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VOLUSIA SYSTEM FOR EMPOWERING TEACHERS (VSET):
INFLUENCE ON TEACHER PRACTICE AND STUDENT ACHIEVEMENT

by

LESLEY M. SILEO-ROBINSON
B.S. Florida State University 1977
M.S. Florida State University 1979
M.S. Stephen F. Austin University 1990

A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Education
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Major Professors: Randall Hewitt/Carolyn Hopp

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ABSTRACT

This study provides an empirical analysis of the primary assumptions of a newly implemented teacher evaluation system, namely that the specific teaching practices evaluated are related to student achievement, and that teacher-directed professional growth plans effectively shape teacher practices in a particular domain. Results of the study are intended to inform the interpretation and the refinement of the Volusia System for Empowering Teachers (VSET), which aims to build capacity in the Volusia teacher work force and ultimately to improve student performance (School Board of Volusia County Team Volusia, Race to the Top application, 2011). This study focused on 14 pilot schools within one school district that implemented VSET as a new teacher evaluation system. The data used in this study were drawn from a multi-metric teacher assessment used in VSET and measures of student achievement. The VSET evaluation model consists of three metrics that are assigned according to the specific categories of a teacher. Two of the metrics, the *professional growth plan rating* and the *educator observation rating* are based on Charlotte Danielson's "Framework for Teaching" (Danielson, 2007). The third metric, the *valued added score* is a measure of the teacher's impact on student learning. The current study focused on determining if there was a correlation between teaching practice and student achievement and to what extent teaching practice was impacted by teacher self-selection of components for professional growth in the teacher evaluation model. The findings suggest that there is not a statistically significant and reliable relationship between the value added score and teacher practices across components, as assessed by VSET evaluators. Follow up analyses did, however, show that higher evaluator observation scores are associated with improved school

grades, suggesting a relationship between teacher impact on student performance. The results support the assumption that the successful completion of the VSET professional development growth plan is associated with teacher's instructional practices in the identified component.

Keywords: Teacher evaluation, professional development, Danielson Framework

With respect and love,
my work is dedicated to my parents,
Nick and Nida Sileo
who lived their lives dedicated to helping others,
believing in a democratic society.

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CHAPTER 1: INTRODUCTION

Background of the Study

Teacher quality is the most powerful predictor of student achievement in our public schools and policy makers recognize that we must build the capacity of our teacher workforce in order to improve student achievement on a national level (Akiba, LeTendre, & Scribner, 2007; Goldhaber & Anthony, 2003; National Academies, 2007). The majority of the educational reforms in the last decade have targeted improving teacher quality, including federal mandates such as the re-authorization of the national Elementary and Secondary Education Act in 2001 known as the No Child Left Behind Act (NCLB: Cohen-Vogel, 2005). Although NCLB includes provisions specifying that only “highly qualified” teachers may be hired, the law does not provide any directives for making such determinations (Goldhaber & Anthony, 2003). It has become increasingly clear that defining the characteristics of a quality teacher and examining which characteristics directly influence student achievement is critical to implementing educational reforms.

Evaluation Teacher Quality

The Secretary of Education, Arne Duncan, speaking at the National Education Association in 2009, said of the impending legislative educational reforms:

It’s time we all admit that just as our testing system is deeply flawed, so is our teacher evaluation system, and the losers are not just the children. When great teachers are unrecognized and unrewarded, when struggling teachers are unsupported, and when failing teachers are unaddressed, the teaching profession is damaged. (Duncan, 2009)

Although educators believe that they are able to subjectively recognize an effective teacher, the ability of a teacher evaluation system to credibly define, measure and improve teachers is at the forefront of the educational reform discourse (Bryk, Harding, & Greenberg, 2012). With the growing emphasis on accountability and a significant body of accumulated research that establishes the relationship between teacher effects and student achievement, the interest in the development and implementation of new teacher evaluation systems that examine teacher quality is critical to educational reform (Hill, Charalambous, & Kraft, 2012; Roosevelt, 2011).

The Secretary and President Obama introduced Race to the Top in 2009, which provides competitive federal grants to support educational reforms, including teacher evaluation models based on student scores (Martin & Lazaro, 2011). Improving teacher effectiveness based on student performance is a major emphasis in the criteria in which states are selected as recipients for this funding. Race to the Top directives, in combination with the opportunity for federal funding and grant support from the Bill and Melinda Gates foundation, prompted states such as Florida to participate in this reform by designing, implementing, and evaluating methods of measuring teacher effectiveness (Alvarez & Anderson-Ketchmark, 2011). The emphasis on educational accountability has also elicited national efforts to develop Value Added Models that provide a measure for student learning derived from a statistical analysis of gains in standardized scores to assess teacher effectiveness (Newton, Darling-Hamond, Haertel, & Thomas, 2010). The consensus among school reformers is that teacher evaluation systems need to be improved by including value added measures to better identify the ineffective teacher and help them to improve (Galley, 2011). The implementation of new teacher evaluation systems with value

added scores provide quantitative data sets to analyze variation in teacher performance and professional development (Johnson, 2012).

Florida received a Race to the Top grant in 2010 and designed and implemented a new teacher evaluation system that utilized multiple measures, including a statewide value added model for measuring student growth (Department of Education, 2012). As states respond to Race to the Top and implement new evaluation systems, the identified components of teacher practice warrant further analysis (Newton, Darling-Hammond, Haertel, & Ewart, 2010).

Volusia System for Empowering Teachers

The Volusia System for Empowering Teachers (VSET) is the new teacher evaluation system in Volusia County designed and implemented in response to the requirements of the Race to the Top grant. The new evaluation system requires the administrator and the teacher to collaboratively evaluate the quality and effectiveness of the instruction, which is a marked difference from the former model that assigned the entire responsibility of the evaluation to the administrator.

The implementation phase of VSET began during the 2011-2012 school year in Volusia County Schools (VCS). VCS is one of 67 school districts in Florida, and is comprised of nine high schools, twelve middle schools, and forty-five elementary schools. The Florida Department of Education released the school district grade of B for 2012 for VCS based on the Florida Comprehensive Assessment Test (FCAT) scores (Trimble & Martin, 2012). All schools in VCS participated in the student achievement/value added measure of VSET, which makes up 50% of teachers' final evaluation rating. During the school year 2012-2013, 14 schools were selected to

pilot the new evaluation system in its entirety, which included three measures: value added score, evaluator observation rating (i.e. observations of teacher practices), and the professional growth plan rating. The entire faculty at each of the 14 pilot schools voted to participate by secret ballot with a range of 67% to 100% approval.

Prior to the beginning of the school year, a VSET team from each school was selected by the school's principal. The VSET team for each school consisted of the principal, all assistant principals, and two teachers. The teams attended one week of training with Ms. Paula Bevan, a consultant with Charlotte Danielson Inc. The school teams participated in monthly site visitations with Ms. Bevan and other school district personnel, and attended monthly district meetings in which all of the 14 pilot schools attended. The instructional staff of each school participated in an 8-hour training prior to the beginning of the school year. They also attended 2-hour training sessions on each of the eight early release professional development days throughout the school year. The VSET evaluation model is differentiated based on experience in teaching, experience in VCS and experience in subject/certification area and prior evaluation ratings.

This study sought to utilize the newly implemented evaluation system, VSET, to provide the first empirical investigation of teacher effectiveness ratings based on the Value Added Model in VCS, Florida, and to examine the relationship of professional development with teacher practices.

Conceptual Framework

The constructivist framework proposes that learning is an adaptive process in which the learner is required to actively collaborate to make sense of their knowledge and experiences as they transition from their previously constructed knowledge base to developing a new conceptual structure (Maclellan & Soden, 2004; Yilmaz, 2008). Fosnot (1996) and Richardson (2003) assert that constructivism is a theory of learning, rather than teaching, and that it is important to identify the teacher as the learner in the teacher evaluation system (as cited in Yilmaz, 2008, p. 168). McLeod argues that the direction, focus, and effectiveness of instructional design in new teacher evaluation systems is grounded in theoretical framework and in the teachers' practical experiences (as cited in Yilmaz, 2008, p. 161).

VSET follows a constructivist approach, as it places the primary focus on the teacher as the learner, and engages the teacher in personal, authentic learning experiences that are relevant to his/her real world classroom environment to advance more meaningful learning. VSET applies the constructivist perspective by assuming that when the teacher develops a deeper conceptual understanding of instructional practices, s/he will more effectively implement those practices (Redden, Simon, & Aulls, 2007).

Purpose of the Study

The VSET reflects an ever-increasing emphasis on assessing and improving teacher effectiveness in an effort to improve student achievement. The purpose of this study was to provide an empirical analysis to test several critical assumptions inherent in VSET, one of the most recently implemented teacher evaluations systems in Florida mandated by Race to the Top.

This study will inform the full ‘roll-out’ of VSET across districts, and will provide further information to ground the development and refinement of efficient, effective evaluations systems targeting student achievement and professional development.

Significance of Study

As is evident from this focused review, there is a vast amount of literature in educational research identifying characteristics of a quality teacher potentially related to student achievement. These findings, along with other administrative and political factors, have informed the development of the newest generation of teacher evaluation systems. These evaluation systems provide the foundation for monitoring and operationalizing effective teaching, and aim to influence student achievement and improve student outcomes. Empirical rigor must be applied in determining the effectiveness of the teacher evaluation systems in capturing, measuring, and influencing key characteristics of quality teaching. The purpose of this study is to provide an empirical examination of the primary assumptions of the teacher evaluation system in Volusia County, namely that specific teaching practices evaluated are related to student achievement, and that teacher-directed professional growth plans effectively shape teacher practices in a particular domain. These findings may inform the interpretation and the refinement of the VSET, which aims to build capacity in the Volusia teacher work force and ultimately to improve student performance (School Board of Volusia County Team Volusia, Race to the Top application, 2011).

Research Questions

The study empirically addressed the following questions:

1. Is there a correlation between teaching practice, as measured by the VSET evaluator observation score of teacher practices across components, and student achievement, as indexed by the VSET Value Added score?
2. To what extent is the teacher's successful completion of the professional growth plan targeting a self-selected component related to objectively measured teaching practice in that component, as measured by the VSET professional development plan rating and evaluator observation score respectively?

Hypotheses

1. The teachers' total evaluator observation score will have a positive, significant correlation to the value added score.
2. The teacher directed professional growth plan rating will have a positive, significant relationship to the teacher's evaluation observation score on the corresponding individual teaching practice.

Methodology

Participants

This study takes place in the 13th largest school system in Florida with an enrollment of 61,000 students representing urban, suburban and rural populations. There are 82 schools in the district, including 45 elementary, 12 middle, 9 high, 2 combination (K-8 and 6-12), 6 alternative, and 8 charter schools.

Participants in this study were teachers from the fourteen pilot schools in Volusia County that were selected to implement VSET. The teachers were participants in the first year of VSET, and

were evaluated by school administrator(s) using the standardized evaluation. The data collected exceeded the projected sample size of 700 participants. The percent of total VSET evaluations conducted during 2011-2012 that was captured in the study samples across school sites are listed in Table 1. The data collection rates vary from approximately 70% to 100% of the total evaluation data available at each school, representing a very robust sample.

Table 1 Volusia County Pilot Schools: Percentage of Total Teacher Evaluations Collected Per School Site

Variable	Teacher Evaluation Sample	Value Added Sample
	N (% of population)	N (% of population)
School Site		
High School A	52 (75.36%)	69 (100%)
High School B	86 (88.66%)	97 (100%)
Middle School A	48 (72.73%)	66 (100%)
Middle School B	53 (100%)	53 (100%)
Middle School C	67 (93.06%)	72 (100%)
Middle School D	31 (81.58%)	38 (100%)
Elementary School A	45 (90%)	50 (100%)

Variable	Teacher Evaluation Sample	Value Added Sample
	N (% of population)	N (% of population)
Elementary School B	62 (100%)	59 (95.16%)
Elementary School C	42 (100%)	42 (100%)
Elementary School D	33 (82.5%)	40 (100%)
Elementary School E	39 (69.64%)	56 (100%)
Elementary School F	35 (100%)	32 (91.43%)
Elementary School G	34 (100%)	33 (97.06%)
Elementary School H	31 (70.45%)	44 (100%)

PGP Sample, N = 658; Value Added Sample, N = 751; % indicates percentage of total evaluations conducted at a particular school that were captured in the study sample

Measures

The data used in this study were drawn from a multi-metric teacher assessment used in VSET and measures of student achievement. The VSET evaluation model consists of three to four metrics that are assigned according to the specific categories of a teacher. Three of the metrics, the professional growth plan, the educator observation and the peer assistance review observation, are based on Charlotte Danielson’s “Framework for Teaching” (Danielson, 2007).

The framework divides teaching into 22 components which are grouped in four domains of teaching responsibility: Planning and Preparation (Domain 1), Classroom Environment (Domain 2), Instructions (Domain 3), and Professional Responsibilities (Domain 4). Rubrics for each of the 22 components provide a description of the level of performance with a rating to support improved teaching practices. The evaluators received certification in the Danielson Framework prior to scoring the evaluator observation and professional growth components.

The End of the Year Evaluation Report captures the detailed numerical score for the *Evaluator Observation Rating*, the *Professional Growth Plan* rating, and the *Value-Added Measure* (Appendix A). The summative rating for teachers with “Effective” or “Highly Effective” rating from the prior year is an average of three scored and weighted categories: Value Added (50%), Evaluator Observation (25%), and Professional Growth Plan (25%). The summative rating for teachers who are new to teaching, new to district or teaching assignment, educators with rating of “Needs Improvement” or “Unsatisfactory”, or are self-selecting into the program is an average of four scored and weighted categories: Value Added (50%), Educator Evaluation (20%), Peer Assistance Review Evaluation (20%), and Professional Growth Plan (10%). The teachers’ final summative rating is correlated to the numerical weighted average of the educator observation score, the professional development score and the value added score. The observation rating ranges from 0.0 to 3.0. Each of the 22 components is listed with their respective weights for each. The administrators’ score for each component is listed in a column corresponding to the listed domain and component. There is a column for the PAR score. The observation score is noted as a total on the bottom of the column of scores for all 22 components. This same numerical rating is also listed in the section for the Evaluator Observation Rating.

The Evaluator Observation Rating, Professional Growth Plan rating, and Value-Added Score are combined to reflect the teacher’s annual evaluation rating as a numerical value which correlates to the category of ‘distinguished,’ ‘proficient,’ ‘basic’ or ‘unsatisfactory’ as shown in Table 2.

Table 2 Ratings and Corresponding Numerical Values from the Observation and the Professional Growth Plan Rubrics

Volusia Multi-Metric Teacher Assessment	Score
<p>Distinguished: Professional teaching that innovatively involves students in the learning process and creates a true community of learners. Teachers performing at this level are <i>master teachers</i> and <i>leaders in the field</i>, both inside and outside of their school</p>	3
<p>Proficient: Successful, professional teaching that is <i>consistently</i> at a high level. Most experienced teachers frequently perform at this level.</p>	2
<p>Basic: Teaching that has the necessary knowledge and skills to be effective, but its applications is <i>inconsistent</i>.</p>	1
<p>Unsatisfactory: Teaching that does not convey understanding of the concepts underlying the component. This level of performance is <i>doing harm</i> in the classroom</p>	0

(VSET Handbook)

The data from the teachers' final evaluation produce a teachers' evaluator score, professional development score, and value added score (Appendix A). The final report also provides the teachers' score for each of the 22 instructional components.

The first measure is the teachers' self-selected component, recorded on the Professional Growth Plan, which is a nominal value of 1 to 22 to identify the component. The second measure is the rating of the professional growth plan, captured in the End of the Year Evaluation Report, and is an ordinal value of 0, 1, 2, or 3 Report. The rating is the numerical value associated with the performance category on the professional growth plan rubric, which was agreed upon by the teacher and the administrator. The third measure is the evaluator observation score assigned to each component that is recorded on the End of Year Evaluation Report. This rating is an ordinal value of 0, 1, 2, or 3. The fourth measure is the summative evaluator observation score captured on the End of the Year Evaluation Report. This rating is a continuous value from 0 through 3. The fifth measure is the value added score recorded on the End of the Year Evaluation Report. This formulaic score has a continuous value ranging from negative to positive values.

Data Analysis

A Pearson correlation analysis was used to determine if there was a relationship between the teachers' rating on instructional practices, as measured by the evaluator observation score across components, and student achievement, as determined by the value added score. A Spearman rank correlation analysis was used to determine if there was a relationship between the teachers' professional growth plan rating of a selected component and their practice for that specific

component on the evaluator observation as determined by the professional growth plan rating and the evaluator observation rating for the component.

Organization of the Study

The purpose of this study was to provide an empirical analysis of the primary assumptions of the teacher evaluation system in Volusia County, namely that the specific teaching practices evaluated are related to student achievement, and that teacher-directed professional growth plans effectively shape teacher practices in a particular domain. In Chapter 1, the research questions, purpose and significance of this study is described. In Chapter 2, a literature review establishes the historical and conceptual basis of new teacher evaluation systems, and aspects of improving teacher practices to impact student achievement. The methodology of the study is described in Chapter 3, and includes a description of the evaluation instrument. The results of the study are detailed in Chapter 4. The concluding chapter of the study, Chapter 5, focuses on a discussion of the results by the researcher and recommendations for future research.

CHAPTER 2: REVIEW OF LITERATURE

Background and Significance

Policymakers seek to assess and improve teacher quality by better quantifying the “value” of teacher effectiveness in new evaluation systems. However, it remains a challenge to define ‘teacher quality’ and to successfully measure critical dimensions of effective teaching (Kupermintz, 2003). (Rivkin, Hanushek, & Kain, 2001). Research studies exploring linkages between teacher characteristics and student achievement have focused on factors such as years of experience, certification, and pedagogical and content knowledge (Goldhaber & Anthony, 2003). However, causal connections between various teacher characteristics and effects on student achievement have not been well established and empirical assessment of newly developed teacher evaluation is needed (Nye, Konstantopoulos & Hedges, 2004).

Characteristics of Quality Teachers

Teacher Credentials and Experience.

Researchers have examined various aspects of teachers’ background and practices in an effort to identify key indices of quality teachers. Administrators are particularly invested in identifying teacher variables that are most strongly related to student performance in order to incorporate such factors into hiring practices and evaluation protocols.

Teacher certification, including state licensure, has been posited to influence the quality of teaching (Laczko-Kerr & Berliner, 2002). Credentials include traditional certification earned by individuals who have completed a bachelor degree in education and alternative certification for those without conventional training. Administrators and policymakers often presume that teacher

certification is positively related to student achievement, as is reflected in the federal requirements in the No Child Left Behind Act to exclude potentially new teacher hires who are not “highly qualified” (Darling-Hammond, 2000). However, research does not widely support this assertion (Walsh, 2002). For example: the Abell Foundations’ review of over 150 studies on teacher certification found that certified teachers are not more effective than uncertified teachers (Walsh, 2001). This critical review suggests that deregulation of licensure for teacher certification may attract more qualified applicants (as cited in Goldhaber & Anthony, 2003, p. 15). Matthews (2003) found that teacher certification in specific subjects does not necessarily require in-depth content knowledge in that area, so may not relate to enhanced student performance (Matthews, 2003). A study examining factors of teacher quality as they relate to national achievement found a significant relationship between certified teachers who hold mathematics major in addition to three or more years of experience and student performance (Akiba, LeTendre, & Scribne, 2007). Broadly defined, teacher certification does not appear to directly influence student achievement.

Studies show that the relationship between teachers’ years of experience and student achievement is strongest among early career teachers (Hanushek, Kain, & Ravkin, 2002). This relationship is stronger in the teachers’ first five years of teaching and is weaker in subsequent years (Darling-Hammond, 2000). However, there are potential moderators of these relationships. Goldhaber and Anthony suggest that any comparison of teachers’ experience based solely on numerical values should also account for attrition and the level of courses assigned to each teacher (Goldhaber & Anthony, 2003). Another important aspect to consider is that the teachers’ years of experience may not equate with the number of years teaching a specific curriculum (e.g.

fifteen total years of teaching consisting of thirteen years in physical education and two in algebra). Teaching experience in a particular curriculum may more directly impact student performance in particular content areas than general years of teaching experience (Ritzhaupt, Dawson, & Cavanaugh, 2012). Bagaka's (2010) study found that more years of teaching experience, combined with the teacher's use of homework and their use of collaborative student assignments, relates to improved student self-efficacy in mathematics (Bagaka, 2010). These results suggest the need for further research examining the interactive influence of the teachers' years of experience and instructional practices on student performance.

Teacher Practices.

Student performance is dependent on the quality of teaching, underscoring the need to further understand the relationship between teacher practices and learner outcomes (Scheerens, & Boser, 1997). Many administrators, teachers, parents, and students are able to name a teacher they believe to be more effective; however, identifying specific practices that constitute quality instruction is paramount to improving student performance. Research findings that yield positive correlations between teacher performance ratings and student performance often use an overall measure for general instructional attributes, which does not assess the impact of specific classroom practices (Kane, Taylor, Tyler, & Wooten, 2010b). One study comparing data in which teachers and students were randomly assigned to classes found that there are substantial differences among teachers in their ability to influence achievement gains in their students (Nye, Konstantopoulos, & Hedges, 2004).

Teachers' instructional practices and their depth of content knowledge are significant predictors of student achievement (Cunningham, Zibuiscky, Stanovich, & Stanovick, 2004;

Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998; Fuchs & Fuchs, 2006). Kane et al. (2011a) examined over 500 teacher evaluation scores captured from the Cincinnati Evaluation system, which is also based on the Danielson framework, and found a relationship between specific teaching practices and student outcomes, suggesting that professional development which focuses on specific instructional practices may have a positive impact on targeted areas of student performance (Kane, Taylor, Tyler, & Wooten, 2011a). A vast number of studies have also focused on non-instructional variables to address low student performance. For example, Joshi and colleagues (2009) conducted a survey of college education faculty and found that the top three reasons for reading failure were socio-economic status, English as a second language and the students' family background (Joshi, Binks, Hougen, Dahlgren, Ocker-Dean, & Smith, 2009). The significant challenge of linking instructional practices to teacher effectiveness is important to meet, so that educators may improve student performance (Stonge, Ward, & Grant, 2011). This study will focus on the VSET measures of instructional practices of teachers and examine if teacher effectiveness correlates to student performance.

Professional Development of the Teacher

Given that teacher effectiveness is the strongest indicator for student achievement, it is imperative to develop systems to improve the effectiveness of teachers (Marzano, Pickering, Pollock, 2001; Nye, Konstantopoulos, & Hedges, 2004). Professional development that enables teachers to improve their instructional methods may be a significant factor in influencing student performance (Byrd-Blake & Hundley, 2012; Mc Caffrey, Koretz, Lockwood, & Hamilton, 2004). The development and wide-scale implementation of professional development models that sustain teacher improvement is critical to impacting student achievement (Byrd-Blake &

Hundley, 2012). However, research examining the relationship between professional development and student achievement is limited compared to studies that focus on the link between instructional practices and student performance.

Educational reformers and policy makers emphasize the need to improve student achievement, yet professional development plans have predominantly focused on the teacher and frequently neglect the student learner in the process to improve teacher effectiveness (Diaz-Maggioli, 2004). Historically, professional development models have been constructed with little investment from the teacher and have been implemented without systematic support for the teacher to transfer her new ideas into instructional practices (Diaz-Maggioli, 2004).

Traditionally, professional development models have employed a top down approach. Evidence suggests that teacher professional development models that have offered one-time workshops that focus on general knowledge rather than specific skills, or are not supported by research based practice, are ineffective (Pianta, 2011).

The current, re-structured models of professional learning recognize that a significant initial step in the process requires the teacher to take an active partnership in selecting the content of their learning, specifying what learning activities will support their growth and then determining how to evaluate their own effectiveness as they reflect on learner outcomes and implement their practices (National Staff Development Council, 2011 pg 553). Gusky and Yoon (2009) recommend that professional development models include research-based instructional practices, active learning experiences for the teachers and opportunities for the teacher to adapt their practices to have positive effects on student learning (Guskey & Yoon, 2009). Masuda, Ebersole,

and Barrett, (2012) qualitative study examined teachers' attitudes toward professional development that showed teachers at different stages in their careers value activities with content that is relevant to their own teaching contexts and need a component directly related to their application of instructional practices. Khan and Begums (2012) focused on the role of portfolios for professional learning and found that professional development that included a reflective process for the teacher to construct their own knowledge and address their ineffective practices will build teachers capacity and improve student learning outcomes (Khan & Begum, 2012).

Ultimately, professional development is a tool to improve the instructional capacity of teachers (Johnson, 2012). If properly implemented, professional development activities enable teachers to acquire empirically supported instructional strategies that have been shown to improve student achievement. Research indicates that when a teacher selects a restricted number of instructional practices to focus on in regards to their professional development, student performance is positively impacted. Kane et al. (2011a) examined over 500 teacher evaluation scores captured from the Cincinnati Evaluation system, which is also based on the Danielson framework, and found a relationship between specific teaching practices and student outcomes, suggesting that professional development which focuses on specific instructional practices may have a positive impact on targeted areas of student performance (Kane, Taylor, Tyler, & Wooten, 2011a). A national longitudinal study which included math and science teachers from elementary, middle and secondary levels, found a relationship between professional development that targets specific instructional practices and the use of that practice in the classrooms (Desimone, Porter, Garet, Yoon, & Birman, 2002). Researchers found that trainings that focus on teaching content were more likely to positively impact student achievement (Smith,

Desimone, & Ueno, 2005). The purpose of teacher evaluation systems should be to assess the effectiveness of teachers and to provide individual feedback to direct professional development and help teachers improve (Papay, 2012). The effective professional development model that targets teacher knowledge and behavior is directly linked to student achievement (Pinata, 2011).

Teacher Evaluation Systems

The primary purposes of teacher evaluation systems are to measure teacher competence and to improve teacher effectiveness, ultimately impacting student achievement (Hanushek, Kain, & Ravkin, 2005). The current trend in teacher evaluation is to include performance based standards that center on building quality instruction in the classroom, which marks a fundamental change from previous measures reliant on subjective opinions from principals or inconsequential criteria (e.g., the number of professional development activities that a teacher attends) (Weems & Rogers, 2010). In their infancy, teacher evaluation systems were constructed largely as subjective mechanisms to provide teacher feedback. For example, in the 1920s and 1950s in Montgomery County Public Schools, evaluation procedures consisted of superintendents' informal visits to all classroom teachers followed by casual, post conference conversations regarding improvement (Jewell, 1976, p 144; Macmaster & Hiebert, 1976). During the 1950s and the 1960s, teacher evaluations evolved into more bureaucratic systems that included protocols for administrators to follow regarding timelines and broad instructional categories (e.g., classroom management or effective instruction). However, these updated systems lacked specific performance criteria to guide the observations and post conference for both the evaluator and the teacher (Sullivan, 2012). The teachers often received feedback that focused on trivial factors, such as the frequency of bulletin boards being changed, rather than specific feedback to

help improve their practices. Policy makers and school leaders recognized that enhanced evaluation systems should be constructed to differentiate the effectiveness of teachers, to provide meaningful feedback on performance to the teacher, and to identify areas of professional development for each teacher (Weisberg, Sexon, Mulhern, & Keeling, 2009). As an avenue to provide a vision of instruction and improvement strategies for such evaluation systems, assessment systems such as the Charlotte Danielson Framework have been incorporated to develop teacher competencies (Milanowski, Heneman, & Kimball, 2011).

Danielson Framework.

Teacher performance in the classroom directly influences student learning and as school districts build teacher human capital they must agree upon evaluation systems for assessing teachers' instructional based on key competencies (Milanowski, Henema, & Kimball, 2011). The Danielson Framework is a prominent assessment system that provides explicit performance standards and instructional expectations that are correlated with student achievement for evaluating teacher effectiveness and supporting continuous improvement in the Volusia System for Empowering Teachers (VSET) ((PR Newswire 2012, Killion & Hirsh, 2011). The overview of the Danielson Framework teaching assessment system (Milanowski, Heneman, & Kimball, 2011) is shown in Table 3.

Table 3 Overview of Teaching Assessment System

System	Original Purpose	Theoretical Perspective	Specialization
Danielson Framework	Formative tool for promoting conversations about good teaching. Suggested uses include self-assessment induction and mentoring, peer coaching and clinical supervision	Intended to be a comprehensive representation of generic teaching activities applicable to almost all K-12 settings. Emphasizes aspects of constructivism	Intended to apply to all career and grade levels and all content areas

This instructional framework is grounded in the constructivist learning theory and specifies rigorous outcomes for the learner and the teachers' performance (Killion & Hirsh, 2011). A recent study investigating the relationship between elementary science teachers' formative assessment practices and their pedagogical knowledge found that teachers who examined their own practices, in addition to focusing on students' responses, could strengthen their instructional practices (Falk, 2012). As a teacher assessment tool, one of the core propositions in Danielson's Framework is the systematic reflection of the teachers' classroom practices, identification of deficits in skills, and self-assessing to then improve their practice (Vivano, 2012). The self-

assessment requires the educator to compare the Danielson Framework rubric as a standard to the observed classroom practices and the responses of the learners. This heuristic approach in VSET guides the teacher to focus on improving ineffective instructional practices that will impact student performance.

Volusia System for Empowering Teachers (VSET)

The VSET is a newly implemented teacher evaluation system designed to improve instruction and the performance of students. This new evaluation system supports teacher professional growth, correlates teacher practices to research, and aligns with the Florida Educator Accomplished Practices, Race to the Top requirement and Florida Statutes (VSET Handbook, 2012). The instructional domains and components identified are adapted from the Charlotte Danielson Framework for Teaching with the intent to connect instructional practices to research based strategies. The evaluator observation portion of the system comprises 20% or 25% of teachers' rating based on experience and prior ratings. This is the portion of the new evaluation system that focuses on defining effective teaching, and is conducted by an administrator. Observations include brief informal observations called a "walk through" that do not require any response from the teacher and formal observations that are announced and require a pre and post conference. The instructional rubrics that are used for summative observation rating include measures of evidence, artifacts, and observable behaviors.

The steps for the announced observation are as follows: 1) pre-observation form completed by teacher, 2) pre-observation conference held, 3) formal observation takes place during an entire class period, 4) post-observation rubric is completed separately by teacher and administrator prior to post conference, and 5) a post-observation meeting is held to collaboratively complete

the rubric. The teacher receives a rating for each of the 22 components in the announced, formal observation.

The unannounced observation is an informal walk-through that may be focused on a specific domain, or the professional growth plan. The walk-through is designed to observe the everyday practices in addition to those observed in an announced, formal observation. It is not scored or rated, and the teacher does not have to respond.

In the VSET summative observation conference, the administrator reviews evidence for the 22 components and rates each component. The average of the 22 components is the evaluators' observation score on the summative report. Teachers with Peer Assistant Review (PAR) observations receive a PAR observation score and those two scores are combined on the summative report.

The Professional Growth Plan component focuses on improving teacher professional practices through self-directed inquiry to improve student learning and should be correlated to student performance. The VSET professional development component varies from 10% to 25% of the teacher's rating based on experience and prior ratings. The plans are differentiated on years of experience and prior ratings with three types:

- *Individual*- teacher rated as “effective” or “highly effective” the previous school year; teacher selects one component to improve their instructional practices.
- *Monitored*- teacher new to teaching, new to the district; or rated as “Needs Improvement” the previous school year; teacher collaborates with the peer assistance reviewer to select the component and activities to improve their instructional practices

- *Directed-* teacher rated as “Unsatisfactory” the previous year; teacher completes a self-inventory, administrator selects component identified as a deficit area in the prior evaluation

The first step in the professional growth plan requires that the teacher self-assess and reflect on current practices and then identify the component for the professional goal (Appendix B). After identifying the goal, the next step is to specify the professional learning activities to support their goal. The teacher and administrator meet throughout the year to monitor and review the goal. At the end of the school year, the teacher and administrator agree upon a professional growth plan rating based on the performance categories described in the professional growth plan rubric (Appendix C).

In the summative conference, the teacher rates his/her progress using the rubric and submits this information prior to meeting with the administrator. During the summative conference, the administrator also rates the teacher. In the conference if consensus is not met, the teacher may appeal this rating and the plan is forwarded to a committee to review the rating.

The value added model rating was adopted for all of the schools in the district and requires 50% of the teachers’ summative rating is based on the value added measure for student learning. Florida statute requires that the student performance evaluation component to include data and indicators of student learning growth measured as in statewide assessments (Value Added Power Point, 2012). The Commissioner of Education in Florida approved a student growth formula that included the value added factors shown in Table 4. The value added formula is developed to

quantify the impact of a teacher on student learning, by accounting for other factors that may impact the learning process.

Table 4 The factors included in the Florida Value Added Model

Student Level -Characteristics	Classroom Level-Characteristics
Up to two prior years of achievement scores	Class size
Number of subject-relevant course	Homogeneity of prior test scores
Disability status	
English language learner status	
Gifted status	
Mobility	
Attendance	
Difference from modal age	

Conceptual Framework

The constructivist framework proposes that learning is an adaptive process in which the learner is required to actively collaborate to make sense of their knowledge and experiences as they transition from their previously constructed knowledge to developing a new conceptual

structure (Maclellan & Soden, 2004; Yilmaz, 2008). Fosnot (1996) and Richardson (2003) assert that constructivism is a theory of learning, rather than teaching, and that it is important to identify the teacher as the learner in the teacher evaluation system (as cited in Yilmaz, 2008, p. 168). McLeod argues that the direction, focus, and effectiveness of instructional design in new teacher evaluation systems is grounded in theoretical framework and in the teachers' practical experiences (as cited in Yilmaz, 2008, p. 161).

VSET follows a constructivist approach, as it places the primary focus on the teacher as the learner, and engages the teacher in personal, authentic learning experiences that are relevant to her real world classroom environment to advance more meaningful learning. Andrew's (2007) found that many teachers in the United States are often bound to non-constructivist models of teaching due to their own personal experience as students in more traditional settings, so a benefit to the new evaluation system that models the constructivist framework may be to broaden their experience and then influence the teachers' use of reform-based instructional strategies. This new evaluation system adopts the constructivist perspective, which assumes when the teacher develops a deeper conceptual understanding of instructional practices, s/he will more effectively implement these practices (Redden, Simon, & Aulls, 2007).

VSET incorporates processes for the teacher to more effectively apply their practical knowledge as they interpret and reflect upon their instructional experiences to ultimately improve their effectiveness and increase student achievement (e.g., the post conference experience in which the teacher and the administrator are required to reflect upon each domain and self- rates each domain using the rubric) (Redden, Simon, & Aulls, 2007). The VSET

protocols and forms for the evaluator observation cycle and the professional growth plan are based on the Danielson Framework practices. The rubrics provide descriptions of teacher practices and student responses that correspond to performance levels which promote self-regulation, a constructivist perspective (Johnson, 2009). VSET is designed to improve teacher effectiveness and to impact student achievement by providing constructivist elements to untimely provide accurate, constructive and timely feedback that advances self-regulation and promotes professional reflection (School Board Presentation, 2011).

Summary of Literature Review

Teacher quality is the most powerful predictor of student achievement in our public schools and policy makers recognize that we must build the capacity of our teacher workforce in order to improve student achievement on a national level (Akiba, LeTendre, & Scribner, 2007; Goldhaber & Anthony, 2003; National Academies, 2007). The ability of a teacher evaluation system to credibly define, measure and improve teachers is at the forefront of the educational reform discourse (Bryk, Harding, & Greenberg, 2012). The Race to the Top federal grant program has had a significant impact on transforming state school reform efforts to design and implement new teacher evaluation systems (McGuinn, 2012). As states respond to Race to the Top and implement new evaluation systems, the identified components of teacher practice warrant further analysis (Newton, Darling-Hammond, Haertel, & Ewart, 2010). This review of literature has addressed some of the characteristics of a quality teacher and examined which characteristics directly influence student achievement. The review highlights issues regarding the importance of increasing teacher accountability to achieve gains in student learning and

emphasizing professional growth and development to improve the teachers' instructional practices (Marzano, 2012).

CHAPTER 3: METHODS

The purpose of this study was to provide an empirical analysis of the primary assumptions of the teacher evaluation system in Volusia County, namely that the specific teaching practices evaluated are related to student achievement, and that teacher-directed professional growth plans effectively shape teacher practices in a particular domain. This study focuses on the 14 pilot schools within one school district that implemented a new teacher evaluation system, Volusia System for Empowering Teachers (VSET). These findings may inform the interpretation and the refinement of the VSET, which aims to build capacity in the Volusia teacher work force and ultimately to improve student performance (School Board of Volusia County Team Volusia, Race to the Top application, 2011). Amidst the outpouring of federal funding for educational reform initiatives that include new teacher evaluation models, it is important that policy makers focus their efforts on evidence-supported models (Pianta, 2011).

Research Questions

The methods used examined the question:

1. Is there a statistically significant correlation between teaching practice, as measured by the VSET evaluator observation score across components, and student achievement, as indexed by the VSET Value Added score?
2. To what extent is the teacher's successful completion of the professional growth plan targeting a self-selected component related to objectively measured teaching practice in that component, as measured by the VSET professional development plan rating and evaluator observation on the selected component score respectively?

Hypotheses

1. The teachers' total evaluator observation score will have a positive, significant correlation to the value added score.
2. The teacher directed professional growth plan rating will have a positive, significant correlation to the teacher's evaluation observation score on the corresponding individual teaching practice.

Sample

A new teacher evaluation system, VSET, was implemented at 14 pilot schools within one school district in the 2011-2012 school year. There were a total of 752 teacher evaluations conducted in the district. In this study, teacher evaluation ratings were collected from each of the 14 school sites and student performance data (value added scores) were obtained by the Office of Program Accountability of Volusia County Schools. The principals at each of the 14 pilot schools provided access for the researcher to review the teacher evaluation records in a timely manner. For the purposes of this study, 658 teacher evaluation ratings were collected from the 14 school sites and 751 value added scores were retrieved from the district Office of Program Accountability. Table 5 represents the pilot school sample sizes. Nearly half of both samples represent elementary school level data, and roughly 20% and 30% of the data are from high schools and middle schools respectively. The evaluation data collected at individual school sites ranged from 5% to 13.1% of the overall sample size.

Table 5 Volusia County Pilot Schools Sample Sizes

Variable	Teacher Evaluation Sample	Value Added Sample
	N (% of sample)	N (% of sample)
School Level		
High School	138 (21%)	166 (22.1%)
Middle School	199 (30.2%)	229 (30.5%)
Elementary School	321 (48.8%)	356 (47.4%)
School Site		
High School A	52 (7.9%)	69 (9.2%)
High School B	86 (13.1%)	97 (12.9%)
Middle School A	48 (7.3%)	66 (8.8%)
Middle School B	53 (8.1%)	53 (7.1%)
Middle School C	67 (10.2%)	72 (9.6%)
Middle School D	31 (4.7%)	38 (5.1%)
Elementary School A	45 (6.8%)	50 (6.7%)
Elementary School B	62 (9.4%)	59 (7.9%)

Variable	Teacher Evaluation Sample	Value Added Sample
	N (% of sample)	N (% of sample)
Elementary School C	42 (6.4%)	42 (5.6%)
Elementary School D	33 (5.0%)	40 (5.3%)
Elementary School E	39 (5.9%)	56 (7.5%)
Elementary School F	35 (5.3%)	32 (4.3%)
Elementary School G	34 (5.2%)	33 (4.4%)
Elementary School H	31 (4.7%)	44 (5.9%)

PGP Sample, N = 658; Value Added Sample, N = 751; % indicates percentage of total study sample accounted for by school site or school level

This study was conducted in the 13th largest school system in Florida, which has an enrollment of 61,000 students representing urban, suburban and rural student populations. There are 82 schools in the district, including 45 elementary schools, 12 middle schools, 9 high schools, 2 combination (K-8 and 6-12) schools, 6 alternative schools, and 8 charter schools. Participants in this study were teachers selected from 14 pilot schools in Volusia County that implemented VSET. The teachers participated in the first year of VSET, and were evaluated by a school administrator(s) using the standardized evaluation. The study sample represents 70 to

100% of the total teacher evaluations completed at each school site in the first year of implementation of the new teacher evaluation system in the school district. As the data collection procedures differed for collecting Professional Growth Plan and Value Added data, the sample descriptives and analyses are described separately in subsequent sections.

Procedures

Data Collection

Prior to confirming the arrangements with school principals, permission to conduct the research was obtained from Volusia County Schools (Appendix D) and the study was approved by the University of Central Florida Institutional Review Board (see Appendix E). In the first year of implementation of the teacher evaluation system, the evaluation data pertaining to teachers' selected components for their professional growth plan was maintained at the school site while the value added measure was held in the district Program of Accountability. The discrepancy in the availability of the two data sets is reflected in two distinct sample sizes. For the purposes of this study, 658 teacher evaluation ratings were collected from the 14 school sites and 751 value added scores were retrieved from the district Office of Program Accountability.

The data collection process for collecting the 658 teacher evaluations was coordinated through the principals at each of the 14 pilot school sites. The researcher visited each school site and reviewed individual teacher evaluation records. The sample size of 751 value added scores were collected from the Office of Program Accountability of Volusia County Schools. The robust Teacher Evaluation sample represents 87.61% of the total evaluations conducted in the

2011-2012 school year, and the Value Added sample represents 99.08% of the total evaluation data.

The data collected identified the school levels (e.g., elementary, middle or secondary) and other school-based variables, but the teacher's identity remained confidential. As described in the section below, this study was conducted following procedures approved by the University of Central Florida Institutional Review Board to ensure maximum confidentiality and protection of study participants.

Teacher Data.

The teacher data collected for this study were maintained in secure, confidential files. Three sets of measures were collected and did not include personally identifiable information (i.e., name, contact information). Rather, the researcher assigned study ID numbers for cases and only recorded information pertinent to the research study (e.g., grade level that the teacher is assigned, such as 'elementary').

Student Data.

The student data collected for this study were maintained securely and included the value added measure for each teacher in the pilot school. This data did not include personally identifiable information for any student, nor did it indicate students' performance on a particular test or measure.

Instrumentation

The data used in this study were drawn from a multi-metric teacher assessment used in VSET and measures of student achievement. The VSET evaluation model consists of three to four metrics that are assigned according to the specific categories of a teacher. Three of the metrics,

the professional growth plan, the educator observation and the peer assistance review observation, are based on Charlotte Danielson's "Framework for Teaching" (Danielson, 2007). The framework provides a common language of instruction in regards to effective teaching which guides the feedback and the collection of evidence. The framework divides teaching into 22 components which are grouped in four domains of teaching responsibility: Planning and Preparation (Domain 1), Classroom Environment (Domain 2), Instructions (Domain 3), and Professional Responsibilities (Domain 4). Rubrics for each of the 22 components provide a description of the level of performance with a rating to support improved teaching practices.

The Professional Growth Plan (PGP) captures the teachers' selected component for their PGP (Appendix B). The End of the Year Evaluation Report captures a detailed numerical score for the *Evaluator Observation Rating*, the *Professional Growth Plan* rating, and the *Value-Added Measure* (Appendix A).

The summative rating for teachers with "Effective" or "Highly Effective" rating from the prior year is an average of three scored and weighted categories: Value Added (50%), Educator Observation (25%), and Professional Growth Plan (25%). The summative rating for teachers who are new to teaching, new to district or teaching assignment, educators with rating of "Needs Improvement" or "Unsatisfactory", or are self-selecting into the program is an average of four scored and weighted categories: Value Added (50%), Educator Evaluation (20%), Peer Assistance Review Evaluation (20%), and Professional Growth Plan (10%). The teachers' final summative rating is correlated to the numerical weighted average of the educator observation score, the professional development score and the value added score. The observation rating ranges from 0.0 to 3.0. Each of the 22 components is listed with their respective weights for

each. The administrators' score for each component is listed in a column corresponding to the listed domain and component. There is a column for the PAR score. The observation score is noted as a total on the bottom of the column of scores for all 22 components. This same numerical rating is also listed in the section for the *Observation Rating*.

These three scores are combined to reflect the teacher's annual evaluation rating as a numerical value which correlates to the category of 'distinguished,' 'proficient,' 'basic' or 'unsatisfactory,' as shown in Table 6.

Table 6 Ratings and Corresponding Numerical Values from the Observation and the Professional Growth Plan Rubrics

Volusia Multi-Metric Teacher Assessment	Score
<p>Distinguished: Professional teaching that innovatively involves students in the learning process and creates a true community of learners. Teachers performing at this level are <i>master teachers</i> and <i>leaders in the field</i>, both inside and outside of their school</p>	3
<p>Proficient: Successful, professional teaching that is <i>consistently</i> at a high level. Most experienced teachers frequently perform at this level.</p>	2
<p>Basic: Teaching that has the necessary knowledge and skills to be effective, but its applications is <i>inconsistent</i>.</p>	1
<p>Unsatisfactory: Teaching that does not convey understanding of the concepts underlying the component. This level of performance is <i>doing harm</i> in the classroom</p>	0

(VSET Handbook)

The data from the teachers’ final evaluation produce a teachers’ observation evaluator score, professional development score, and a value added score (Appendix C). The final report also provides the teachers’ score for each of the 22 instructional components.

Study Variables

Several variables were extracted from VSET data for purposes of study analyses and are described below.

Valued Added Sample.

The *evaluator observation score across components* is the metric for the teacher's instructional practice across the 22 VSET components, with higher scores indicating better teaching practices. The score is captured on the End of the Year Evaluation Report and is a continuous value ranging from 0 through 3. The *value added score* is a measure for the impact of a teacher on student learning. The value added measure represents the difference between the predicted performance of the student and the actual performance, with negative scores representing students not showing as much growth as expected. The value added variable is continuous and was re-scaled for ease of interpretation, so that the lowest Value Added Score is a 0, and positive values indicate increasingly stronger teacher impacts.

Professional Growth Plan Sample.

For purposes of the professional development-focused research question, the teachers' self-selected component, as recorded on the Professional Growth Plan with a nominal value of 1 to 22 corresponding with the Danielson Framework Dimension was examined. At the end of the school year, the teacher and administrator agree upon a *professional growth plan rating* based on the performance categories described in the professional growth plan rubric (Appendix C). The rating is captured in the End of the Year Evaluation Report, and is an ordinal value of 0, 1, 2, or 3, with higher scores representing successful completion of the professional growth plan. The

evaluator observation rating for the selected component is the instructional practice rating assigned to the teacher-selected evaluation component by a trained administrator who received certification in the Danielson Framework. The rating is recorded on the End of Year Evaluation Report and is an ordinal value of 0, 1, 2, or 3, with higher scores representing better performance. A peer assistance reviewer may serve as an additional observer depending on the category of the teacher (i.e. individual, monitored). For the purposes of this study, only the administrator rating was examined to ensure consistency and comparability across teacher evaluation scores.

Data Analysis

In this study design, the researcher recorded measures collected from a district-wide group of teachers who participated in a one-year pilot implementation of a new teacher evaluation system. The descriptive analyses for this study incorporated the following variables to describe sample characteristics:

- School level which includes elementary, middle or secondary
- Student enrollment per school
- Percentage of free and reduced in student population per school
- School grades from 2012
- Category of teacher evaluation, including individual or monitored

Graphs were constructed to present the data visually and examine the distributions of the study variables and relationship between key variables of interest, as described below.

Histogram

A histogram was constructed for each study variables to indicate the frequency distribution of values for each variable. The X-axis (horizontal line) represents the value(s) of the variable, and the Y-axis represents the frequency of a particular value in the distribution. If the distribution is symmetrical, the frequencies rise from the lowest up to the middle and then decrease from the center to the highest value, with the average falling in the center of the graph.

Scatter Plot

A scatter plot was constructed to visually depict the relationship between the two continuous study variables that were hypothesized to be related: evaluator observation score across components and the value added score. The scatter plot is composed of individual points that represent the value of a specific event on the scale established by two variables plotted on the *x*- and *y*-axes. A correlation is implied when the points cluster together, while a lack of correlation is indicated by randomly scattered points. The type of relationship is indicated by the underlying form, linear or curved or no form, and the strength of the relationship is related to how tightly clustered the points are around that underlying form.

Pearson Correlation.

A Pearson correlation analysis was used to determine if there was a relationship between the two continuous study variables that were hypothesized to be related: evaluator observation score across components and the value added score. This study examined whether the measure of teacher practice influences the measure of student achievement. The study hypothesis is that more effective teacher practices are related to higher student achievement. The information for

all of the individuals in the sample was plotted on a scatter diagram, with each point representing an individual observation.

One-Way ANOVA.

Follow up analyses included a between subjects one-way ANOVA used to evaluate differences in evaluator observation scores across components between schools obtaining a grade of A, B, C, or D.

Spearman Rank Correlation.

A Spearman rank correlation was used to examine whether there was a significant relationship between teachers' ratings on their professional growth plan and the evaluator observation ratings on their self-selected component. The Spearman's Rho correlation coefficient is a nonparametric test that makes no assumptions regarding the distribution of the data. It is the appropriate 'quasi-ordinal' statistic to examine the strength of association between two ranked variables.

The assumptions for the one-sample Spearman's correlation are that the data are ordinal, interval or ratio and that there is a monotonic relationship between the variables under consideration. The following formula is used to calculate the Spearman rank correlation:

$$\rho = 1 - \frac{6 \sum d_i^2}{n(n^2 - 1)}$$

Where:

P=Spearman rank correlation

D_i = the difference between the ranks of corresponding values X_i and Y_i

N =number of value in each data set

All computations were performed using SPSS.

CHAPTER 4: DATA ANALYSIS

The study was designed to empirically address the following questions:

1. Is there a statistically significant relationship between teaching practice, as measured by the Volusia System for Empowering Teachers (VSET) instructional practice score, and student achievement, as indexed by the VSET Value Added score?
2. Is there a statistically significant relationship between the teacher's successful completion of the professional growth plan targeting a self-selected component and his/her objectively measured teaching practice in that component, as measured by the VSET professional development plan rating and evaluator observation score respectively?

Descriptive Statistics

Table 7 presents the demographic information for the 14 school sites, including student enrollment, percentage of free and reduced, and the school grades for 2011 and 2012.

Table 7 School-level Values for Percentage of Free & Reduced, Enrollment, Attendance, and Grade

School	Percentage of Free & Reduced	Enrollment	Attendance	Assigned School Grade in 2012
High School A	47.5	947	94.85	D
High School B	56.5	1665	95.43	D
Middle School A	84.2	937	96.13	C
Middle School B	47.9	942	95.82	A
Middle School C	63.0	1238	96.19	B
Middle School D	62.7	675	95.94	C
Elementary School A	49.3	695	95.06	A
Elementary School B	63.1	784	95.33	A
Elementary School C	64.4	591	94.60	B
Elementary School D	89.6	525	94.42	C
Elementary School E	35.5	809	95.32	A
Elementary School F	75.7	531	95.38	B

School	Percentage of Free & Reduced	Enrollment	Attendance	Assigned School Grade in 2012
Elementary School G	72.1	426	94.99	A
Elementary School H	95.4	505	94.38	B

Table 8 presents descriptive information for the teachers who participated in the VSET pilot study and are included in the PGP sample, including school level, the category of evaluation (i.e., individual or monitored), and the self-selected domain in the teacher’s professional growth plan.

The plans are differentiated on years of experience and prior ratings with three types:

- *Individual-* teacher rated as “effective” or “highly effective” the previous school year; teacher selects one component to improve their instructional practices.
- *Monitored-* teacher new to teaching, new to the district; or rated as “Needs Improvement” the previous school year; teacher collaborates with the peer assistance reviewer to select the component and activities to improve their instructional practices

- *Directed-* teacher rated as “Unsatisfactory” the previous year; teacher completes a self-inventory, administrator selects component identified as a deficit area in the prior evaluation

Table 8 Professional Growth Plan Descriptives

Variable	N (%)
Teacher Category	
Individual	609 (92.5%)
Monitored	49 (7.4%)
Reviewed Previous Evaluation	
Yes	94 (14.3%)
No	564 (85.7%)
Professional Growth Plan Domain Selected	
Domain One: Planning and Preparation	106 (16.1%)
Domain Two: Classroom Environment	58 (8.8%)
Domain Three: Instruction	410 (62.3%)
Domain Four: Professional Responsibilities	84 (12.8%)
Professional Growth Plan Component Selected	

Variable	N (%)
1a: Demonstrating Knowledge of Content and Pedagogy	9 (1.4%)
1b: Demonstrating Knowledge of Students	7 (1.1%)
1c: Setting Instructional Outcomes	26 (4.0%)
1d: Demonstrating Knowledge of Resources	16 (2.4%)
1e: Designing Coherent Instruction	12 (1.8%)
1f: Assessing Student Learning	36 (5.5%)
2a: Environment of Respect and Rapport	20 (3.0%)
2b: Establishing a Culture for Learning	22 (3.3%)
2c: Managing Classroom Procedures	5 (.8%)
2d: Managing Classroom Behaviors	10 (1.5%)
2e: Organizing Physical Space	1 (.2%)
3a: Communicating with Students	4 (.6%)
3b: Using Questioning and Discussion Techniques	89 (13.5%)
3c: Engaging Students in Learning	202 (30.7%)
3d: Using Assessment in Instruction	111 (16.9%)

Variable	N (%)
3e: Demonstrating Flexibility and Responsiveness	4 (.6%)
4a: Reflecting on Teaching	8 (1.2%)
4b: Maintaining Accurate Records	22 (3.3%)
4c: Communicating with Families	28 (4.3%)
4d: Participating in a Professional Community	4 (.6%)
4e: Growing and Developing Professionally	20 (3.0%)
4f: Showing Professionalism	2 (.3%)
N = 658	

The strong majority of teachers participated in the category of individual (92.5%) versus monitored (7.4%) evaluations. The first step in the professional growth plan requires that the teacher self- assess and reflect on current practices and then identifies the component for the professional goal (Appendix B). The percentage of teachers who reviewed their prior year’s evaluation to guide the development of their professional growth plan (14%) was less than those who did not review their prior evaluations (80%).

The instructional domains and components identified in Table 8 are adapted from the Charlotte Danielson Framework for Teaching with the intent to connect instructional practices to

research based strategies in the VSET. The Danielson Framework divides teaching into 22 components which are grouped in four domains of teaching responsibility: planning and preparation (Domain 1), classroom environment (Domain 2), instructions (Domain 3), and professional responsibilities (Domain 4). For the VSET Professional Growth Plan, the teachers are required to select a domain and corresponding component as the focus of professional development. For the 2011 – 2012 year, more than half (62.3%) of the teachers selected Domain 3, Instruction as the focus of the professional development plan, while comparable numbers of teachers selected Domain 1, Planning and Preparation and Domain 4, Professional Responsibilities (16.1 and 12.8% respectively). The least commonly selected domain was Domain 2, Classroom Environment (8.8%). The nine power components have the greatest correlation to increase student achievement. The three most commonly components selected by teachers were power components, Engaging Students in Learning (3c; 30.7%), Using Assessment in Instruction (3d; 16.9%), and Using Questioning and Discussion Techniques (3b; 13.5%).

Prior to analysis, the study variables were examined utilizing for accuracy of data entry, missing value, and satisfaction of the assumptions for analyses. Summary statistics for the study variables are presented in Table 9. The sample size, mean, standard deviation, range, skewness, and kurtosis are reported.

Table 9 Study Variables

Variable	N	Mean	Standard Deviation	Range	Skewness (SE)	Kurtosis (SE)
Free-Reduced	751	62.90	.59	35.5 – 95.4	.40 (.09)	-.59 (.18)
Evaluator Observation Score Across Components	751	2.17	.34	.75 – 3.00	-.39 (.09)	1.29 (.18)
Value Added Score	751	.72	.16	0 – 1.62	.16 (.09)	2.34 (.18)
Professional Growth Plan Rating	658	2.13	.50	1 – 3	.24 (.10)	.57 (.19)
Evaluator Observation Score for Selected Component	658	2.12	.53	0 – 3	.06 (.10)	.63 (.19)

A histogram was constructed for each study variable to visually describe the distribution of the variables and indicate the frequency of the values in the distribution. Figures 1 through 6 display the histograms for each study variable. The X-axis (horizontal line) of these figures represents the value(s) of the variable, and the Y-axis represents the frequency of a particular value in the distribution. Figures 1 and 2 do not indicate severe departures from a normal distribution for the evaluator observation scores across components and the value added scores respectively. Figure 3 indicates a rather flat distribution of free and reduced percentage values across schools, with the mean representing the most common value of 62. Figure 4 indicates that more schools obtained a grade of A ($n = 251$), followed by B ($N = 190$), D ($N = 166$) and C ($N = 144$). As can be seen in Figure 5, the most common evaluator observation score for the teacher-selected evaluation component was '2,' representing a 'proficient' rating of the teacher's practices in that particular dimension. Figure 6 indicates that the majority of professional growth plan ratings had a value of '2,' representing a 'proficient' rating of the successful completion of the professional growth plan.

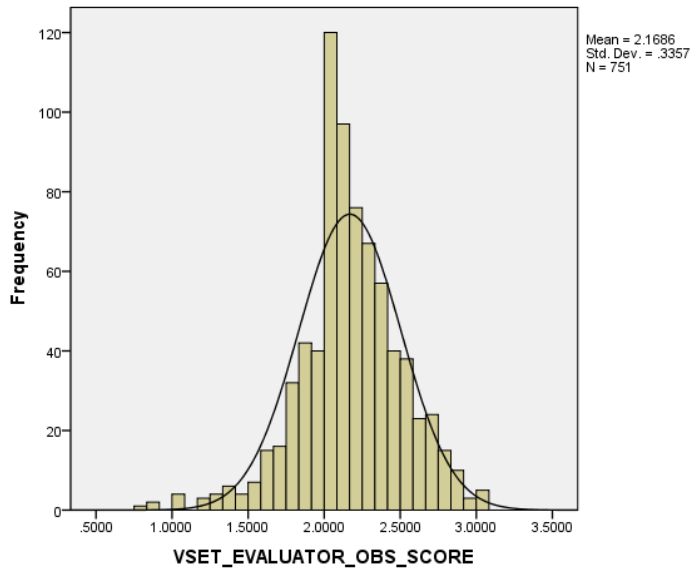


Figure 1 Histogram of Evaluator Observation Scores Across Components (N = 751).

This figure illustrates the frequency of evaluator observation scores for the teacher's instructional practice across the 22 VSET components, ranging from .75 to 3, in the value added sample.

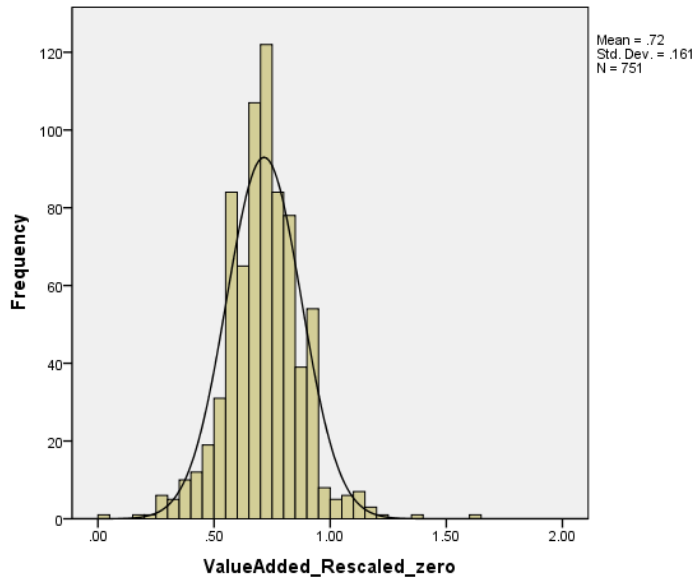


Figure 2 Histogram of Value Added Scores (N = 751).

This figure illustrates the frequency of value added scores for the impact of a teacher on student learning, re-scaled to range from 0 to 1.62, in the value added sample.

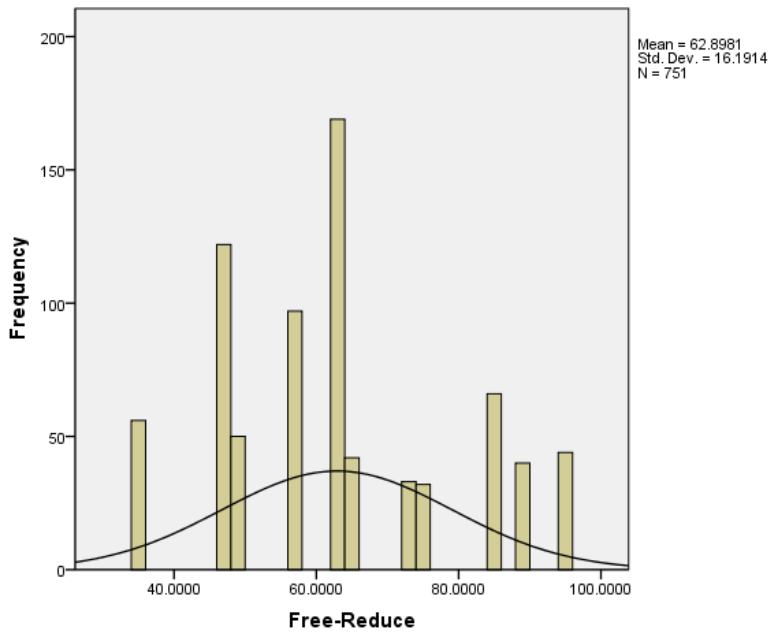


Figure 3 Histogram of Free and Reduced Percentages (N = 751).

This figure illustrates the frequency of free and reduced percentages across school sites, ranging from 35.5 to 95.4, in the value added sample.

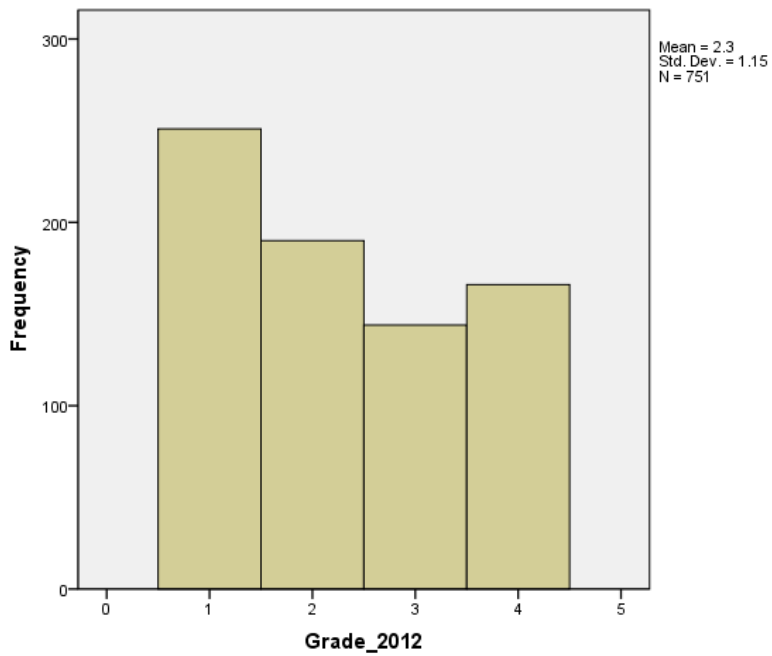


Figure 4 Histogram of 2012 School Grades (N = 751).

This figure illustrates the frequency of school grades across sites, ranging from 1 (A) to 4 (D), in the value added sample.

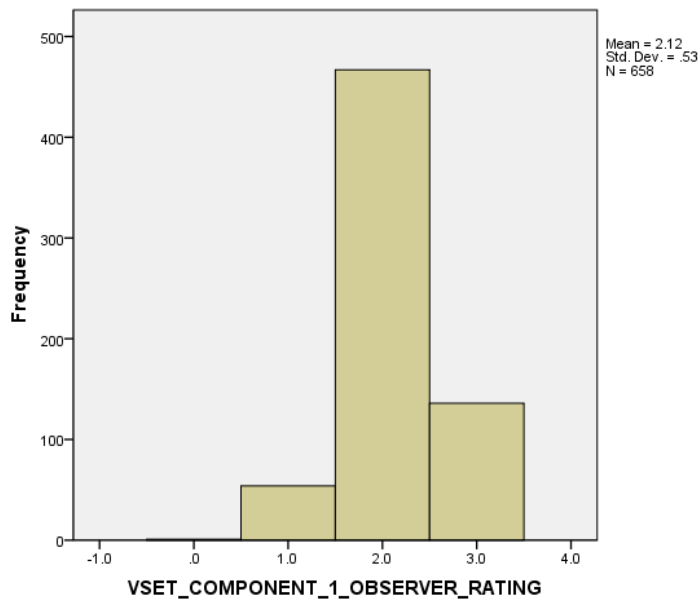


Figure 5 Histogram of Evaluator Observation Scores for the Selected Component (N = 658).

This figure illustrates the frequency of evaluator observation scores for the teacher-selected VSET component, ranging from 0 (Unsatisfactory) to 3 (Distinguished), in the teacher evaluation sample.

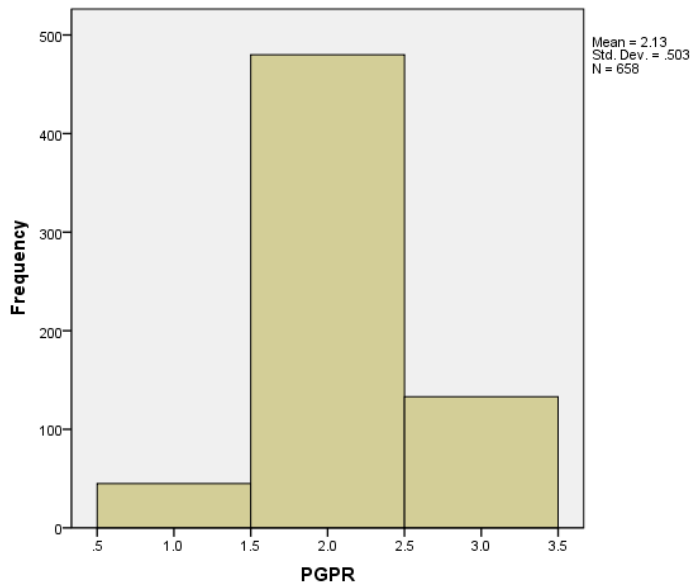


Figure 6 Histogram of Professional Growth Plan Ratings (N = 658).

This figure illustrates the frequency of professional growth plan ratings, agreed upon by the teacher and the administrator, associated with the performance category on the professional growth plan rubric, ranging from 0 (Unsatisfactory) to 3 (Distinguished), in the teacher evaluation sample.

Results

Research Question One

Is there a correlation between teaching practice, as measured by the VSET evaluator observation score of teacher practices across components, and student achievement, as indexed by the VSET Value Added score?

Hypotheses One.

The teachers' total evaluator observation score will have a positive, significant correlation to the value added score.

A scatter plot was constructed to visually depict the relationship between the two continuous study variables that are hypothesized to be related: evaluator observation score across components and the value added score (Figure 6). The scatter plot is composed of individual points that represent the value of a specific event on the scale established by two variables plotted on the x - and y -axes. The scatter plot does not indicate a detectable linear relationship between the two variables, but rather a formless cluster of points. A Pearson product-moment correlation coefficient was computed to assess the relationship between the evaluator observation score across components and the value added score. There was not a significant relationship between the two variables ($r = .003$, $n = 751$, $p = .928$). The scatter plot of the two variables reflects the non-significant finding, with no detectable linear relationship. This finding does not support hypothesis one, and suggests that there is not a statistically significant and reliable relationship between the value added scores and teacher practices across components, as assessed by VSET evaluators.

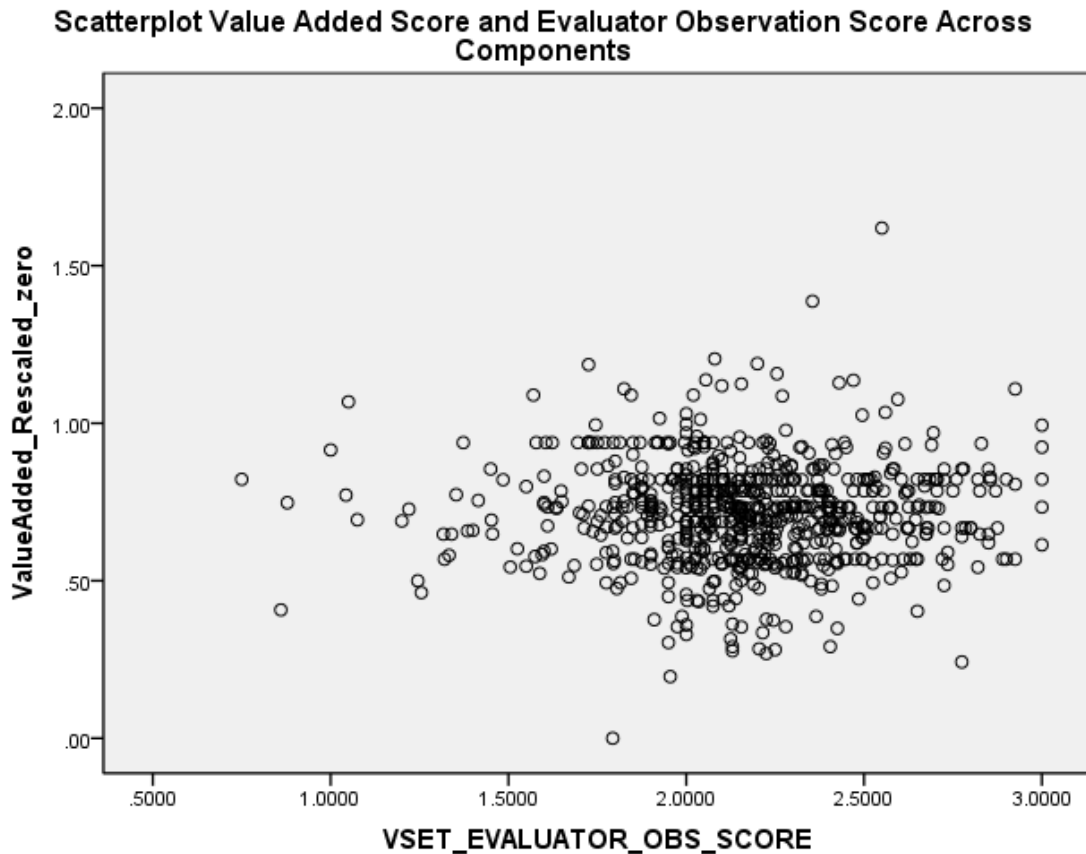


Figure 7 Scatter plot of Value Added Scores and Evaluator Observation Scores Across Components (N = 751).

This figure illustrates the relationship between value added scores and evaluator observation scores across VSET components.

The schools in Florida receive grades that are based on student performance (Hill, 2010) and these school grades were used as a proxy for student achievement in this study. Follow up

analyses were conducted to evaluate differences in evaluator observation scores between schools obtaining a grade of A, B, C, or D. Descriptive values for the evaluator observation scores by and across grades are reported in Table 10.

Table 10 Evaluator Observation Scores Across Components by School Grade and Overall

School Grade	N	Mean	Standard Deviation	95% CI	Range
A	251	2.25	.32	2.21 – 2.29	.75 – 3.00
B	190	2.13	.38	2.08 - 2.19	1.20 – 3.00
C	144	2.04	.25	1.99 – 2.08	.86 – 2.53
D	166	2.20	.33	2.15 – 2.25	.88 – 2.93
Overall	751	2.17	.34	2.14 – 2.19	.75 – 3.00

A between subjects analysis of variance (ANOVA) was calculated on the evaluator observation score across components. The analysis was significant, $F(3, 747) = 14.489, p = .000$.

Post hoc comparisons using the Tukey HSD test indicated that the mean evaluator observation score across components for 'A' schools ($M = 2.25$, $SD = .32$) was significantly higher than the 'B' ($M = 2.13$, $SD = .38$) and 'C' ($M = 2.04$, $SD = .25$) schools, but not significantly different than 'D' ($M = 2.20$, $SD = .33$) schools. The evaluator observation score for 'B' schools was significantly higher than for 'C' schools, but not significantly different from 'D' schools. The 'C' schools had significantly lower value added scores than the 'A', 'B', and 'D' schools. These results suggest that higher evaluator observation scores are associated with improved school grades, suggesting a relationship between teacher impact on student performance.

Research Question Two

To what extent is the teacher's successful completion of the professional growth plan targeting a self-selected component related to objectively measured teaching practice in that component, as measured by the VSET professional development plan rating and evaluator observation score respectively?

Hypothesis Two.

The teacher directed professional growth plan rating will have a positive, significant correlation to the teacher's evaluation observation score on the corresponding individual teaching practice.

A Spearman rank correlation was used to examine whether there was a significant relationship between teachers' ratings on their professional growth plan and the evaluator observation ratings on the teacher's self-selected component. The Spearman's Rho correlation coefficient is the appropriate statistic for this analysis, because both variables are ordinal. One of

the assumptions for the one-sample Spearman's correlation is that there is a monotonic relationship between the variables under consideration. Spearman's correlation is nonparametric, so there are no assumptions regarding normal distribution.

The Spearman's rho revealed a statistically significant relationship between the professional development growth plan rating on the teacher-selected component and the evaluator's rating of the teacher's performance on that component ($r_s[658] = .39, p < .001$). This finding is consistent with hypothesis two, and supports the assumption that the successful completion of the VSET professional development growth plan is associated with teacher's instructional practices in the identified component.

Summary of Findings

This study provided the first known empirical analysis of the primary assumptions of a newly implemented teacher evaluation system (VSET), namely that the specific teaching practices evaluated are related to student achievement, and that teacher-directed professional growth plans effectively shape teacher practices in a particular domain. The researcher sought to test the following hypotheses:

- Hypothesis One: The teachers' total evaluator observation score across components will have a positive, significant correlation with the value added score/student achievement
- Hypothesis Two: The teacher directed professional growth plan rating will have a positive, significant correlation to the teacher's evaluation observation score on the corresponding individual teaching practice

In summary, the study findings suggest that there is not a statistically significant relationship between the VSET value added scores and evaluator observation ratings of teacher practices across VSET components and therefore results do not support Hypothesis One. However, follow up analyses indicate that VSET value added scores are significantly related to school grades, providing partial support for the relationship between teacher impact, as assessed by VSET, and student performance. The study findings do indicate that the successful completion of the VSET professional development growth plan is associated with teacher's instructional practices in the identified component and therefore results support Hypothesis Two.

CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

The purpose of this study was to provide the first empirical analysis of the Volusia System for Empowering Teachers (VSET) in the first year of implementation, 2011 through 2012, and to inform the development of teacher evaluation reform processes. This study examined several critical assumptions inherent in VSET, namely that specific teaching practices evaluated are related to student achievement, and that teacher-directed professional growth plans effectively shape teacher practices in a particular domain. These findings may inform the interpretation and the refinement of the VSET, which aims to build capacity in the teacher work force and ultimately to improve student performance (School Board of Volusia County Team Volusia, Race to the Top application, 2011). This chapter includes interpretations of the study results in the context of the evaluation system literature and includes recommendations for school district administrators for teacher evaluation reform and implementation and recommendations for future research.

Teacher Instructional Practice and Student Performance

Although educators believe that they are able to subjectively recognize an effective teacher, the ability of a teacher evaluation system to credibly define, measure and improve teacher practices and in effect improve student performance is at the forefront of the educational reform discourse (Bryk, Harding, & Greenberg, 2012). With the growing emphasis on accountability and a significant body of accumulated research that establishes the relationship between teacher effects and student achievement, the development and implementation of new teacher evaluation systems that examine teacher quality is central to educational reform (Hill, Charalambous, &

Kraft, 2012; Roosevelt, 2011). The emphasis on educational accountability has also elicited national efforts to develop Value Added Models that provide a measure of student learning derived from a statistical analysis of gains in standardized scores in order to assess teacher effectiveness (Newton, Darling-Hamond, Haertel, & Thomas, 2010).

The consensus among school reformers is that teacher evaluation systems need to be improved by including value added measures to better identify the ineffective teacher and help them to improve (Galley, 2011). Therefore, the implementation of new teacher evaluation systems with value added scores provide quantitative data sets to analyze variation in teacher performance and professional development (Johnson, 2012). Research studies exploring linkages between teacher characteristics and student achievement have focused on factors such as years of experience, certification, and pedagogical and content knowledge (Goldhaber & Anthony, 2003). However, causal connections between various teacher characteristics and effects on student achievement have not been well established and empirical assessment of newly developed teacher evaluation is needed (Nye, Konstantopoulos & Hedges, 2004). The implementation of new teacher evaluation systems with value added scores provide quantitative data sets to analyze variation in teacher performance and professional development (Johnson, 2012).

Florida statute requires that the student performance evaluation component of teacher evaluation models include data and indicators of student learning growth as measured in statewide assessments (Value Added Power Point, 2012). The Commissioner of Education in Florida approved a student growth formula that includes the value added factors shown in Table 4. The value added model rating in VSET was adopted for all of the schools in the Volusia

County district and requires that 50% of the teachers' summative rating is based on the value added measure for student learning. The value added formula was developed to quantify the impact of a teacher on student learning by accounting for factors that may impact the learning process, and should in theory relate to teacher instructional practices. This study tested this assumption in the context of the implementation of VSET in the first, pilot year of 2011 through 2012.

Hypothesis One

The teachers' total evaluator observation score across components will have a positive, significant correlation with the value added score/student achievement.

The findings of this study suggest that there is not a statistically significant relationship between the value added score and teacher practices across instructional components, as assessed by VSET evaluators ($r = .003$, $n = 751$, $p = .928$). Hypothesis one was therefore not supported using the value added measure as a representation of student achievement. One possible explanation for this non-significant finding could relate to the validity of the value added formula. Floden suggests that the interpretation of value added scores, including in Florida districts, should be done with caution due to the variability in scores related to the demographic component of controlling for within school comparisons (Floden, 2012). This study examined a value added model that used mandated state testing, but it's important to consider that a handful of other school districts use student achievement gains (Kane, Taylor, Tyler, & Wooten, 2011a). Ready suggests that value added measures of student learning have the potential to more accurately evaluate school quality because the students' prior performance is strongly related to

their subsequent performance (Ready, 2013). In sum, the variation in value added measures may not suggest that the evaluation models including a student achievement component should be abandoned, but rather that the value added scores may need to be considered in combination with other measures, such as end-of-course exams or content specific pre- and post-benchmark tests, to most accurately capture teacher impact on student achievement (Papay, 2011).

The schools in Florida receive grades that are based on student performance (Hill, 2010) and these school grades were used as a proxy for student achievement in this study. This study examined the school grades in follow up analyses to evaluate differences in evaluator observation scores between schools obtaining a grade of A, B, C, or D. The school grade was the dependent variable, and the evaluator observation score was the independent variable. The analyses showed that higher evaluator observation scores were generally associated with higher school grades, suggesting a relationship between instructional practices on student and school-wide performance $F(3, 747) = 14.489, p = .000$. These findings suggest that there is a relationship between teacher instructional practices and student performance as indexed by school grade, but not as measured by value added scores.

Teacher Professional Development Plans

The purpose of teacher evaluation systems should be to assess the effectiveness of teachers and to provide individual feedback to direct professional development and help teachers improve (Papay, 2012), because ultimately, professional development is a tool to improve the instructional capacity of teachers (Johnson, 2012). As a teacher assessment tool, one of the core propositions in Danielson's Framework is the systematic reflection of the teachers' classroom practices, identification of deficits in skills, and self-assessment to improve teacher practice

(Vivano, 2012). A recent study investigating the relationship between elementary science teachers' formative assessment practices and their pedagogical knowledge found that teachers who examined their own practices, in addition to focusing on students' responses, strengthened their instructional practices (Falk, 2012). The current, re-structured models of professional learning recognize that a significant initial step in the process requires that the teacher take an active partnership in selecting the content of their learning, specifying what learning activities will support their growth, and then determining how to evaluate their own effectiveness as they reflect on learner outcomes and implement their practices (National Staff Development Council, 2011 pg 553).

The Danielson Framework divides teaching into 22 components which are grouped in four domains of teaching responsibility: Planning and Preparation (Domain 1), Classroom Environment (Domain 2), Instructions (Domain 3), and Professional Responsibilities (Domain 4). Rubrics for each of the 22 components provide a description of the level of performance with a rating to support improved teaching practices. The first step in the VSET professional growth plan requires that the teacher self-assess and reflect on current practices and then identify the component for his/her professional goal (Appendix B). The majority of teachers (80%) did not review their prior year's evaluation to guide the development of their professional growth plan. The teachers' prior year evaluation was not rated with separate scores, however, and was thus not compatible with the Danielson components, which may have contributed to many teachers' decision not to utilize it to inform the VSET professional growth plan development. The rigorous timeline requirement for the completion of the professional development plan in the initial self-selection process may have contributed to this statistic. This study sought to examine the

relationship of professional development growth plans targeting a VSET component selected by the teacher and the teachers' instructional practices for that component.

Hypothesis Two

The professional growth plan rating for the teacher-directed professional growth plan will have a positive, significant relationship to the teacher's evaluation observation score on the corresponding individual teaching practice.

The results of this study found a statistically significant relationship between the professional development growth plan rating on the teacher-selected component and the evaluator's rating of the teacher's performance on that component ($r[658] = .39, p < .001$), thus supporting hypothesis two. This finding supports the assumption that the successful completion of the VSET professional development growth plan is associated with teacher's instructional practices in the identified component. This finding aligns with the broader literature on education and professional development. For example, a national longitudinal study which included math and science teachers from elementary, middle and secondary levels, found a relationship between professional development that targets specific instructional practices and the use of that practice in the classrooms (Desimone et al., 2002). Researchers have also found that professional development activities that focus on teaching content over extended time versus 'one-shot' training were more likely to positively impact student achievement (Smith, Desimone, & Ueno, 2005).

Administrators hold that regardless of the school level of the teacher (i.e., elementary, middle or high), the teachers' instructional practice is more effective when the teacher successfully

completes a professional growth plan that is focused on an instructional practice that the teacher actively selected. Kane et al. (2011a) examined over 500 teacher evaluation scores captured from the Cincinnati Evaluation system, which is also based on the Danielson framework, and found a relationship between specific teaching practices and student outcomes, suggesting that professional development which focuses on specific instructional practices may have a positive impact on targeted areas of student performance (Kane, Taylor, Tyler, & Wooten, 2011a). The results of this study illustrate the effectiveness of the VSET professional development plan for the teacher-selected component. This study suggests that, if properly implemented with active participation and direction by the teacher, professional development plans targeting empirically supported instructional strategies that have been shown to improve student achievement are effective.

Recommendations and Implications for Practice

The ongoing teacher evaluation system reform in education provides the foundation for monitoring and operationalizing effective teaching, and aims to influence student achievement and improve student outcomes. The ongoing empirical rigor that is applied to determine the effectiveness of these teacher evaluation systems in capturing, measuring, and influencing key characteristics of quality teaching is a notable change in the educational profession. Although educators may agree with the overarching goals of the reformed evaluation systems, the uniform and successful implementation of the evaluation systems entails a challenging paradigm shift for evaluators and teacher alike.

Engage Teachers in Evaluation Process

The current trend in teacher evaluation is to include performance based standards that center on building quality instruction in the classroom, which marks a fundamental change from previous measures reliant on subjective opinions from principals or inconsequential criteria (e.g., the number of professional development activities that a teacher attends) (Weems & Rogers, 2010). The new evaluation system requires that the administrator and the teacher collaboratively evaluate the quality and effectiveness of instructional practices, which is a marked difference from the former model that assigned the entire responsibility of the evaluation to the administrator. Teachers must be encouraged to personalize their learning targets for their professional growth plans and the plans should be grounded in research-based instructional frameworks. A professional relationship that is supported by the common language of an instructional framework and focuses on the teachers' individual practices will in time support professional growth for both the evaluator and the teacher to in turn impact student performance. School and district leadership may consider the following recommendations to fully engage teachers in the evaluation process:

- Provide ongoing training to teachers in identifying student learning data as it correlates to their instructional practices to build meaningful connections in their classroom experience
- Establish Professional Learning Communities at the school level to promote and encourage collaboration in a deliberate way for the purpose of increasing knowledge and positively impacting practice.

Ensure Administrator Fidelity and Effective Implementation of Evaluation System

The VSET process is a research-based instructional evaluation system to improve instructional practices and measure student performance. At the most fundamental level, establishing a set of criteria to distinguish teacher performance proficiency is fundamental to establishing the evaluator observation ratings and the professional growth plan ratings. The trained evaluator must be knowledgeable and articulate the specific evidence base for ratings of observable behaviors demonstrated by the teacher using particular instructional strategies throughout the school year. Evaluators must be trained to observe, evaluate and provide meaningful feedback to teachers to ensure that teachers respect the fidelity of the delivery of the new evaluation system. The new evaluations systems differ from previous cursory systems and therefore, require increased consistency and fidelity to assessment procedures by the evaluator. In order to ensure fidelity of ratings of evaluator observation and professional development ratings, the district should provide ongoing calibration training for evaluators.

Enhance Educators' Commitment to Evaluation Systems and Professional Development

It is imperative that the purpose for the evaluations system be understood by the teachers and the evaluators. Teacher quality is the most powerful predictor of student achievement in our public schools and policy makers recognize that we must build the capacity of our teacher workforce in order to improve student achievement on a national level (Akiba, LeTendre, & Scribner, 2007; Goldhaber & Anthony, 2003; National Academies, 2007). The district leaders and teachers must recognize the merit in evaluating and improving instructional practices to consequently impact student achievement. As evaluators develop expertise in instructional frameworks and improve their repertoire of research-based practices, the impact on learner

outcomes will support authentic connections between effective practices, professional development, and student performance. The evaluator's commitment to the observation conferences and the professional development process to ultimately strengthen instructional practices should be evident throughout the school year in addition to recognizing improvements subsequent to summative conferences.

VSET follows a constructivist approach, as it places the primary focus on the teacher as the learner, and engages the teacher in personal, authentic learning experiences that are relevant to her real world classroom environment to advance more meaningful learning. Andrews (2007) found that many teachers in the United States are bound to non-constructivist models of teaching due to their own personal experience as students in more traditional settings, so a benefit to the new evaluation system that models the constructivist framework may be to broaden their experience and then influence the teachers' use of reform-based instructional strategies. District leadership may consider the following avenues for enhancing educators' commitment to evaluation systems and professional development:

- Focus on developing evaluator and teacher commitment to improve instructional practices for the purpose of impacting student performance
- Encourage the evaluator and teacher to heighten analysis of instructional practices in the context of student learning at school sites
- Promote district-wide vision to foster ongoing professional development and improve job performance

Analyze and Apply VSET Data to Improve Teacher Performance

District leaders and school administrators must be committed to evaluating the causal relationship between improving instructional practices and student performance. The effective professional development model that targets teacher knowledge and behavior should in theory be directly linked to student achievement (Pinata, 2011). The instructional domains and components identified in VSET are adapted from the “Charlotte Danielson Framework for Teaching” with the intent to connect instructional practices to research based strategies. The framework divides teaching into 22 components which are grouped in four domains of teaching responsibility: Planning and Preparation (Domain 1), Classroom Environment (Domain 2), Instructions (Domain 3), and Professional Responsibilities (Domain 4). Rubrics for each of the 22 components provide a description of the level of performance with a rating to support improved teaching practices.

An analysis of the evaluator observation scores for the teachers’ components should be examined in regards to identifying district wide deficiencies in the components that have the greatest correlation to increase student achievement. Research findings that yield positive correlations between teacher performance ratings and student performance often uses an overall measure for general instructional attributes, which limits correlations to specific classroom practices (Kane, Taylor, Tyler, & Wooten, 2011b). One study comparing data in which teachers and students were randomly assigned to classes found that there are substantial differences among teachers in their ability to influence achievement gains in their students (Nye, Konstantopoulos, & Hedges, 2004). The purpose of teacher evaluation systems should be to assess the effectiveness of teachers and to provide individual feedback to direct professional

development and help teachers improve (Papay, 2012). The VSET data should be analyzed and applied to improve teacher performance, including the design of district-wide professional development targets to include identified deficient areas in the Danielson power components that have the greatest correlation to student achievement, and thus the greatest likelihood of improving teaching outcomes.

Study Limitations

Potential limitations of the current study, which should be considered in interpretation of results, including the following:

1. In the first year of implementation, the web-based system that supported VSET did not archive the professional development plan that included teachers' data specific to the self-selection process of the component. The data were retrieved at each school site and was not as systematically maintained as the Human Resource support data system.
2. In the first year of implementation, the evaluator observation training omitted VSET calibration, which would certify that each observer met an expected proficiency level prior to rating teachers.
3. In the first year of implementation, the value added model was limited to the state database and could not account for relationships currently accounted for in district databases.

Recommendations for Future Research

This study provides the first empirical analysis of the VSET, a pilot evaluation system implemented in Volusia County during the 2011 through 2012 school year, with the goal of

informing the development and refinement of efficient, effective evaluation systems targeting student achievement and professional development. While the results elucidate several important issues surrounding the effectiveness of VSET, including the relationship between instructional practices and student achievement and the effectiveness of the professional development plans targeting a specific component of instructional practice, further research is needed to fully examine VSET and other emerging evaluation systems. Several primary areas for further study and specific research recommendations are detailed below:

- A follow-up study should be conducted in the second year of VSET implementation with the classroom teachers in the pilot study to determine if evaluator observation ratings on their self-selected components show sustained improved instructional practices. Specifically, the design of this study may be replicated to determine if the teacher's successful completion of the professional growth significantly and positively correlates with evaluator observation ratings for the teacher-selected component in subsequent years of VSET implementation.
- Conduct a study with teachers to find out if they are selecting components that they consider areas of professional strength or weakness in their instructional practices for the Professional Growth Plan. The first step in the professional growth plan requires that the teacher self-assess and reflect on current practice, however it is not clear what motivating factors influence the self-selection. Such a survey may be administered prior to and following the implementation of the professional growth plan and could yield interesting results regarding the potential impact of decision making criteria in selecting a component and resulting improvements in teacher practices. For example, if a teacher

selects a teaching component that is a perceived relative weakness, then perhaps s/he may be more motivated to improve in that area or s/he may evidence greater or less improvement than if a component of perceived strength at baseline was selected.

- Conduct a longitudinal study with the value added scores and the evaluator observation scores of the VSET implementation, to determine if this relationship is significant in the second and subsequent years of implementation. It is possible that the administration of VSET and calculation of value added scores will evolve with increased experience among teachers and administrators. Further examination of the validity of the Value Added measure as an index for ‘teacher impact’ should also be considered.

Conclusion

Policy makers and school leaders recognize that enhanced evaluation systems should be constructed to differentiate the effectiveness of teachers, to provide meaningful feedback on performance to the teacher, and to identify areas of professional development for each teacher (Weisberg, Sexon, Mulhern, & Keeling, 2009). The responsibility for implementation of new teacher evaluation systems does not rest on the district leaders alone. The evaluators and teachers are also responsible for participating in a professionally responsible and reflective manner.

It has become increasingly clear that defining the characteristics of a quality teacher and examining which characteristics directly influence student achievement is critical to implementing educational reforms. Research shows that student performance is dependent on the quality of teaching underscoring the need to further understand the relationship between teacher practices and learner outcomes (Scheerens, & Boser, 1997). The findings of this study

suggest that there is not a statistically significant and reliable relationship between the VSET value added scores and teacher practices across components, as assessed by VSET evaluators. The results did indicate, however, that higher evaluator observation scores across components are associated with better school grades, suggesting a relationship between instructional practices and school-wide performance. As states respond to Race to the Top and implement new evaluation systems, the identified components of teacher practice in VSET warrant further analysis (Newton, Darling-Hammond, Haertel, & Ewart, 2010). The value-added measure may provide useful information about teacher quality, but it but may need to be considered in combination with other measures (Papay, 2011).

VSET adopts the constructivist perspective, which assumes when the teacher develops a deeper conceptual understanding of instructional practices, s/he will more effectively implement these practices (Redden, Simon, & Aulls, 2007). Historically, professional development models have been constructed with little investment from the teacher and have been implemented without systematic support for the teacher to transfer her new ideas into instructional practices (Diaz-Maggioli, 2004). Traditionally, professional development models have employed a top down approach. Evidence suggests that teacher professional development models that have offered one-time workshops that focus on general knowledge rather than specific skills, or are not supported by research based practice are ineffective (Pianta, 2011). Teachers must engage reflective thought as they develop and implement professional development plans. The evaluator observation and professional growth plan conferences engages evaluators and teachers in conversations generated from research-based rubrics. This study found that successful

completion of teacher self-selection of components for professional growth has a significant relationship to teacher practices.

This study suggests that VSET effectively captures measures of teaching practices and that the teacher-directed professional growth plan effectively shapes teacher practices in a particular domain. Overall, this study supports the professional development plans instituted in the VSET and suggests potential problems with the value added scores, specifically concerning the relationship of VSET evaluator ratings and value added scores. The study did, however, support the relationship of evaluator scores with school grades and suggests the potential utility of the VSET components in enhancing teacher practices and student performance.

As an avenue to provide a vision of instruction and improve instructional practices strategies, school district leaders incorporated the Charlotte Danielson Framework in VSET to develop teacher competency (Milanowski, Heneman, & Kimball, 2011). One of the core propositions in Danielson's Framework is the systematic reflection of the teachers' classroom practices, identification of deficits in skills, and self-assessing to then improve their practice (Vivano, 2012). The teacher and the evaluator were required to compare the Danielson Framework rubric as a standard to the observed classroom practices and the responses of the learners. This was in stark contrast to the prior evaluation system that was not based on an instructional framework and did not require any assessment by the evaluator or teacher. In VSET, the teacher and the evaluator were required to base their conferences on the Danielson Framework rubric, thus continually reinforcing the vision of instruction.

McLeod argues that the direction, focus, and effectiveness of instructional design in new teacher evaluation systems is grounded in theoretical framework and in the teachers' practical experiences (as cited in Yilmaz, 2008, pg. 161). The evaluator observation and professional growth plan conferences were focused on the individual teachers' delivery of instructional practices and the rubric was the standard for making meaningful connections to teacher effectiveness. This study showed that the heuristic approach employed in VSET guides the evaluator and the teacher to focus on improving ineffective instructional practices to impact student performance. In the first year of implementation of VSET, teacher quality was improved, thus enacting one of the most powerful mechanisms to create better schools (Weisburg, Sexon, Mulhern, & Keeling, 2009).

APPENDIX A. VSET END OF YEAR EVALUATION REPORT



400746605

Volusia System for Empowering Teachers End of Year Evaluation Report

FOR:
 Rubric: Classroom Teacher
 Professional Growth Plan Rating: 2
 Value Added Measure: Pending

Observer:
 On:
 Observation Rating: 2.155

Summative Rating: Pending

Domain	Description	Admin	PAR	%Weight	Total
Domain 1: Planning and Preparation	Demonstrating Knowledge of Content and Pedagogy	3		2.5	.0750
	Demonstrating Knowledge of Students	2		2.5	.0500
	Setting Instructional Outcomes	2		5.0	.1000
	Demonstrating Knowledge of Resources	3		2.5	.0750
	Designing Coherent Instruction	2		2.5	.0500
	Assessing Student Learning	2		5.0	.1000
Domain 2: Classroom Environment	Creating an Environment of Respect and Rapport	2		5.0	.1000
	Establishing a Culture for Learning	2		5.0	.1000
	Managing Classroom Procedures	2		3.0	.0600
	Managing Student Behavior	2		4.0	.0800
Domain 3: Instruction	Organizing Physical Space	3		3.0	.0900
	Communicating with Students	3		5.0	.1500
	Using Questioning and Discussion Techniques	2		10.0	.2000
	Engaging Students in Learning	2		10.0	.2000
	Using Assessment in Instruction	2		10.0	.2000
Domain 4: Professional Responsibilities	Demonstrating Flexibility and Responsiveness	2		5.0	.1000
	Reflecting on Teaching	2		5.0	.1000
	Maintaining Accurate Records	2		5.0	.1000
	Communicating with Families	2		2.5	.0500
	Contributing to the School and District	2		2.5	.0500
	Growing and Developing Professionally	2		2.5	.0500
	Showing Professionalism	3		2.5	.0750
				Total:	2.155

Principal/Site Supervisor's Signature _____ Date _____
 Teacher's Signature Denoting Receipt of Report _____ Date _____

3=Distinguished/Highly Effective 2=Proficient/Effective
 1= Basic/Developing (1-3 years experience)/Needs Improvement (greater than 3 years experience) 0=Unsatisfactory

This end-of-year evaluation report will become the "summative" report when the value added measure (VAM) supplied by the state is factored in with other measures.

APPENDIX B. VSET PROFESSIONAL GROWTH PLAN

Professional Growth Plan

Type of Plan: Individual Monitored Directed

Effective and Highly Effective Teachers *New Teachers New to District Needs Improvement* *Unsatisfactory Teachers*

School Year: _____

Last Four Digits Social Security: _____

Teacher: _____

Position/Subject Area: _____

Teacher – _____

School: _____

PAR: _____

Administrator: _____

A. Reflecting on the Evidence

What data about yourself will be used to guide the development of your Professional Growth Plan? (Check all that apply)

A1

- Self Reflection (*Charlotte Danielson Framework Rubric*)* Empowering Educators for Excellence (EE) Year 1 Year 2
- Previous Year's Summative Evaluation Endorsement Requirement Other _____

What data about your students will be used to guide the development of your Professional Growth Plan? (Check all that apply)

A2

- Academic Formative/Progress Monitoring Academic Summative/Outcome Attendance Behavior/Discipline
- Other Student proficiency within the cohort groups will increase by 2% in mathematics.

A3

What school data will you consider as you develop your Professional Growth Plan? (Check all that apply)

- Academic Achievement Attendance Behavior/Discipline Drop Out School Improvement Plan Other _____

A. Identification of Growth Area(s)

A4

Reflect on the data from A1-A3 and identify the domain(s) and component(s) that indicate an area for growth.

Check Domain(s) of Growth:

- Domain 1 – Planning and Preparation
- Domain 2 – The Classroom Environment
- Domain 3 – Instruction
- Domain 4 – Professional Responsibilities

- Individual Growth Plans must address one component that the teacher has identified as having the greatest potential for increasing student learning.
- Monitored and Directed Growth Plans must address one Power Component. **Power Components are in bold.**

1a	1b	1c	1d	1e	1f
2a	2b	2c	2d	2e	2f
3a	3b	3c	3d	3e	3f
4a	4b	4c	4d	4e	4f

Volusia System for Empowering Teachers

APPENDIX C. VSET PROFESSIONAL GROWTH PLAN RUBRIC

**E. Professional Growth Plan
End-of-Year Review**

Overall rating for Professional Growth Plan _____

Rating Rubric for Professional Growth Plan	
3 Distinguished	The Professional Growth Plan demonstrated a direct correlation to needs indicated by student learning data and the educator's previous performance rating, credentials and/or self-inventory. Strategies were specific, fully-developed and focused on improving or changing professional practice for the purposes of improved student learning. The educator reviewed his/her plan during the school year, and readily adjusted the plan when ongoing evidence indicated the need. The educator not only completed all activities identified in growth plan, but identified strategies and resulting evidence that ultimately improved or changed the educator's practice in an effort to improve student learning. The educator's reflection provided extensive and thorough evidence of why the educator implemented those strategies and how and why the chosen strategies improved or changed his/her practice. In the course of implementing the plan, the educator collaborated with other educators in a deliberate and meaningful way. Results of the plan were effectively shared with the wider school community and impacted the practice of others.
2 Proficient	The Professional Growth Plan demonstrated a direct correlation to needs indicated by student learning data and the educator's previous performance rating, credentials and/or self-inventory. Strategies were specific, well-developed and focused on improving or changing professional practice for the purposes of improved student learning. The educator reviewed his/her plan during the school year and, if necessary, made adjustments to the plan. The educator completed all activities identified in growth plan and produced evidence that identified strategies were implemented in the classroom. The educator's reflection made adequate connections between student data and the strategies the educator chose to implement. In the course of implementing the plan, the educator collaborated with other educators in a meaningful way. Results of the plan were shared with departments or grade levels and may have had an impact on some colleagues.
1 Basic	The Professional Growth Plan demonstrated some correlation to needs indicated by student learning data and the educator's previous performance rating, credentials and/or self-inventory. Strategies were loosely-focused on improving or changing professional practice for the purposes of improved student learning. The educator reviewed his/her plan during the school year, but made few or no adjustments to the plan unless suggested by the evaluator. The educator's reflection demonstrated that he/she completed most or all activities identified in the growth plan, but provided limited evidence of implementation or how it improved or changed his/her practice. The educator's attempts to collaborate with others were not deliberate and contributed little to the evidence. Results of the plan were minimally shared with others.
0 Unsatisfactory	The Professional Growth Plan did not directly correlate to needs indicated by student learning data and the educator's previous performance rating, credentials and/or inventory. Strategies were not clear or did not specifically focus on improving or changing professional practice for the purposes of improved student learning. The educator reviewed his/her plan during the school year but did not recognize or accept the need to make adjustments to the plan. The educator's reflection (if one exists) provided little evidence that the strategies were implemented or how those strategies improved or changed his/her practice. There was minimal or no evidence to support the plan. The educator did not collaborate with others in a meaningful way. Results of the plan were not shared with others.

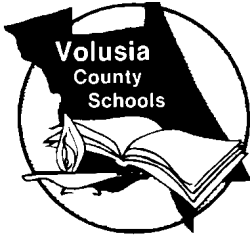
Teacher Signature _____

Date _____

Administrator Signature _____

Date _____

APPENDIX D. VOLUSIA COUNTY SCHOOL STUDY APPROVAL



P.O. Box 2118•200 North Clara Avenue•DeLand, Florida 32721-2118

DeLand	Daytona Beach	New Smyrna Beach	Osteen
(386) 734-7190	(386) 255-6475	(386) 427-5223	(386) 860-3322

School Board of Volusia County
Mrs. Diane Smith, Chairman
Ms. Candace Lankford, Vice-Chairman
Mrs. Linda Costello
Mr. Stan Schmidt

Dr. Margaret A. Smith
Superintendent of Schools

November 27, 2012

Lesley Sileo-Robinson
 1860 N Clyde Morris Blvd
 Daytona Beach, FL 32117

Dear Lesley,

I have received your request to conduct research within Volusia County Schools and approved your topic of "VSET: Influence on Teacher Practice and Student Achievement."

As with all requests to do research; participation is at the sole discretion of the principals, teachers and parents of all students involved. Parent Consent Forms will be necessary for all data gathered from the students of Volusia County Schools.

By copy of this letter, you may contact the school principals who allow this research to be conducted with their faculty and students. We request that you conduct your survey with as little disruption to the instruction day as possible.

I would appreciate receiving a copy of your findings upon completion of the study.

Sincerely,
 Bambi J. Lockman, LL.D.
 Deputy Superintendent, Instructional Services

APPENDIX E. INSTITUTIONAL REVIEW BOARD STUDY APPROVAL



University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1
FWA00000351, IRB00001138**

To: **Lesley M. Sileo-Robinson**

Date: **December 13, 2012**

Dear Researcher:

On 12/13/2012, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination
Project Title: Volusia System for Empowering Teachers (VSET): Influence on Teacher Practice and Student Achievement
Investigator: Lesley M Sileo-Robinson
IRB Number: SBE-12-08998
Funding Agency:
Grant Title:
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 12/13/2012 09:37:22 AM EST

A handwritten signature in black ink that reads 'Joanne Muratori'.

IRB Coordinator

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