Assistant Principal/AD – Carroll Middle School
Northwest Allen County Schools |
| 2006 – 2007 | Assistant Principal – Huntington North High School
Huntington County Community Schools |
| 2004 – 2006 | Math Teacher – Homestead High School
Southwest Allen County Schools |
| 1999 – 2004 | Math Teacher – Carmel High School
Carmel Clay Schools |