
**VALUE-ADDED VERSUS STATUS: COMPARATIVE CASE STUDIES OF THE
UTILIZATION OF STUDENT ACHIEVEMENT DATA BY PUBLIC SCHOOL SYSTEMS**

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**In Partial Fulfillment of the Requirements
for the Degree of Doctor of Education
in Educational Leadership**

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August 2009**

Acknowledgements

The completion of this dissertation would not have been possible without the constant and unwavering support of my greatest cheerleader- my dear wife Jennifer. As much as I, she has endured the demands that this program has placed on our lives. She provided me with the time, space and support needed to help me achieve this goal. I look forward to a return to normalcy and will forever be indebted to her for the sacrifices that she has made for me as I traveled this long and winding path.

To my children, Andrew and Jessica, I thank you for your patience and understanding. You always seemed to understand the importance of this journey for me. I hope that someday you will look back on these past years as a source of inspiration for your own pursuit of learning. I love you both and promise that the piles of articles will be cleaned up soon.

I would be remiss if I did not extend my sincere gratitude to my friends and colleagues from cohort one. Your boundless energy, wealth of experience and knowledge, sense of humor, and commitment to learning served as the consummate motivator for me, even when I was faced with seemingly insurmountable challenges. Together, we have paved the way for new generations of educational leaders to emerge as Doctors of Education. Although this leg of our journey together has come to a close, I am confident that we will forever remain connected by the many fond memories of all that we have achieved together. You will always have a place in my heart.

Finally, I must extend a deep and heartfelt "thanks" to all faculty of the Ed.D. program. Dr. Myers- Your unwavering commitment to your vision has inspired me more

than you will ever know. Dr. Butterworth- Your sound advice and belief in all of us made it all seem possible. Dr. Alemu- Your feedback and guidance throughout the research process was invaluable.

Abstract

This multiple case study examined the utilization of student achievement data by teachers and administrators in school systems implementing a value-added model versus those implementing a traditional or status model. The study employed scripted interviews, analysis of documents, and observation of data analysis activities when possible. This study was guided by the following primary research question: How do school systems, teachers, and administrators differ in their use of student achievement data when implementing traditional/status assessment models versus value-added assessment models? The study determined that teachers and administrators from school systems that have pursued a value-added assessment model exhibit greater readiness and motivation to utilize such data. Additionally, professional development, specialized support positions, technology resources, and expectations for comprehensive planning were notably more prevalent in such value-added systems. Attitudes and perceptions of the relevance of data analysis appeared to be positively impacted by steps taken to prepare and support professionals for effective utilization of value-added data. This study may prove useful for system leaders seeking increased and improved utilization of student achievement data for instructional planning, decision-making, goal setting and/or comprehensive planning.

Definition of Terms

For the purpose of this study the following terms have been defined:

Adequate Yearly Progress: An individual state's measure of yearly progress toward achieving state academic standards. Adequate yearly progress is the minimum level of improvement that states, school districts, and schools must achieve each year, according to federal No Child Left Behind (NCLB) legislation.

Accountability: The notion that people (e.g., students or teachers) or an organization (e.g., a school, school district, or state department of education) should be held responsible for improving student achievement and should be rewarded or sanctioned for their success or lack of success in doing so.

Assessments: Teacher-made tests, standardized tests, or tests from textbook companies that are used to evaluate student performance.

Comprehensive planning : A continuous process of (1) establishing goals, (2) gathering data, (3) forming and assessing all means of goal achievement, (4) making decisions and creating action plans to achieve desired outcomes.

Formative assessments: Any form of assessment used by an educator to evaluate students' knowledge and understanding of particular content and then to adjust instructional practices accordingly toward improving student achievement in that area.

Professional Development : Programs that allow teachers or administrators to acquire the knowledge and skills they need to perform their jobs successfully. It is an overarching term for opportunities for growth within the teaching profession.

Professional development manifests itself in a variety of forms including workshops, consultations, mentoring, etc.

Traditional/Status: Assessment models that measure the unadjusted mean levels of achievement or proficiency of students in a school or cohort. Oftentimes such results are utilized for direct comparison of one cohort to a previous cohort at the same grade level.

Value-Added : is any method of analyzing student test data to ascertain students' growth in learning by comparing students' current level of learning to their own past learning. Based on a review of students' test score gains from previous grades, researchers can predict the amount of growth those students are likely to make in a given year. Thus, value-added assessment can show whether particular students have made the expected amount of progress, have made less progress than expected, or have been stretched beyond what they could reasonably be expected to achieve.

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CHAPTER I

Introduction

In recent years, public education has endured widespread criticisms for its failure to adequately prepare students for the complex and demanding world of the twenty-first century. As such, parents, citizens, politicians, and policymakers have been motivated to demand immediate change in our public education system by calling schools and school districts to greater account for the apparent failings of a large percentage of American students. The passing of the No Child Left Behind (NCLB) Act in 2001 remains as undeniable evidence of this calling for greater accountability and improved standards for our schools.

Accountability for student learning is no longer regulated only at local levels where teachers and schools had maintained freedoms to create, administer, and analyze assessment measures as they deemed appropriate. The advent of learning standards and statewide standardized assessments required under the federal NCLB act has transformed the education landscape by mandating schools to comply with new requirements and expectations. Under this revolutionary act, states are required to develop and implement accountability systems in key areas. They are academic content standards, academic achievement standards, statewide assessment systems, technical quality, alignment inclusion, and reporting. In sum, lawmakers have demanded objective evidence to show that students are meeting adequate achievement standards and schools are timely and responsive in their interventions.

Embedded within the NCLB act is the requirement that all states administer assessments in mathematics and reading language arts in grades three through eight and at least once at the high school level (U.S. Department of Education, 2006, June 30). A third performance indicator must also be measured by all public schools. At this time in the state of New York, the third indicator is science for grades three through eight and graduation rate at the high school level. Reliance on standardized assessments as the primary mode of accountability for school systems has not only transformed school programs and practices, but has also led to ongoing and careful analyses of student achievement data. As such, schools have been thrust into a data rich environment and are expected to maximize their use of pupil performance data to make informed decisions that will sustain growth and improvement (at least on trajectory toward 100 percent proficiency by 2014). In addition to the focus on academic achievement data, it is common for schools to be accountable for additional outcomes and statistics such as, graduation rate, attendance, violent and/or disruptive incidents and post-graduate pursuits.

The shift in paradigm to summative evidence used as accountability measures has prompted many states (e.g., Florida, Tennessee, North Carolina and Pennsylvania) to initiate comprehensive reviews of the methodological and practical issues involved with implementation of assessment and data analysis models employed by school administrators and teachers. In many cases, the first attempts at assessment models used for accountability purposes were focused primarily on annual reporting of disaggregated simple averages, median test scores or proficiency-level indicators reported for student subgroups that had participated in standardized testing programs.

Such traditional or status models of test-based accountability typically reported cohort-to-cohort growth whereby one cohort of students was directly compared with the previous cohort at the same grade level. As the NCLB act took hold, new policies were enacted that altered the accountability model somewhat. New mandates required that predetermined percentages of students meet or exceed measurable objectives on mandated exams. Sanders (2000) reported that such methodologies were limited in scope and provided little opportunity for meaningful comparisons. Additionally, such uses of data for accountability had been viewed by some to be unfair due to distortions caused by the many socio-economic and non-school factors that are outside of a school's possible influence (Adcock, 1995). Meyer (2000) also contended that reliance on mean school-level achievement scores impedes schools and the public from determining measurable impacts of school programs due to the contamination of data with external factors.

The apparent shortcomings of traditional or status models helped to propel a new movement in the education and policy communities whereby value-added models gained support as the solutions to such inefficacies. At last, there appeared to be a valid and reliable model that would enable school and education authorities to estimate the effectiveness of teachers, programs and systems- even when vast differences in students and communities were evident. Intense discussions about the superiority of value-added models for accountability purposes have ensued. Many states have leapt forward by mandating rapid and full adoption of such models and have gone as far as utilizing value-added data for evaluation of teachers and school leaders. For example, in 2002, the General Assembly of Pennsylvania proposed legislation that would base

teacher and administrator evaluations on student achievement data calculated using a value-added data collected over a period of three years. To statistically isolate analyses of achievement data for measure of the effect of school, teacher and program, some jurisdictions have also voluntarily opted to implement value-added models whereby, to the extent possible, all external or nonschool variables were accounted for. Such models are designed to clarify school and/or program effects via complex statistical calculations that use students' achievement data to predict the gains attributed to the effects of school-based variables (e.g. teacher, program, policy, etc.).

Doran and Cohen (2005) described value-added models as measures of each student's growth over a period of time (e.g. one academic year) rather than a measure of current student achievement only. Statistically, however, determining how much "value" a school has added to a student's academic growth requires sophisticated tools and comprehensive data sets. Doran (2003) listed five additional components that must be in place before school systems should embark on value-added analyses of pupil performance data. They are: an annual testing system; student data in electronic form; student and teacher identification numbers; sufficient sample sizes; and a consistent test score matrix. In addition to these components, schools must also have ready access to nonschool data sets such as student, family and community characteristics that may become critical predictors of student achievement (Meyer, 2000). These data are critical when schools attempt to control for such determinants.

The research base on statistical techniques used by states and school systems to analyze student achievement data continues to grow. As such, criticisms of traditional statistical techniques as well as value-added models have been well

documented (Doran, 2003). Additionally, studies have been conducted to assess teacher and administrator readiness to effectively utilize the wealth of data that is now being produced in this new era of accountability. Dudley (1997) asked a group of teachers what the word data conjured up in their minds. He indicated that their responses included computers, numbers and confusion. Ballou (2002) indicated that any accountability system is only effective when people can understand them with ease. Additionally, Saunders and Rudd (1999) determined that there was no empirical evidence demonstrating how schools actually used value-added data, or any other form of performance data available to them. They too indicated that staff of schools may have had difficulty understanding statistical analyses.

The recent, and often rapid, transitions made by states, such as Pennsylvania, to value-added models raised some questions about the readiness of school districts to understand and fully utilize this new system to its fullest capacity. The many criticisms of traditional statistical models which are unlikely to provide unbiased estimates of school performance and the criticisms of value-added models which may be impractical and too complex to understand warrant a closer exploration of how performance data and models for analysis undertaken by school systems is actually used to improve student learning and raise standards (Osgood, 2001). Additionally, some believe that discussions and debates amongst researchers about the strengths and weaknesses of value-added models have not broached the educational policy community (Koretz, 2008). The likelihood is that the daunting complexities of value-added models have surpassed the knowledge base and skill level of policy makers as well as educators. Koretz surmised that such lack of true understanding, and critical discourse, will

undoubtedly lead to misuse, inappropriate and unproductive use of generated assessment data. Despite the continued prevalence of traditional, cohort-to-cohort accountability models, recent trends indicate a swift movement toward value-added systems throughout the nation. This study explored the realities of data analyses and utilization by two similar school systems that have voluntarily opted for different assessment and accountability models. The intent was to venture beneath policy by studying the true meaning and value of student achievement data to those who operate at the interface between instruction and learning.

Purpose of the Study

The purpose of this multiple case study in two similar school systems was to explore the utilization of student achievement data by systems that have adopted a traditional assessment model as compared to those systems that have adopted a value-added assessment model. The primary sampling procedure used was interviews with administrators and teachers from the selected research sites. At this stage in the research, a “traditional assessment system” is defined as a model that measures the unadjusted mean levels of achievement or proficiency of students in a school or cohort. “Value-added” models are defined as systems whereby growth of individual student learning gains are measured and compared to predicted outcomes.

Significance of the Study

This study will add to a growing bank of literature in the area of school accountability and use of student achievement data. Findings and recommendations will inform selection, planning and implementation of assessment models by school

systems seeking compliance with NCLB accountability standards. The findings of this study will also contribute to a broader concurrent mixed methods study designed to examine the use and impact of accountability measures and assessment data on educational organizations of various socio-economic statuses. By focusing on the actual utilization of achievement data by similar, yet separate school systems that have opted to implement different assessment models (traditional and value-added) this researcher will be able to provide valuable insight to processes of data collection, analysis, and use and the capacity to overcome known barriers and issues of each system. In turn, school systems may find value in the results of this multiple case study as they consider their own model and capacity for effective data analysis and utilization.

Research Questions

This case study provides a deeper understanding of the link between type of assessment model (value-added versus traditional) employed by school systems and the use of generated pupil performance data to inform practice, improve programs, design interventions, organize schools and systems, etc. The primary research question addressed via this multiple case study is: How do school systems, teachers, and administrators differ in their use of student achievement data when implementing traditional/status assessment models versus value-added assessment models?

Through multiple case studies, this study intended to answer the following basic questions for school districts implementing value-added and traditional/status models:

1. How do schools and school personnel using a value-added model compare to schools using traditional models in perceived or actual readiness for analysis and utilization of student achievement data?
2. Are there notable differences in motivations for and commitment to analysis and utilization of student achievement data by administrators and teachers in school systems using value added and traditional assessment models?
3. How are organizational systems and structures implemented to support analysis and utilization of student achievement data?
4. How do attitudes and beliefs toward the analysis and utilization of student achievement data differ in school systems using value-added and traditional models?

Limitations

The data collected for this research consisted of interviews conducted with teachers and administrators from the two sample districts during the 2008-2009 school year. The snowball selection process described in Chapter three was initiated with the superintendents from each district. The first level of recommendations made by the superintendents resulted in two school level administrators identified from each district. Initially, the researcher intended to interview building principals only. From District 1 (VA) only one building principal was recommended for the purposes of this study. The solution to this dilemma was recommendation of an instructional supervisor who held like responsibilities and was an active participant and leader in the implementation of data analysis activities.

Sample districts were selected primarily for their use of different assessment models. The researcher also attempted to select districts of similar achievement status and demographics. A notable difference that could not be controlled due to geographic constraints was the overall size of each district based on student enrollment. Sample District 1 (VA) had roughly twice the student population than Sample District 2 (TS). The researcher recognized this variable as an inconsistency between the two districts.

With two exceptions, interviews were conducted as planned following the described protocols. Due to scheduling difficulties, two interviewees from District 2 (TS) were unable to schedule face-to-face interviews with the researcher. To accommodate such needs, the researcher scheduled a phone interview with one such participant and relied on an email correspondence/questionnaire with the second participant. Although direct observations of respondents' body language and facial expressions could not be noted in these cases, the researcher believes that adequate information had been collected from both participants.

To the extent possible, the researcher attempted to collect archival records and documents that pertained to each district's analysis and utilization of student achievement data. Such documents coupled with direct observation of scheduled data analysis activities would have supported efforts to further validate findings through triangulation of all data sources. Unfortunately, few documents were provided by Sample District 2 (TS) for such purposes and the researcher was only able to make few direct observations of data analysis activities within the timeframe allotted for this research.

In hindsight, the researcher also recognized the implications of these limitations on the chosen snowball sampling method. One might question the generalizability of findings generated when interview responses from intentionally selected participants could not be triangulated with ample review of archival records and observation of data analysis activities. The researcher contends that the exploratory nature of this study warranted a sampling model whereby participants were selected for their ability to articulate specific applications and utilizations of student achievement data in each sample district.

Delimitations

The following delimitations were placed on the findings of this study:

1. This study targeted administrators and teachers who had been directly involved with data analysis activities. It did not focus on utilization of student achievement data by staff members at large.
2. This study did not delve into technical issues of the exact value-added model adopted by District 1 (VA).
3. The intent of this study was not to evaluate the merits of adopted assessment and accountability models. Rather, the study focused on the utilization of data produced within each model, conditions for readiness for data analysis and utilization and the attitudes and perceptions held by practitioners working within each model.

CHAPTER II

Literature Review

Introduction

This chapter presents a review of the literature related to this study. This chapter was divided into three sections. The first section includes a detailed description of value-added and traditional or status models used for analysis and interpretation of student achievement data. Included in this first section are overviews of the justifications and limitations of each model as reflected in research literature. The second section describes the known prerequisite conditions for implementation of value-added systems. The third section describes literature pertaining to the readiness of school systems to employ sophisticated data analysis procedures such as value-added. This chapter concludes with a summary of the important concepts presented.

Value-Added Versus Traditional Assessment Models

Student achievement tests and results are at the core of the accountability movement spurred by legislation such as the No Child Left Behind Act of 2001. As described in *Quality Counts '99: Rewarding Results, Punishing Failure* (Education Week, 1999), "Accountability for student performance is one of the two or three- if not the most- prominent issues in policy at the state and local levels right now" (p.8). Most stakeholders- parents, teachers, administrators, politicians and policymakers- agree that the data generated from the administration of standardized assessments for core subjects such as reading and mathematics can serve as legitimate and meaningful tools to evaluate the effectiveness of teachers and schools. However, the manner in which

states and school systems demonstrate their effectiveness and show achievements or regressions by their students has been debated for many years. Questions about how best to analyze and utilize student achievement data have become urgent. The stakes have become very high for school systems striving to demonstrate adequate yearly progress in reading and mathematics for all students, to close achievement gaps among specific subgroups of students (e.g., minorities/Anglos, low SES/high SES; disable/non-disabled), and to report such progress to all stakeholders on an annual basis.

Traditional assessment models that rely on average and median test scores and cross-sectional comparisons continue to be the most commonly used models for measure of school performance and accountability. In this approach, achievement data are analyzed for a specific grade over time with different cohorts of students to determine school improvement and school progress. For example, the performance of different cohorts of fourth graders over the course of consecutive years would be analyzed to determine a percentage of improvement. However, this method lacks assessment of individual student progress longitudinally through the grade levels. It also fails to account for demographic and socioeconomic factors, differences in student's ability levels, and teacher effectiveness. Such approaches emphasize gross productivity, or the mean performance of students in a school or cohort (Willms & Kerckhoff, 1995). Most remain focused on status scores, or students' scores from the current year, which produce estimates of school effects on student performance (Coleman, Campbell, & Kilgore, 1982). Regression analyses are often used and include only school variables that are assumed constant or fixed. Rarely do such

models adjust for students' incoming knowledge level or readiness for learning (Tekwe et al., 2004).

Because of known deficiencies, such traditional systems have been criticized for statistical weaknesses that may well render them unfair as accountability measures. Heck (2000) indicated that such models provided only a biased view of the contributions made by teachers and schools to student learning because of the insufficient considerations of non-school variables and prior attainment. Meyer (2000, 2002) indicated that average test scores are insufficient as they reflect the contributions of schools and many other external factors over the span of potentially many years. He concluded that such measures are highly flawed for four basic reasons. The first reason is due to the vast contamination of data by the wide array of factors that have been shown to influence student achievement. These factors include socioeconomic status, previous learning levels, community and family impacts and student history. Second, Meyer argued that average test scores are almost always out-of-date. The consequence of testing that assesses cumulative learning from many years may actually be negatively correlated with actual progress made in school performance. Third, the impact of student mobility may present an additional contaminant of data based on average scores. Fourth, relying solely on average test scores prohibits pinpointing of effect by a teacher, classroom, grade, policy or practice. In other words, it becomes nearly impossible to distinguish the contributions of any specific factor.

Thum and Byrk (1997) contended that traditional and status-based systems are utterly indefensible. Similar sentiments about the shortcomings of traditional assessment models were presented by Doran (2003). Accountability of this form

provides only snapshots and is, according to Doran, limited to a point in time when the cumulative effects of years of influence are assessed. Traditional measures may also serve as incentives for schools to alter accountability data to suit their need to demonstrate adequate progress. Additionally, he found that schools may be hard pressed to focus their efforts on those students nearest the cut-point for proficiency rather than striving to meet the needs of all learners. As such, he argued that a school's or teacher's impact is best measured using a value-added approach that assumed that learning is the sum of many factors including those that may be outside of a school's locus of influence. Failure to recognize growth toward a predetermined level of proficiency placed schools that served disadvantaged populations in a precarious and unfair position. Similarly, districts that served the most privileged populations have little reason to seek improvement and strive for best practices. They, in fact, became the beneficiaries of demographics rather than providers of exceptional education.

It is of little surprise that such criticisms of traditional assessment models had incited many states and school systems to explore the assessment of teacher and school effect through use of alternate statistical models. To address these shortcomings, several states are now using or considering the adoption of value-added assessment, a longitudinal analysis program that allows schools to track individual student achievement through consecutive years such that teacher and school effects on academic growth can be measured. Over time, this economic/manufacturing concept that exhibited the value added to materials as they were refined and crafted received much consideration and validation by experts in the field of education. The translation to education indicated that a student was, in essence, a collection of intakes when

entering a classroom or school. The impact of schooling over an academic year could be measured as the “value-added” during a set period of time of instruction (i.e., an academic year) (Archer, 1999). The underlying belief was that these value-added statistical models were better able to isolate the contributions of teachers and schools and correlate them to the growth in learning shown by students on standardized assessments. Proponents of value-added models argued that it made little sense to hold schools accountable for mean pupil performance levels when students in school came with vastly different mean achievement levels and backgrounds (Ballou, 2004). Aitkin and Longford concluded that the minimal requirement for valid institutional comparison is an analysis based on individual level data which adjusted for intake differences (1986).

The basic tenet of value-added assessment is to statistically adjust for key influencers known to affect student achievement before determining the net effect of teachers and schools. Basic assumptions are made that students’ achievements are undeniably affected by a vast array of conditions as well as their unique backgrounds and challenges. Most value-added models employ multiple regressions to calculate a predicted achievement outcome while controlling for contextual conditions included in the formula (e.g. socioeconomic factors) (Hill & Rowe, 1996). A comparison between the observed outcome and the predicted outcome is made to determine the net productivity or value-added to student achievement (Willms & Kerckhoff, 1995). Other researchers described value-added models as a collection of statistical techniques that rely on multiple years of students’ test scores to estimate the effects of individual schools or teachers (McCaffrey et al., 2004.).

Value-added assessment models can analyze data at the individual, classroom, teacher, curricular, and school level (Sanders & Rivers, 1996). For example, by annually comparing students' test scores at the level of the classroom, some researchers and educators believe it is possible to directly measure the effect of teachers and schools on student learning and achievement. Comparison of outcomes to predicted or expected gains support desired accountability for teachers and schools. Furthermore, proponents of the value-added assessment approach believe it can be used to evaluate specific educational programs. Such determinations can be used to inform curriculum design, delivery models, and program selection by school districts.

Unlike traditional analyses, attempts to analyze norm-referenced and criterion-referenced data in a way that provided information on student, teacher, and program performance, value-added system required immense logistical planning in statewide testing programs and sophisticated computer capabilities to thoroughly and accurately assess the data. Although such models have been in existence since the early 1980s, the process of collecting and comparing several years of performance data continued to have both supporters and detractors.

Critics of value-added models had emphatically argued that such systems were much too complicated and complex to legitimately inform program and practice (Ballou, 2002). Ballou also contends that significant improvements must be made to existing measurement instruments if value-added systems are to be used for school and teacher accountability. Three problems were identified in this study: current methods of testing don't measure gains very accurately; some gains may be attributable to factors other than qualities of a given school or teacher and there is no firm basis for comparing gains

of students of different ability levels. In sum, Ballou believed that many uncertainties and inequities remain with value-added models. Stone (1999) concluded that value-added models were statistically strong but the validity of their results depended on prerequisites such as annual testing of students in all grades with reliable and valid achievement tests. Stone also pointed out that valued-added assessment models required fresh, non-redundant test items each year which are tied to an underlying linear scale. At this time, states and standardized test makers are ill-equipped to address such pre-conditions. Regardless of such uncertainties, value-added models were still viewed by many as superior to status or cohort-to-cohort measures.

Additional case studies have shown that some value-added schools were not well-equipped to adequately use data to inform their work. As such, Saunders (2000) concluded that many schools quickly reverted back to traditional or status-based assessment models. Her findings indicated that schools that had not been prepared for such data often had difficulty distinguishing between one set of data or another. She suggested further studies to determine the cause of relative lack of use of value-added data as well as investigations of the differences in use by departments or levels within a system.

Prerequisites for Implementation of a Value-Added Model

Regardless of the apparent promise of value-added models, researchers have concluded that jurisdictions and school systems must be well-prepared for successful implementation. Meyer (2000) concluded that systems must be prepared to assess students annually (minimum); collect extensive data on student and family characteristics and develop and support comprehensive databases. Saunders (2000)

concluded that five additional factors seemed to be positively correlated with successful utilization of value-added data. They were: active support by senior administration; championing of value-added by senior faculty members; adequate incentives to use value-added data; minimum of three years of participation and suitable support structures and exposure to the use of value-added data. Similarly, Salganik (1994) concluded that specific conditions must be met in order for schools to successfully and meaningfully conduct value-added analyses. The conditions noted in this study were: individual-level data on students must be available; the student background characteristics included in the model must be related to student performance; the student characteristics must be beyond the control of the school; otherwise, the school could be expected to change them; the characteristics included should be accepted as legitimately associated with the educational challenges facing the school (e.g., poverty, cultural differences in achievement).

In addition to such prerequisite conditions, successful value-added systems relied on sound statistical methodologies. To date, researchers have yet to identify a single, agreed-upon technique to measure teacher or school effects on student achievement (McCaffrey et al., 2004). Many states have, however, proceeded to move forward with implementation of value-added models. Tennessee is the state that has the longest history of full-scale implementation of value-added assessment. The Tennessee model was developed by statistician, William Sanders, of the University of Tennessee and was implemented in 1992 (Sanders & Horn, 1995). Sanders and Horn described this method as a, "statistical mixed-model methodology to enable a multivariate, longitudinal analysis of student achievement data"(p.338). Shortly after

Tennessee adopted the model developed by Dr. Sanders, the Dallas School District adopted their own value-added model (Webster, 1997). The Dallas model develops and issues School Effectiveness Indices based on student achievement data. Soon after, states such as Arizona, Texas, Pennsylvania, North Carolina and Florida had developed and implemented their own value-added models. Consistent with all systems implemented thus far is the awareness of requisite conditions that must be addressed.

A common set of conditions also exist for the utilization and application of data generated from value-added analyses. For example, in 2005, Coburn concluded that timeliness and accessibility to data by school administrators and teachers constituted a significant obstacle regardless of the model of analysis being implemented. Considering the well-known statistical complexities of true value-added models, one could conclude that such obstacles may be far more substantial when accounting for student achievement via value-added approach. In addition to accessibility, the quality of data collected and analyzed must be accurate and reliable (Choppin, 2002). Of notable concern to districts and states that have implemented value-added models is the readiness and capacity of staff to fully utilize collected data for informed decision-making and organizational planning.

School Readiness for Data Analysis and Utilization

The degree to which school systems are able to maximize their use of student achievement data depends largely on the capacity of teachers and administrators to understand and interpret data as well as the organization's capacity to overcome

barriers and provide optimal conditions. Supovitz and Klein (2003) evaluated the technical capacity of faculty in schools that had been recognized for effective utilization of student achievement data. To their surprise, the results of their study indicated a gross lack of skill and capacity to effectively use such data. Their findings included the realization that only nineteen percent of teachers and administrators studied felt that they had the skills to analyze and manipulate student achievement data. Similarly, studies conducted by Massell (2000) found that teachers and administrators were ill-prepared to transition from data used to indicate how students performed to data used to inform decisions made for continued improvements. Mason (2003), in his study of the Milwaukee Public School System also concluded that schools were generally not well organized to use data effectively.

Although human capacities are essential for effective use of data, other systemic capacities and resources must be embedded in school districts' procedures for data informed decision making. Technology (software and hardware), for example, has been shown to be a critical resource that enables timely retrieval, analysis and return of achievement data (Sharkey and Munane, 2003). Technology must be accessible and able to disaggregate achievement data so that teachers and administrators are able to review results from specific student subgroups. Technology alone, however, cannot overcome the need for professional development and time for collaboration with colleagues when reviewing assessment data for informed decision-making.

Summary of Literature Review

As the reviewed literature has shown, student achievement data have been well-established as a primary measure of school and teacher accountability. Achievement tests seem to draw criticisms from all sides yet most agree that they must be administered as legitimate measures of school systems' effectiveness. Additionally, parents and teachers want to know how learners have grown and what they really know and are able to do. How then should school systems navigate through a data-rich environment so that accountability measures are fair, meaningful and valid *and* data can be used by teachers and administrator to effectively inform decisions? Criticisms of traditional status or cohort-to-cohort measures have emboldened interests in systems whereby gains in academic achievement that a school or teacher elicits can be effectively and accurately calculated. Hence the recent adoptions by many states of value-added assessment models. Although most researchers agree that value-added models hold great promise and are considered to be superior to traditional models, some questions and concerns remain. Uncertainties and inequities in value-added models were noted by Ballou (2002) and many researchers confirmed poor human capacities for effective use of data by teachers and administrators.

CHAPTER III

Methodology

Introduction

This chapter details the methodology and the procedures used to conduct this multiple case study. The primary focus was to gather pertinent information from school districts implementing different assessment and analysis models. District 1 employed a value-added system and District 2 employed a traditional or status model. This study employed a qualitative research design with semi-structured interviews conducted in each sample district. Two administrators and four teachers were interviewed from each sample district. Interviewees were identified via a snowball or network sampling procedure. Whenever possible, responses were triangulated with obtained documents and direct observation of data analysis work.

The purpose of this multiple case study in two similar school systems was to explore the utilization of student achievement data by systems that have adopted a traditional assessment model as compared to those systems that have adopted a value-added assessment model. The primary sampling methodology used was interviews with administrators and teachers from the selected research sites. At this stage in the research, a “traditional assessment system” was defined as a model that measures the unadjusted mean levels of achievement or *proficiency* of students in a school or cohort. “Value-added” models were defined as systems whereby growth of individual student learning *gains* are measured and compared to predicted outcomes.

Description of the Study

Using a multiple case study approach, data were collected via interviews, document analysis, and observation. Considerations for the selection of the two sample districts were similarities in student achievement and demographic factors such as number of students eligible for free and reduced lunch. An additional and primary consideration for sample selection was the model used by each system for measure and analysis of student achievement data. For the comparative purpose of this research study, it was imperative that one system employed a traditional or status model and the other system implemented a value-added model.

Purposeful and snowball sampling of interviewees was utilized. Key administrators and teachers who were considered to be uniquely knowledgeable and experienced with data analysis and utilization were interviewed. Interviews were conducted, digitally recorded, and transcribed by the researcher. A comprehensive interview protocol (Appendix 1.) and series of pre-determined questions (Appendix 2.) were followed. Transcripts and key documents were organized, coded, and analyzed to determine the themes emerging inductively from the data. The researcher utilized periodic peer debriefing to guard against possible bias and/or preconceived notions and assumptions that could interfere with interpretation of interview responses.

Research Questions

The primary research question to be addressed via this multiple case study is:

How do school systems, teachers, and administrators differ in their use of student achievement data when implementing traditional/status assessment models versus value-added assessment models?

Through multiple case studies, this study was guided by the following basic questions for school districts implementing value-added and traditional models:

1. How do schools and school personnel using a value-added model compare to schools using traditional models in perceived or actual readiness for analysis and utilization of student achievement data?
2. Are there notable differences in motivations for and commitment to analysis and utilization of student achievement data by administrators and teachers in school systems using value added and traditional assessment models?
3. How are organizational systems and structures implemented to support analysis and utilization of student achievement data?
4. How do attitudes and beliefs toward the analysis and utilization of student achievement data differ in school systems using value-added and traditional models?

This chapter discussed the methodological basis for the case study. Next, the chapter reviewed the data collection procedures including interviews, document review, and observations. Third, a discussion of the analysis of data analysis was presented. Finally, a summary was provided.

Research Design

Qualitative Case Studies

According to Yin (2002), qualitative case study methodologies allow a researcher to deeply explore multiple interacting factors which produce unique insights of

underlying themes and meanings that enable one to understand the subject of study. Purposeful sample selection is essential if a researcher intends to capture the contextual depth for the study (Creswell, 1998). A case study is a detailed look over a period of time of an event or activity that takes place in a specific context. Data are collected from multiple sources with the object of study at the core. This chapter describes the design, sample selection, data collection, and data analyses that will be used for the qualitative and comparative case studies conducted for this research.

Case Study Sample Selection

For the purpose of this study, two similar school districts in the Capital Region of New York State were selected to participate in this case study. Similar school, community and socioeconomic conditions were sought. Both schools maintained a similar combined wealth ratio and belonged to like Similar School Groups as determined by the New York State Education Department. Additional selection criteria were purposeful and based on the type of data analysis models employed at each site (traditional vs. value-added). To identify potential districts, this researcher also consulted with regional experts at the Capital Region BOCES. For the purpose of this study, the Assistant District Superintendent provided recommendations based on her work with schools in the region. District 1 was selected for its sustained implementation of a value-added model. Conversely, District 2 was selected for its continued use of a traditional or status model of assessment. Table 1 summarizes the characteristics of the selected sites for these proposed multiple case studies.

Table 1.

Combined Wealth Ratios

District	Assessment model	Combined Wealth Ratio
District 1 (Value-Added)	Value-Added	0.46
District 2 (Traditional/Status)	Traditional/Status	0.585

Within each system, participants for interviews were selected via a snowball or network sampling procedure. Superintendents were first contacted via written request for permission to conduct research within their school system. Once permission was granted, the Superintendent from each site was asked to select two school administrators who had sustained their commitment to data analysis and utilization. This purposeful selection ensured that research methodologies were conducted in systems that were likely to provide clear examples of data analysis and utilization. Each selected administrator, in turn, was asked to recommend two teachers who have participated in data analysis activities and/or committees.

Data Collection Procedures and Process

This qualitative case study attempted to include collection, review, and analysis of multiple sources of information. Such triangulation, according to Creswell (2009), improves the strength of qualitative research by building a coherent justification in themes which, in turn, add to the validity of the study. At each site, interviewees, documents for review, and opportunities for observations were selected purposefully to gain deep understandings of the utilization of student achievement data.

Interviews

Interviews were conducted with two administrators and four teachers from each site. Teachers and administrators were purposively selected based on their participation in prior analysis of student achievement data. Interviews and observations were conducted during multiple school visits made during regular school hours. Interviews were face-to-face and conducted in secure locations. As noted in the limitations, questionnaires and/or phone interviews were utilized in cases when interviewees were not able to participate in face-to-face interviews. All recorded information (notated and recorded) gathered during interviews or collected via questionnaire, was kept confidential by coding and/or using pseudonyms. All information was securely stored on a password protected hard drive accessible only to the researcher. Individual interviews were approximately 30 minutes in length, tape recorded and transcribed directly into NVivo 8 software. Due to the exploratory nature of this multiple case study, interviews included open-ended questions that were intended to capture individual and group usage of student achievement data. A strict interview protocol was developed and followed (Appendix 1).

Observations

Whenever possible, observations were conducted during regularly planned meetings or discussions focused on the analysis of student achievement data. During such analysis sessions, the researcher did not engage or participate in any manner. The researcher observed to gain deeper understanding of the types of discussions and

data used by the group. An observation protocol was created ensure consistency in approach notation of key observations (Appendix 1).

Document Review

Additionally, this study included a review of documents collected and maintained in each system that may reflect usage of assessment data to inform instruction, evaluate teachers, or aid in curriculum design. Documents sought included minutes from curriculum meetings, accountability reports, and curriculum maps. Whenever possible and with permission, documents were photocopied, cataloged and coded. This third type of data was triangulated with interview responses and observations to ensure that data are supported and reliable.

Validity

To insure internal validity and trustworthy reporting of interview outcomes, observations and review of documents, sufficient time was spent in each research site and with participants to monitor for distortions and sufficient substantiation of findings. A data collection protocol (Appendix 1) had been adopted and modified to maintain consistency of data collection in each site and during each visit (Karvonen, 2006). Notes and transcripts were collected from each interview and were compared with collected documents whenever possible. Tentative findings were clarified and confirmed regularly with follow up questions. Additionally, periodic audits (internal/self-reflection and external) were conducted to review findings and monitor for consistency in interpretations. *External* validity was achieved via, accurate and complete descriptions of research sites, documents, observations and interviewees/participants. Additionally,

the researcher attempted to establish generalization by clearly describing the methodologies and sampling procedures used.

Data Analysis

Qualitative data were collected and analyzed on an ongoing and timely manner. For the data to be meaningful, the interviewer relied on digitally recorded interviews being confirmed through notes taken during the interviews. The findings from the interviews were coded, sorted, and analyzed using NVivo 8 software. NVivo 8 qualitative analysis software aided the classification, categorization and analysis all data collected based on a series of predefined tree nodes. Interview responses were cross referenced with written documents and follow-up telephone interviews were conducted to clarify or confirm responses when necessary. Data were triangulated by collecting and analyzing existing documents and reports that may have confirmed the responses collected during interviews. Additionally, observations of behaviors and actions exhibited by teachers and administrators while interacting with data were noted. As interviews, documents and other sources of information were brought together, the shape of the inquiry and the analysis of results were modified and fine-tuned. As such, additional nodes and sub nodes emerged and were utilized throughout the analysis process.

CHAPTER IV

Data Analysis and Discussion

Introduction

Teachers and administrators alike cannot deny the role that student achievement data play in all aspects of public education. From planning for instruction of a single class to holding an entire school system accountable for learning and achievement of thousands of students, public education has become inundated with collection and analyses of data. How best to make use of the litany of information that is generated remains as an enduring and essential question. Many educators policy makers, and statisticians have argued that traditional or status models must be reformed to ensure fair and accurate reporting of the effectiveness of schools and school systems. The gradual shift to value-added models has also presented unique challenges and complexities for school systems whose employees may not be well prepared for such change in paradigm. This research was designed and implemented to gain deeper and comparative insights into the value and utilization of student achievement data generated in systems using different models (traditional/status and value-added).

Chapter Four describes analyses of data collected for this multiple case study of the utilization of student achievement data by teachers and administrators in school districts implementing traditional/status and value-added models for collection and analysis of student achievement data.

Sample Districts

The two districts studied for this research maintained similar profiles as described by the New York State Education Department Accountability and Overview Reports for 2007-2008. Each was described as a small city school system located in the Capital Region of upstate New York. Considerations for the selection of the two sample districts were similarities in student achievement and demographic factors such as number of students eligible for free and reduced lunch. An additional and primary consideration for sample selection was the model used by each system for measure and analysis of student achievement data. For the comparative purpose of this research study, it was imperative that one system employed a traditional or status model and the other system implemented a value-added model. Table 2 provides demographic factors and information for each sample school district.

Table 2.

Demographic Factors of Sample Districts

Factor	District 1(VA)	District 2(TS)
Eligible for Free Lunch	50%	47%
Limited English Proficient	3%	2%
American Indian or Alaska Native	0%	0%
Black or African American	34%	33%
Hispanic or Latino	14%	10%
Asian or Native Hawaiian/other Pacific Islander	12%	1%

Source: New York State Education Department 2007-2008 School Report Cards

It is noteworthy that some differences between the two sample school districts remained. Specifically, the total enrollment for District 1 was reported to be 9394 students for 2007-2008 while District 2 was reported to be 4035 for the same school year. The researcher remained cognizant of this difference in student enrollment.

The primary sources of information for this research were interviews with teachers and administrators from each of the sample school districts. The methodology called for interviews with no less than two administrators and four teachers from each district. Via written request a snowball or network sampling procedure was initiated with the Superintendent from each sample district. The purpose of initial contact with the Superintendent was to receive permission for the research and to obtain first level recommendations for two administrators who maintained responsibility for and/or direct involvement with the analysis and utilization of student achievement data. In District 1, the superintendent delegated such recommendations to the district's Data Coordinator and Research Committee. In turn, one principal and one supervisor were recommended for interviews. In District 2, the superintendent recommended two elementary principals for interviews. One of the two was not responsive. As such, another elementary principal from District 2 served as the second administrative interviewee. Each administrative interviewee followed with subsequent recommendations of two teachers for second level interviews based on guidelines provided by the researcher. Teachers were recommended based on their direct involvement with school and/or district data analysis activities.

Additionally, the researcher attempted to collect and review pertinent documents shared by each sample district. Collected documents reflected each district's analyses

and utilizations of student achievement data. District 1 was forthcoming with a variety of pertinent documentation including data analyses, graphs, charts, meeting minutes, and reports. District 2 was only able to produce documents received by Regional Information Centers or the New York State Education Department (e.g., School Report Card) Additional internal and relevant documents for review by the researcher within the timeline for completion of this study.

Interviews

Each participant was asked 28 questions that were strategically developed to address aspects of the primary and sub research questions. A strict protocol (Appendix 1.) was developed and followed for each interview. The results and analyses of these interviews are summarized in the following pages. Responses to interview questions were coded using NVivo 8 software. Within NVivo 8, tree nodes were created to establish connections between interviewee responses and major topics or themes related to the primary and/or sub research questions. Initially, the main coding categories included readiness, utilization, and attitudes and perceptions. During review of transcripts, additional coding categories emerged. Within each major coding category, a series of sub categories were created to enable coding of relevant statements that connected well to the major categories. The final coding structure reflected a balance between pre-determined codes and those that emerged during review of responses.

A tracking system was created to identify the respondents, maintain their confidentiality and to assist the reader. Respondents were referenced with a

corresponding letter and number to represent their role (administrator or teacher), the sample district (1 or 2), and their respondent number. For example, each time a quote or comment could be directly attributed to the first administrator interviewed from District 1 (VA), the symbol A1-1 will be noted at the start of the quote. In some instances, such attribute was intentionally omitted. Omissions occurred whenever a respondent's confidentiality may have been compromised due to the limited number of sample districts included in this research. Table 3 reflects an overview of this tracking system.

Table 3.

Respondent Tracking System

Respondent	District 1 (Value-Added)	District 2 (Traditional/Status)
First Administrator	A1-1	A2-1
Second Administrator	A1-2	A2-2
First Teacher	T1-1	T2-1
Second Teacher	T1-2	T2-2
Third Teacher	T1-3	T2-3
Fourth Teacher	T1-4	T2-4

The following analysis is based on the respondents' answers to interview questions. For the purpose of this chapter, interview questions have been categorized by research question to which they pertain. As was noted previously, the primary research question to be addressed via this multiple case study is: How do school systems, teachers, and administrators differ in their use of student achievement data

when implementing traditional/status assessment models versus value-added assessment models?

Interview questions were developed to address each of the research questions of this multiple case study. Each interview question was field tested by a teacher and administrator to ensure clarity and coherence of each question. Designated interview questions included multiple open-ended questions followed by possible follow-up questions. According to Merriam (1998), open-ended questions allow for the greatest response from respondents. Additionally, questions were developed and utilized so that the researcher could categorize responses within the contexts of each research question. Appendix 2 illustrates alignment of interview questions to primary and sub research questions.

Primary Research Question: Utilization and Implementation

The first interview question asked respondents to describe data analysis activities in which they have participated. Responses gathered by administrators in District 1(VA) reflected a concerted effort to regularly analyze and utilize student achievement data with teachers. A variety of administrative responsibilities for data analyses were described by respondent A1-1. For example, when citing analysis of New York State testing data, respondent A1-1 clearly articulated an array of steps that have been taken by administrators to deliver achievement data to teachers in a timely manner. Respondent A1-1 promptly analyzes all reports received from the Northeast Regional Information Center (NERIC) and prepares comprehensive item analyses for teachers. Analyses are conducted at multiple levels to inform practice and planning.

District, school and student analyses are conducted and assembled into comprehensive reports. Respondent A1-1 also collaborates closely with Data Coordinators to ensure accurate and meaningful analyses and reports.

Formal data analysis activities cited by A1-1 included comprehensive planning for department and schools based on student achievement results as compared to targets and goals. Additionally, A1-1 described ongoing data analysis activities facilitated with teachers in the district. Acquisition of analysis tools, such as Achievement Series, has provided teachers and administrators with immediate access to data. Such accessibility has supported ongoing review of results during meeting times. A1-1 supports such activities by preparing base level item analyses in advance of such events.

A second administrator in District 1 (VA) corroborated the district's attempts to provide timely release and analysis of student achievement data. When responding to this question, A1-2 stated: "The key is timeliness of when we receive and release data. It loses its value when it cannot be reviewed promptly. Looking at last year's results has less of an impact but that was all that we had in the past. Now I do quite a bit of item analysis with teachers."

Although timeliness and accessibility to data were not at the core of this first question, the researcher found notable the common perspective shared by administrators who eagerly referred to efforts made within the district to initiate timely review of achievement data.

Administrative respondents from District 2 (TS) portrayed analysis and utilization of student achievement data primarily within the context of remediation and student support services at the building level. Respondent A2-1 participated at the building level by “looking through state testing and all the information that was given to us.” Of note was early admission by A2-1 to a lack of district-wide activity focused on the analysis and utilization of student achievement data. Additionally, A2-1 indicated that administrators “we’re not privy to having professional development activities on data analysis.” As such, the researcher interpreted this respondent’s answers to the first question as an indicator that data analysis activities occurred primarily when planned and facilitated at the building level only.

Respondent A2-2 similarly, described data analysis through the lens of remediation and Academic Intervention Services. A2-2 described participation as providing support to remedial and AIS teachers when using measures such as DIBELS, Rigby, running records, and New York State testing. Although respondent A2-2 appeared supportive and interested in formal and coordinated data analysis activities, it was stated “I haven’t done anything beyond the building level.”

The first interview question uncovered differences in opportunities for administrative participation in formal data analysis activities. Specifically, administrators in District 1 (VA) appeared more active and included in a variety of school and district-wide processes. Additionally, a broader context for data analysis was noted. Administrators in District 2 (TS) responded to this first question by only describing data analysis within the context of remedial and/or AIS programs. The researcher determined that the primary mode of data analysis was identification and monitoring

underperforming students. Although such activities are obviously critical, there did not appear to be comprehensive administrative review of student achievement data for all students or for school and/or district planning in District 2 (TS). Teacher respondents from District 1 (VA) described a variety of formal and informal data analysis activities. Respondent T1-1 described participation on Building Leadership Teams where data had been reviewed in two to three year chunks and reviewed for root causes. Additionally, T1-1 had participated in comprehensive planning to address deficiencies in student performance and reviewed all New York State tests by comparing data across schools and districts within the region.

Other teacher respondents from District 1 (VA) described ongoing collaborations focused on the review of student achievement data. T1-2 described vertical team meetings that had been supported through restructuring of daily schedules and were created for the purpose of data analysis. Respondents T1-3 and T1-4 provide insight to data activities pertinent to their teaching positions. For example, T1-3 described work as follows:

I am held responsible for determining AIS status of my students. Traditionally, we have used ELA scores to determine AIS reading status, but in recent years, we have added reading level indicators and guided reading levels based on Fountas and Pinnell testing. I traditionally keep scores on all of my AIS students and track their growth accordingly as long as they are on my roster. It is then my responsibility to send this data on to the teachers who will take over instruction when they graduate from my grade or move to another class.

Teacher respondents from District 2 (TS) described similar job-embedded responsibilities for data analysis and utilization. For example, T2-1 described use of New York State testing data, ELA benchmark assessments, as well as data collected for Positive Behavior Intervention System (PBIS). Respondents T2-2 and T2-4 described similar applications with reference to review of benchmark assessment data three times per year.

Overall, responses to question #1 revealed apparent differences in the degree to which each district conducts inclusive and participatory data analysis activities. District 1 (VA) appears to plan and facilitate a variety of formal and informal activities by which teachers and administrators are able to participate in the analysis of student achievement data. In turn, respondents may be better able to utilize such data for their own job responsibilities. Teachers and administrators from District 2 (TS) indicated that formal data analysis activities were limited to school level and did not appear to be a priority at the system level.

The researcher intended to explore respondents' understanding of the model being employed by their school district by asking respondents to articulate what they thought the model chosen by their institution to be. Of note were differences in responses obtained from participants from District 1 (VA). Both administrators acknowledged use of a value-added model. Both respondents A1-1 and A1-2 acknowledged the "early stages" of their use of value-added data analysis. Additionally, both commented on the minimal use of such data by teachers across the district. Respondent A1-2 shared, "Across the district, we are attempting to use value-added

more. In my school, we are very early in this process. Teachers don't really have an idea of what value-added is. So, we're just getting started."

Teacher respondents from District 1 (VA) confirmed descriptions provided by both administrators. For example, respondent T1-4 replied: "It is my understanding that we have used the traditional model, but are going to the value-added model in the future."Comparatively, all but one respondent from District 2 (TS) acknowledged use of a traditional or status model. The one exception was T2-1 who responded, "I am not sure."

The researcher explored the utilization of student achievement data, within and by each sample district by requesting that each respondent describe the manner in which data are utilized within their respective school or district. It should be noted that additional questions afforded respondents opportunity to describe examples of data utilization. As a result, most respondents made reference to prior answers while responding to this question.

Respondents from District 1 (VA) expanded on prior responses by including activities such as item analyses, departmental collaborations, identification of student needs, and comprehensive planning. Respondent T1-4 shared:

Data is presented to target groups to improve classroom, building, and district practices. These groups include administrators, content coordinators, building leadership teams, elementary grade level teams, instructional coaches, literacy coaches, middle school vertical and horizontal teams, academic departments, strategic planning teams, program teams (grants), the Board of Education, and others.

Comparatively, responses from interviewees from District 2 (TS) did not include the variety or number of structured groups and activities coordinated for data analysis and utilization. For example, A2-1 responded “As a district, we really do not use it. As a school, we use it to monitor student performance and to identify need.” Such brevity was common for all respondents from District 2 (TS).

The researcher further explored utilization of student achievement data by individual respondents. Administrators consistently shared responsibilities and activities that reflected those conducted within and across respective districts. Such consistency was evident regardless of the model of analysis used.

Teacher respondents, as one might expect, described the use of student achievement data to inform planning and instruction. For example, T2-1 shared “I use data to adjust how and what I am teaching. I use data to determine if a specific instructional approach has benefitted students or not.” Teacher respondents from District 1 (VA) shared similar responses, but often included a greater variety of assessment types used to inform their instruction. For example, T1-4 shared: “I personally use the data to create my class lists. I use the data received from the Fountas and Pinnell, QRI, WJ III and other assessments to give students text at their reading levels and to determine progress at that level.”

Further questioning explored each district’s use of student achievement data for the purpose of goal setting. Respondents from District 1 (VA) described a variety of data-driven goal setting processes. For example, Respondent T1-4 shared the following: “Our comprehensive educational plan set up by our building leadership team

routinely uses State test scores to evaluate programs and instruction- specifically with students in certain subgroups who routinely do not achieve proficiency.”

A similar response was shared by T1-3:

Each year, our buildings are required to write a Comprehensive Education Plan (CEP) whether or not they are identified as a School in Need of Improvement. Part of the CEP process is to review the data, identify the gaps found (including program gaps), set goals to remediate those gaps, and create an action plan to implement the initiative. We create a data book with all state assessment information for each building.

Additional specific goals were noted by the administrators from District 1(VA).

For example, A1-1 described the process by which teachers and administrators identified improved scores on the Global Studies Regents exam as a goal. Additionally, A1-2 cited literacy as a primary district-wide goal that had emerged from data analyses.

Comparatively, respondents from District 2 (TS) routinely noted that goal setting via data analyses occurs primarily at the building level and rarely as a comprehensive and district-wide process. Respondent A2-1 responded “It has at the building level but it has not across the district.” Similarly, respondent A2-2 shared “Never at the district level. It is really only used at the building level for goals.”

Teacher respondents from District 2 (TS) indicated that they were either unsure of the uses of data for goal setting or confirmed that goal setting was limited to the school level. For example, T2-1 indicated that he/she was “not sure” when responding to this question. T 2-3 shared: “The principal and I have discussed which grade levels are in the most need of improvement for next year’s ELA exam. We will also discuss

which areas on the ELA exam students struggled with the most; this will guide instruction for next year. “

A description of the role of student achievement data on decision-making processes was requested of each participant. Similar response patterns to previous questions emerged. Of note, respondents from District 1 (VA) readily described comprehensive and district-wide decision-making and planning activities. Comparatively, respondents from District 2 (TS) were uncertain or only able to describe building level activities. For example, A1-1 shared:

It does for the district in many ways. Research and data combined helps the district decide that they are going to go to a K-8 model. I think it is the district's approach, not the schools'. They don't just make that decision because it seems good. They look at data and think about research. It is part of the district's strategic planning.

Respondent T1-1 shared additional examples.

We look at it for all kids but it definitely helps us to identify kids for AIS who got a 1 or 2 on the state tests. We also offer after school programs for many kids who need support. These run 2 to 3 times per week for ELA and math. It is very targeted and based on a variety of measures and types of data. We have also used data to help us with staffing. We now have 3 remedial teachers because the data indicated that more support was needed. We also schedule teachers so that they have common planning when they can discuss data.

Comparatively, responses from District 2 (TS) ranged from, “It doesn't.” (A2-2) to “We have monthly shared-decision making meetings at our building. We look at

academic data and PBIS data so we can make decisions about schedules and placements.”

Descriptions of the decision-making process for lesson planning and pedagogy was also sought. The use of student achievement data as an influence on classroom instructional practices appears to vary widely in both sample districts. For example, A1-2 noted: “This varies widely. Some teachers only think about data when they are forced to, but some go all out and are craving the information.” Similar responses were shared by teachers from District 1 (VA).

Similar responses were shared by administrators and teachers from District 2 (TS). Respondent A2-2 shared, “It is really hit-or-miss. Some teachers use it but not extensively. It is really an individual teacher’s decision.” Respondents T2-1 and T2-2 also noted the negative perceptions that many teachers have when working with data. T2-1 shared, “Currently, many teachers see data as laborious and do not use it to guide instruction” and T2-2 stated “I have shared results with teachers but I don’t think many teachers are comfortable interpreting data analysis themselves.”

Interview questions were also presented to learn more about the various types of data collected and analyzed by classroom teachers. Respondents from District 2 (VA) described thirteen different assessments administered and utilized for data collection and analysis. Respondents from District 2 (TS) described six measures from which data are collected and reviewed. Appendix 3 lists the types of assessments administered and used for data analysis.

When asked to describe the manner in which non-school influencers (e.g., socioeconomic status) are accounted for when analyzing data, respondents from both

sample districts noted identification of testing subgroups as the primary approach. They also acknowledged that such classifications are limited to State testing. No respondent from either sample district described methodologies by which such influencers are used to determine predictable outcomes for student achievement.

To assess the degree of utilization of student achievement data by school personnel in each system, participants were asked to estimate the percentage of staff who regularly engages in data analysis activities. Responses to this question varied widely for each sample district. Administrators from District 1 (VA) estimated between sixty percent (A1-2) and ninety percent (A1-1). Teacher respondents also varied in their estimations from “roughly twenty percent” (T1-2) to “eighty to ninety percent” (T1-4). Several respondents from District 2 (TS) had difficulty deriving an estimate. T2-1 surmised that only a handful of teachers accessed and utilized data. A2-2 predicted that “about sixty percent” used data regularly.

In addition to the degree of data analysis and utilization, the researcher explored other applications that may occur in each district. Specifically, participants were asked to describe the link, or lack thereof, between student achievement data and evaluation of teachers and administrators. Administrator respondents from District 1 (VA) consistently confirmed use of student achievement data for tenure recommendations but did not believe that any other formal usage occurred for evaluations. For example, A1-2 shared, “Yes. I look at data for tenure recommendations and the trends in students’ passing rates. That is about it though.” Interestingly, three of the four teacher respondents did not believe that such usage occurred. Conversely, all respondents

from District 2 (TS) stated without any hesitation that student achievement data was not used for evaluative purposes.

Similarly, the researcher asked participants if data were used to evaluate programs. All respondents from District 1 (VA), with the exception of T1-4, believed that student achievement data had been used to evaluate programs and curriculum. Some indicated that such activities were required for compliance with NCLB-mandated reviews for all districts in need of improvement. Respondent T1-3 shared:

We have many grant funded programs throughout the district, and these grants require data of all types for program evaluation. At both the elementary and secondary levels, student achievement data, especially results from state assessments, is used to evaluate curriculum alignment and instructional strategies.

A notable exception to the pattern of responses for this question was given by T1-4.

This respondent stated:

I have noticed this practice especially in programs that have been specifically purchased by the District for student achievement – such as the Voyager program I have used in AIS summer academy and other programs purchased through grant money (such as the Reading One to One program used after school in the past as purchased by the Reading First grant, etc.). Unfortunately, the District will often try such programs and then dump them before we have completely determined their benefit or validity. There is such a need for results that new programs are often not given a chance. We pilot a lot of programs... too many, in my mind, and then evaluate too quickly or with very little data. We are

dealing with young minds, here, not car parts or aluminum siding. We can't judge results right away, and we certainly can't assume that every student will behave the same in different circumstances.

No other respondents from District 1 (VA) shared similar sentiments about the manner of program review conducted within this district. Respondents from District 2 (TS) provided answers with uncertainty. For example, A2-1 shared "I think we are heading there" and A2-2 answered, "To some extent." Teacher 2-1 responded "I don't think so."

Sub-Research Question #1: Readiness for analysis and utilization of data

The researcher attempted to acquire information relevant to this sub-research question by first asking participants to describe formal data-based plans developed by their respective district. According to administrators from both sample districts, data reporting services provided by NERIC were accessed for baseline analyses of student achievement data. Administrators from District 1 (VA) described additional steps that had been taken as a result of district-wide and site-based comprehensive planning requirements. The creation of a Data Coordinator position to support implementation of such plans was noted by respondents A1-1 and A1-2 as a critical shift as more sophisticated models (i.e., value-added) and greater emphasis on data analysis had been pursued. Respondent A1-2 also described the roles of Building Leadership Teams in the comprehensive planning process. Both administrators from District 1 (VA) described separate and distinct products of the planning process. Respondent A1-1 described the shift to more timely analyses of student achievement data via utilization of Achievement Series as a deliberate outcome of the planning process. Respondent A1-2 noted the district-wide literacy initiative as another significant and planned outcome.

Teacher respondents from District 1 (VA) described the shift that had occurred in recent years from use of AIS consultants as primary overseers of data analysis and reporting to a centralized Data Coordinator. This was described by T1-3 as a necessary improvement to the data arm of the school district. As such, she believed that the district was better able to expand data awareness, planning and utilization to more than just the AIS providers and consultants.

Administrative respondents from District 2 (TS) indicated that no district-wide planning for analysis and utilization of student achievement data had been observed. A2-1 described the lack of district-wide planning as: "If you were to ask questions of administrators in different buildings about data usage, you would get different answers as to how things are done." Respondent A2-2 also answered this question negatively. It appears that comprehensive planning for data analyses, utilization and articulation was left solely to the leaders at each school. Respondent A2-1 noted that "comprehensive and district-wide plans were forming at one point, but turnover in district leadership prevented further advancement of such plans."

Equally important to this exploration of readiness was to assess the backgrounds of each participant. This question was presented to explore observations made by many researchers that found that public school systems and professionals were rarely trained for implementation of sophisticated data analysis techniques such as those used in most value-added models. Respondents from both sample districts described their background as limited to completion of a statistics course while completing their own undergraduate or graduate degrees. Regardless of role or district, there appeared to be a consistent theme in all responses that demonstrate minimal professional or

educational exposure to sophisticated data analysis techniques. One respondent (T1-1) from District 1 (VA) made note that he/she had “learned by doing.” Similarly, T2-1 indicated that he/she had, in fact, “taught his/herself.”

The researcher had interpreted the similarities in responses to this question to indicate that regardless of position or system, most educators received minimal training in data analysis and interpretation prior to employment as a teacher or administrator.

Furthermore, the extent of training received by each participant was an important learning for this study. A question was presented to further assess readiness for analysis and utilization of student achievement data in each sample district. This question enabled the researcher to investigate the commitments made by each district to build the capacities of teachers and administrators attempting to utilize such data.

Administrators from District 1 (VA) both described training received when their district first attempted to transition to a value-added model. Conversely, administrators from District 2 (TS) had not received any formal training while serving in their current roles. A similar pattern was evidenced from teacher respondents from both districts. The researcher also observed noticeable differences in the manner in which respondents from each sample district answered this question. Specifically, most respondents from District 2 (TS) answered with a simple “No.” In comparison, respondents from District 1 (VA) cited specific instances when training had been received (e.g., value-added, Achievement Series, spreadsheets, item analysis, etc.).

In summary from the responses to this question, it was evident that District 1 (VA) had provided significantly more training to teachers and administrators engaged in data analysis activities.

An additional mode of support and condition of readiness is acquisition of technology resources for collection, analysis and interpretation of data. Respondents from District 1(VA) described several technology resources acquired for data analysis purposes. These include software packages such as Achievement and Performance Series. Additionally, online resources such as the New York State Testing and Accountability Reporting Tool (NYSTART), a comprehensive data management systems published by the New York State Education Department, is utilized regularly to access base level analyses. Respondent T1-4 shared 'Our district uses NYSTART to analyze State test scores. We also use Data Mentor as well. We also use the typical tools such as spreadsheets.' No respondents from District 2 (TS) indicated that technology is used to support data analysis and utilization.

Although technology appears to be a necessary in order for districts to be adequately prepared for large scale data analysis and utilization, professional development appears to be equally important. Participants were asked to describe professional development opportunities provided by their respective districts. Clear and notable differences in the perceived availability and provision of planned professional development emerged as interviewees responded to this question. All respondents from District 1 (VA) were able to describe professional development activities facilitated in recent years. Of note were the creation of specialized positions charged with the planning and facilitation of professional development. Examples of such positions

include the Administrator for Federal Programs, Data Coordinator, Elementary and Middle Level Literacy Coaches, and professional developers from Capital Region BOCES.

Conversely, all respondents from District 2 (TS) indicated that professional development had not been provided to support the analysis and utilization of student achievement data. A2-2, for example, responded “No. We need to do much more.”

Sub-Research Question #2: Motivations and commitment

This portion of the interview script explored the motivations for participation in data analysis processes and attempted to gauge the level of commitment made by each participant to such activities. The first question in this series was designed to examine each respondent’s commitment to participation in data analysis activities in their respective school districts. The second question sought to explore their motivations for doing so. The researcher closely monitored all responses to determine if such motivations were intrinsic or extrinsic. Additionally, the attitudes and perceptions of each response were of particular interest.

Administrative respondents from both District 1 (VA) and District 2 (TS) referred back to their years as teachers when responding to this question. Respondent A1-1 reflected on the self-accountability realized when teaching a course that culminates in the administration of a Regents examination. “As a teacher, I always viewed it as my fault when my students did not perform well on the Regents.” Clearly, this administrator maintained a reflective use of data and the intrinsic motivation to support and lead data analysis and utilization as an administrator.

Respondent A2-1 responded in similar fashion. The following support the researcher's assumption that motivation for use of achievement data had been established while teaching:

I think it stems from my belief that when I came in as a formal special education teacher you need to know what deficiencies need to be addressed with your students. You cannot have a shoot-in-the-dark approach to education. You need to know what specifically they need. I brought this mind set with me to this position and I put the expectation on teachers that we need to know why we are instructing what we instruct (A1-2).

Such replies indicate that the motivation to utilize student achievement data may depend less on the model adopted and more on the individual's experience and background in this arena.

Respondents A1-2 and A2-2 appeared somewhat less reflective on their teaching experience with regard to utilization of student achievement data. Each shared their beliefs about why data is important for the schools that they currently lead. For example, respondent A1-2 expressed belief "that data should drive instruction." "Looking at data helps teachers to better understand the connection between instruction, curriculum and learning. As a principal, I wanted to help teachers see those connections. I felt that it was my job to bring data to them in a way that was not overwhelming."

The third question in this series asked participants to articulate anticipated benefits from participation in data analysis activities. The researcher posed this

question to explore the held dispositions and attitudes of each participant prior to their participation in data analysis activities in their respective school systems and roles. Respondents from District 1 (VA) consistently noted the role that data could play in their own reflections on practice. It appeared that there was an intrinsic motivation that guided their work in this area. For example, respondent A1-1 shared the following:

I always thought that teachers would look at it (data) in a reflective way and always thought that we would better our practices. By looking at the trends, and as much as I do believe that you want to teach responsively, for an eleventh grade class, you could have a group of students who are struggling with writing. Our kids were struggling with writing. We also want to address struggles with our own instructional practices. It goes back to if a teacher is able to be reflective, then they'll use the data. I always believed that the greatest benefit would be one's own reflection.

Similar sentiments were shared by the other respondents from District 1 (VA). The belief that data could be utilized by the individual as much, if not more so, than by the system emerged from all respondents from District 1 (VA). Although these respondents appeared to possess the intrinsic motivations needed to use data to improve one's own practice, respondent T1-4 indicated that "...teachers were reluctant to embrace the use of data and, in fact, too often found it threatening." The researcher considered this to be an indication that the pool of participants from Sample District 1 (VA) may possess motivations that are less prevalent across the system.

Respondents from District 2 (TS) described the anticipated benefits to the school or school district with little reference to self. Consistently, respondents from District 2 (TS) made reference to “we” rather than “I.” Although responses indicated that these participants anticipated many positive impacts, they did not recognize potential benefits for their own leadership or instruction. Rather, the anticipated benefits were for the school or system. For example, respondent A2-1 made reference to recent designations by the New York State Education Department that classified his school as rapidly improving. Respondent T2-1 shared “We can see the strengths and weaknesses.”

The researcher further explored respondents’ understanding and beliefs about the model employed by their school or district by asking each participant to describe perceived pros and cons of the assessment model used by their school district. Respondents A1-1 and A1-2 shared similar sentiments. A1-1, for example, shared:

It would be great for our district to use a growth model because when you are looking at achievement, you are being compared to other districts. We often look like we are not making the grade. A growth model will show that our kids are growing. It is also about recognizing where kids are growing and for teachers to know that as well as parents. It really does make sense rather comparing one year to the next. I think you'll be able to show a lot of growth with many of our kids. The cons are that we will have the same problems that suburban schools will have. We have certain kids, we have Ivy kids. I'm wondering how much growth we will see with them. We're talking about really smart kids and how we get them to grow.

Teacher respondents from District 1 (VA) answered within the context of their own understanding of the model used by their district. For example, respondent T1-1 who believed that a traditional model was still the primary mode of data analysis but that value-added was being introduced commented on both. This respondent shared:

All of the data that I have looked at is from NYS exams. This model is useful because it allows me to see how my students are performing compared to other students in the state. A negative about traditional models is that it does not reflect all of the improvements that the students have made in past couple of years.

Respondent T1-3 elaborated further by describing the “complimentary” relationship between a traditional/status model and a value-added model. He/she responded:

The traditional/status model is static; it is a snapshot of student achievement on one portion of one day during one school year, a choreographed event that could have an assortment of variables randomly affect the results. It does, however, provide an opportunity to evaluate program and curriculum, as well as identify trends that can be addressed or celebrated by a teacher, a team of teachers, a grade level, a building, or a district. Value-added does not address specific standards or performance indicators, but it does clearly demonstrate how well segments of the student population are being served, and this could lead to potent school improvement efforts. That said though, I don't see these two models as competing processes, but rather complimentary, as each provides different and powerful insights into student achievement and the effectiveness of

the curriculum, instruction, and learning.

Respondents from District 2 (TS) described similar deficiencies in a traditional/status model as those noted by researchers cited for this study. For example, respondent A1-2 indicated that the traditional/status model “is very hit-or-miss” and that “it is very hard to really compare achievement from one year to the next.” Respondent A1-1 articulated similar concerns with the model but also connected deficiencies in data analysis to a lack of commitment and planning by the school district. “Where we always run into problems in our district is when the messages are not clearly articulated and teachers and administrators do not know what they’re doing or why they’re doing it or what the common purposes are.”

Teacher respondents from District 2 (TS) maintained a generally positive view of the traditional/status model as they know and understand it. For example, respondent T2-1 shared “The only cons are that it can be time-consuming and that some people might not see the value. The pros are endless. It is a continual way to see if what we are doing is working.”

When asked to comment on the impact of data on their own professional goal setting, similar responses were shared by respondents from both sample districts. By and large and with few exceptions, respondents indicated that data had not influenced specific goals per se, but had heightened awareness of students needs and focused their work on targeted areas. For example, A1-2 shared “It is there, but there are no specifics. I use it for planning what I want to do with teachers but it is not something that has been a big part of my own goals.” Similarly, respondent A2-2 responded “It really hasn’t. I guess I use it mostly to set instructional goals. Teacher respondents

from both districts, likewise, described general influence of data on their professional practice but were not able to articulate specific professional goals that they had set for themselves as a direct result of data analysis activities.

The interest in data analysis shown by the staff at large was also the basis for an interview question. All respondents, regardless of school district or model used for data analysis, acknowledged an array of variables that may well influence the degree to which teachers are interested in student achievement data. For example, T1-3 shared:

The level of staff interest in student achievement data depends on several variables: the purpose/expectations set by the building and/or content leader, the level of experience of the individual or group in working with data, the personal buy-in, and probably most important, the atmosphere during the data conversations. If there is a perceived threat, the staff never comes to “own” the process so the conversation never impacts classroom practice; whereas, if there is an atmosphere that promotes transparent, frank conversations without recriminations, then staff members grow from the collegiality and the sharing of best practice.

Some variables noted had negative effects on the rate and degree of progress made by schools in District 2 (TS). Respondent A2-1 described the influence of length of tenure on a teacher’s acceptance and interest when utilizing student achievement data. This respondent stated:

Again, I think it is a slow process. I have very veteran teachers in my building. I think the average tenure is 16 years and I have teachers that have been there for 35 years so the process is very slow. I will say that the AIS process that I spoke

about earlier with special meetings was absolutely like pulling teeth. I had teachers saying I've been here for 20 years, why are we doing this? I had teachers that also thanked me that said "what a difference" and that it focused us on what students' need.

Other respondents, such as T2-3 indicated that they were uncertain about the interest level maintained by teachers in District 2 (TS)

Sub-Research Question #3: Organizational systems and structures

Successful implementation of an assessment model has been noted by some researchers to be highly dependent in availability of time for such activities. The researcher explores the use of time, as well as other organizational structures and considerations. A variety of scheduled opportunities for data analysis were noted by respondents from District 1 (VA). Notably fewer and less frequent opportunities were described by respondents from District 2 (TS).

In addition to organizational considerations, school systems must consider the mechanisms for reporting collected and analyzed data to the larger school community. Individual student reports are prepared and mailed to parents from District 1 (VA). Respondent A1-1 indicated that such responsibilities belong to the district's Data Coordinator. As was noted previously, the data coordinator position was created to specifically to provide such support. Additionally, A1-1 shared that reports and presentations are shared with the Board of Education. Respondent A1-2 confirmed such practices and added parent information nights as another forum used to report student achievement data to the school community. Teacher respondents noted the use of the district's web site as well as a series of school and district newsletters used to

articulate achievement data. Respondent T1-3 shared: “We have a robust district website where information, including some data, is shared with parents and the public at large. Beyond that, we have a Community Outreach Specialist and a Parent Liaison, as well as a Special Ed Parent Liaison.”

Respondents from District 2, also share student achievement data with parents via individual student reports. T2-2 indicated that such reports are included with student report cards. No respondents described web-based reporting or formal presentation to the Board of Education.

Sub-Research Question # 4: Attitudes, beliefs, and perceptions

All subtopics explored thus far may well impact the attitude, beliefs and perceptions held by participating teachers and administrators. Participants were first asked to comment on their level of confidence when working with student achievement data. With the exception of respondent A2-2, all administrators and teachers felt confident when analyzing and/or utilizing student achievement data.

Additionally, participants were asked to reflect on their beliefs about the functionality, relevance, and value of data collected by their respective districts. All respondents from District 1 (VA) responded affirmatively to this question. Of note was the emphatic response “yes” shared by all respondents. For example, A1-1 shared, “Yes. It is definitely relevant.” It should be noted, however, that some respondents from District 1 (VA) also shared perceived limitations that one must consider when utilizing data. “It is helpful if one appreciates the limitations of tests scores” was stated by T1-4. Respondent A1-2 shared similar sentiments that one must be cautious. She stated, “It is hard because State tests are just a snapshot. They do not tell us everything.”

In comparison, administrative respondents from District 2 (TS) acknowledged the potential benefits of data analysis and utilization but noted deficiencies in the current practices in their school district. Respondent A1-1 shared “Not really because we do not have any real plan in place across the district.” A2-2 also noted, “It is good but we have to do much more with interpretation.” Teacher respondents from District 2 (TS) shared more positive sentiments about the relevance of data. T2-1 simply responded “I do” while T2-3 stated strongly “Absolutely.”

The degree to which data sufficiently measures and reports the effects of teachers, programs and schools on student learning was also requested of each participant. All respondents from District 1 (VA) expressed reservations about the adequacy in which collected and analyzed data measures the effect of teaching, program and policy on student learning. Respondent A1-2 shared: “Yes, but it is only one piece. I'm always cautious with state tests because they are only one measure. We try to have multiple measures as much as possible. Similar reservations were expressed by teacher respondents T1-1 and T1-2. T1-1 answered “No. There are still too many variables to isolate the effect of teaching and curriculum. I don't know if there really is any way to separate out all of the things that impact student learning.” T1-2 shared:

I think that the data being collected and analyzed by the district sufficiently measures certain aspects of teaching. It certainly measures whether or not a teacher has taught a specific topic, but it does not take into account students' attitudes and motivations to learn.

All respondents from District 2 (TS) responded negatively to this question. Some felt strongly that the methodologies and measures used for data collection and analysis by their district was inadequate. “Undoubtedly, no” was the response elicited from respondent A2-1.

To close each interview, participants were asked to share any additional information that they felt was relevant to this study. Only respondent A2-1 opted to provide additional information in response to this question. The respondent stated:

I think the trend in more affluent school districts is that they have known that there needs to be more discussion about data as it drives instruction. I think people have been talking about it for a while but I don't think it is something that is mandated by enough assistant superintendents especially in urban school districts. I think that a movement now is starting in urban schools. How can we be as successful as the suburban district? Yes, we have different students but I think that the realization that data-driven instruction is the way to go especially in urban schools where people have been teaching for 20 years but have never had that expectation placed upon them.

Summary

Chapter IV reported the details of how interviews were conducted and outlined how the data from the interviews was organized, coded and analyzed. As mentioned earlier, the study consisted of 14 interviews of administrators (2) and teachers (7) from the two sample districts. Several prevalent themes emerged that are relevant to the purpose of this study and the research questions which were designed to compare the utilization of student achievement data in systems that maintain a value-added model

versus those that utilize a traditional/status model. In Chapter V, the researcher will outline the findings and conclusions that were reached as a result of the study. The chapter will also include the hindsight view from the researcher's perspective to discuss what might be considered for future research. As a part of Chapter V, specific recommendations will be outlined by the researcher based on specific findings and alignment to research questions.

CHAPTER V

Summary, Conclusions and Recommendations

Introduction

Chapter V uses the data presented and analyzed in Chapter IV to present finding, conclusions and recommendations for each of the study's research questions. The first section of this chapter summarizes the findings discovered during the administrator and teacher interviews conducted in each sample district that answer the research questions. The second section describes the researcher's conclusions for each of the research questions. Finally, recommendations are provided to inform school districts and personnel as they consider the impacts of different assessment models.

Student achievement data has become the primary measure for school and district accountability as mandated by legislation such as the No Child Left Behind Act of 2001. Although educators and policy makers have yet to reach consensus on the best methodologies and models to be used for such purposes, it remains clear that the era of accountability is far from over. Therefore, it is likely that we will see ongoing evolution of accountability and assessment models used to measure the effect of teachers, schools and districts on student achievement.

The capacity of school systems, administrators and teachers to effectively measure and analyze the plethora of data generated by standardized testing also remains suspect. One might conclude that the use of a traditional or status model remains viable when viewed within this context. The use of traditional models that

simply measure the proficiency of students in a group or cohort remains as the more commonly implemented approach. This may well be due to the complexities associated with alternate models such as value-added or growth as was noted by Saunders and Rudd (1999). Additionally, readiness for implementation of value-added systems is often dependent on access to sophisticated software and hardware resources (Sharkey and Munane, 2003). Technology, however, is just one prerequisite that must be considered by school systems considering conversion to a value-added model. Other conditions must be present (e.g., annual testing systems, sufficient sample sizes, consistent test score matrices, etc.) if administrators and teachers are to be expected to utilize student achievement data for professional gain and accountability.

Emerging research, legislation, and policy decisions have led many state and local school systems toward greater utilization of value-added assessment models. The noted shortcomings of traditional status/proficiency models coupled with the potential insights realized when effective value-added systems are employed, have fueled new debates about the current state of accountability models used in education. Are school systems, administrators, and teachers ready and able to maximize utilization of student achievement data and leverage the benefits of value-added models as hoped?

The purpose of this study was to explore the differences in utilization of student achievement data by teachers and administrators using a value-added model versus those using a traditional or status model. The researcher explored such differences by establishing several guiding research questions. The primary research question addressed via this multiple case study was: How do school systems, teachers, and

administrators differ in their use of student achievement data when implementing traditional/status assessment models versus value-added assessment models?

The methodologies developed for this multiple case study were guided by the following basic sub-research questions:

1. How do schools and school personnel using a value-added model compare to schools using traditional models in perceived or actual readiness for analysis and utilization of student achievement data?
2. Are there notable differences in motivations for and commitment to analysis and utilization of student achievement data by administrators and teachers in school systems using value added and traditional assessment models?
3. How are organizational systems and structures implemented to support analysis and utilization of student achievement data?
4. How do attitudes and beliefs toward the analysis and utilization of student achievement data differ in school systems using value-added and traditional models?

Summary of Findings

An analysis of data collected and reported in Chapter Four led to a series of findings aligned to and summarized for each research question.

Primary Research Question: Utilization and Implementation of Assessment Models

It was apparent that administrators and teachers working with a value-added model had embraced the utilization of student achievement data at multiple levels- district, school, and individual. Respondents articulated a variety of applications whereby professionals were engaged in data-informed activities and applications.

It was shared by most respondents that value-added data generated in District 1 (VA) was utilized extensively for comprehensive planning and internal accountability mechanisms. Additionally, specific and common examples were shared by multiple respondents. For example, both administrators from District 1 (VA) described the role that data plays in the comprehensive and district-wide planning processes. Similarly, teacher respondents articulated common practices employed throughout the school system. The researcher interpreted similarities in responses to be common understanding and awareness of district activities and applications.

Also consistent among administrator respondents from District 1 (VA) was the commitment to bring data to teachers and staff in a timely and efficient manner. As such, both respondents shared strategic and intentional applications that they had employed in their respective leadership roles. Examples included base-level item analyses, student placement and recommendations for remedial support, departmental collaborations, vertical articulations, strategic planning, goal setting, gap analysis, staffing, program evaluation, and progress monitoring and reporting. In both cases, the researcher felt that administrators had fully embraced the use of value-added data for

needs analyses, school/building planning, scheduling, and data-informed professional development of teachers.

Teacher respondents, consistent with administrator respondents, articulated many of the same activities and processes by which value-added data are regularly utilized. The researcher again interpreted consistency in responses to indicate extensive collaboration and inclusive participation by administrators and teachers. Additionally, several teacher respondents from District 1 (VA) described the role of value-added data for planning and individualization of instruction. For example, T1-1 described root-cause analyses implemented to identify individual student needs.

In comparison, respondents from District 2 (TS) shared far fewer examples of actual utilization of collected and analyzed student achievement data. Several respondents, without any prompting or solicitation by the researcher, commented on the lack of district-wide activity focused on analysis and utilization of student achievement data. The researcher interpreted the consistency of such sentiments to indicate that data analysis and utilization was limited to building/school level activities.

Administrator and teacher respondents from District 2 (TS) shared similar concentration on data used primarily for identifying students in need of remediation and/or Academic Intervention Services. Although such applications are necessary and laudable, the researcher noted the lack of mention of comprehensive planning, goal setting, informed decision making, strategic planning, etc. to indicate minimal and limited utilization of student achievement data by school personnel. The researcher interpreted such limitations to be due primarily to the lack of clarity, consistency, and

commitment to system-wide utilization of student achievement data. Additionally, the researcher considered the type of data collected (i.e., traditional/status).

Sub-Research Question #1: Readiness for analysis and utilization of data

It was apparent that readiness for analysis and utilization of student achievement data was substantially different in the two sample districts. District 1 (VA) had taken many steps to build foundations and capacities for effective utilization of value-added data. Although teachers and administrators from both systems freely acknowledged lack of prior experience and/or education in the area of data analysis and/or statistics they had, in fact, exhibited personal confidence and readiness to effectively engage in such activities. Such readiness was consistently attributed to sustained professional development, acquisition of technology and electronic data files, and hiring of experts to serve in specialized support positions, such as Data Coordinator. The researcher recognized the will and commitment of the district to prepare staff for utilization of student achievement data as described in the comprehensive planning process.

Administrators and teacher respondents from District 2 (TS) shared similar backgrounds whereby educational experiences had not prepared them well to engage in data analysis processes. Unlike respondents from District 1 (VA), however, all respondents from District 2 (TS) described limited attempts by the district to prepare teachers and/or administrators for data analysis through professional development, consultation or training. Additionally, hardware and software resources were not acquired or accessible for those who wished to engage in comprehensive analyses and/or utilization of data.

The researcher believed that the lack of district-wide comprehensive planning for utilization of achievement data by Sample District 2 (TS) had not provided adequate resources (human, technology, etc.) or positioned teachers or administrators well for such work. Therefore, the researcher recognizes the critical role that capacity building and readiness planning play regardless of the selected model for data collection and analysis.

Sub-Research Question #2: Motivations and commitment

Throughout the interview process, the researcher observed notable differences in the motivations for utilization of student achievement data in the studied sample districts. Such differences are likely attributable to the ambitious and district-wide push toward frequent and effective utilization of student achievement data in District 1 (VA). Conversely, the apparent lack of district-wide planning shared by most respondents from District 2 (TS) had observable negative impacts on the motivations of some teachers and administrators.

Sub-Research Question #3: Organizational systems and structures

The researcher observed that conversion to a complex and sophisticated system for data analysis, such as value-added, demanded comprehensive planning and establishment of supporting organizational structures. In the context of this study, it appeared as though leaders from District 1 (VA) respected the need to build organizational capacity. All respondents articulated awareness and understanding of the district's organizational systems and structures established so that the benefits of value-added data could be fully leveraged. Additionally, the researcher noted the free

and open access to data for all teachers, administrators, systems leaders, school board members and parents. Coordination and facilitation of data-driven activities and reporting appeared to fall largely on the shoulders of specialized employees with expertise in data analysis; hence the creation of specialized support positions such as data coordinators.

Although established organizational structures were not described by respondents from District 2 (TS), awareness of their importance emerged often. Administrators, in particular, appeared willing to engage in planning and preparation for comprehensive data analysis and utilization across the district.

Sub-Research Question # 4: Attitudes, beliefs, and perceptions

The respondents from District 1 (VA) viewed data as useful when identifying struggling systems and at-risk students. They felt that the value-added system could also be used to show that non-proficient students were making progress despite the labels that come from current accountability systems (e.g., School In Need Of Improvement). The opportunity to exhibit growth in students' learning and achievement appeared to forge positive perceptions and attitudes in the respondents from District 1 (VA). The researcher believed that the availability of data and the opportunity to articulate to community members, administrators, policy makers and others the impact that they are having on student learning over time, had served as a motivator for professionals who might otherwise have been confined to annual measures associated solely with a traditional or status model. As such, teachers and administrators had embraced value-added assessment and data analysis as a tool to recognize and share the accomplishments and results of their work.

Respondents from District 2 (TS) expressed some negative beliefs and attitudes toward their use of student achievement data. The researcher acknowledged that such negative attitudes were likely due to organizational ambiguities caused by lack of shared vision or comprehensive plan for data utilization; possibly even more so than the model used for data analysis. An emergent theme based on observations and responses was, however, the apparent realization that data generated by existing testing and accountability models employed in New York State was the sole measure viewed by the greater school community. As such, respondents appeared to view such data as something that would produce only negative outcomes (e.g., number of students achieving below proficiency or needing AIS) rather than a vehicle by which positive gains in student learning could be observed and articulated. Simply put, the researcher believed that respondents from District 2 (TS) viewed data in its current form as a punitive measure of what teachers, administrators and schools were not doing well rather than a vehicle to exhibit growth and progress.

Conclusions and Recommendations

Conclusions were drawn from this research with regard to the utilization of traditional/status student achievement data versus utilization of value-added student achievement data. Each conclusion was aligned with a research question and includes specific recommendations that may assist educators and school leaders as they consider selection and implementation of student achievement data models.

Conclusion #1: Utilization and Implementation of Assessment Models

The underlying belief that value-added assessment models are better able to isolate the contributions of teachers and schools and correlate them to individual

student growth over time while accounting for intake differences and non-school influencers appeared to foster interdependence and shared vision embraced by administrators and teachers from throughout a system. Measuring the “value-added” during a year of instruction, rather than via annual snapshots of a group or cohort’s status at a given point in time (e.g., grade level) forged bridges across grade levels, disciplines, and schools. Therefore, value-added data provided relevant and meaningful information which, in turn, supported a wide array of professional collaborations and activities at many levels across a district. The researcher concluded that such value-added data fostered more frequent and sustained data-informed activities than data collected within a traditional or status model.

Additionally, implementation of value-added models may have transformed the use of student achievement data from school-based deficit planning to the use of student achievement data for system-wide benefits planning. The researcher concluded that teachers and administrators utilizing a value-added model recognized the availability of data that exhibited growth of individual learners. Conversely, traditional or status models appeared to force administrators and teachers to react or respond solely to negative findings or consequences rather than utilizing data for strategic and systemic improvement planning. As noted in Chapter Two, such data had been shown to impede schools from determining measureable impacts of school programs and structures (Meyer, 2000). Therefore, the “value” of such data did not appear influential and/or worthy of efforts required by administrators who might be willing and able to embrace data for informed planning and decision-making. As such,

the scope and variety of data analysis activities remain limited when utilizing a traditional or status model.

With the conclusion that value-added models improve the utilization of student achievement data by teachers and administrators, the researcher recommends that school systems adopt a value-added model to maximize informed use of student achievement data at individual, school, and district levels.

Furthermore, to maximize utilization, the researcher recommends adoption of value-added models that include multi-year longitudinal analyses whereby learning is viewed on a continuum, and ideally, a trajectory toward proficiency over time. Although state and federal requirements may maintain annual accountability measures, the researcher believed that avoidance of knee-jerk reactions to isolated measures and bits of data will promote utilization of data by administrators and teachers without fear of annual retribution or labeling. Bernhardt (2003) shared similar sentiments. She contended that a safe environment must be established if data are to be embraced by all staff members. Implementation of value-added models that produce measures of teacher and school effects on a year-to-year basis may do little more than a traditional or status model and may well promote a climate of data-driven fear.

This recommendation provides an alternative perspective from previous value-added research that supports accountability focused on measure of the enduring effect of instruction delivered to a student by an individual teacher. Sanders and Rivers (1996) demonstrated that the experience had by a student in one year had significant and lasting impacts on achievement for future years. Few can argue the fact that teachers matter and their impacts are long-lasting (Wright, Horn, and Sanders, 1997).

Such realizations and findings may encourage use of annual value-added data for teacher accountability and evaluation. The researcher contended, however, that the lingering criticisms of complex value-added models (Ballou, 2002) and the inadequacies of school resources and existing testing models are cause for longitudinal analyses as suggested. Maintaining a systems view, rather than an individual accountability view during conversion to a value-added model may foster greater systemic, comprehensive, and collaborative utilization of generated data by teachers and administrators.

Conclusion #2: Readiness for analysis and utilization of data

The researcher concluded that implementation of a value-added assessment model, as suggested by researchers such as Meyer (2000) and Saunders (2000), promoted the development of skill and capacity for data utilization by teachers and administrators. Addressing prerequisites such as supportive leadership, extensive databases, ongoing professional development, and acquisition of essential technologies ensures preparedness and improves readiness in teachers and administrators. The researcher concluded that a shift to a highly complex and statistically-sophisticated model like value-added establishes urgency in leaders to ensure that all professionals are well prepared for ongoing data analysis and utilization. Therefore, the chosen model (i.e., value-added) is likely to influence planning for successful implementation.

The researcher also concluded that school systems must put forth significant time, energy, and resources for successful implementation of a value-added assessment model. Such efforts must include targeted and sustained professional development for all administrators, teachers and support staff; acquisition of technology

resources (software and hardware); provision of time for collaboration; and recruitment of expert support staff (e.g., Data Coordinator).

Based on this conclusion and corresponding literature, the researcher offers the following recommendations for consideration when seeking readiness for adoption of a complex data analysis model such as value-added:

1. Evaluate the immediate and long-term needs of all staff for the purpose of planning for professional development on chosen assessment models.
2. Plan and implement differentiated professional development opportunities aligned to roles and skill levels of individuals.
3. Assign or recruit individuals with expertise to assist with analysis and translation of data into usable information (e.g., data coordinator).
4. Research and/or develop necessary resources including hardware and software needed for creation, analysis and manipulation of assessment records.
5. Develop comprehensive, multi-year plan for implementation of value-added assessment model. Plan must include steps for sustainability of efforts.
6. Allocate adequate time for teachers and administrators to collaboratively interpret data and determine actions and strategic plans.

Conclusion #3: Motivations and commitment

Motivation and commitment to utilization of student achievement data is influenced greatly by leaders and leadership strategies, as much, and possibly more so,

than the assessment model chosen by a school district. As such, the researcher concluded that the adopted model may have less influence than the role of leadership and the creation of a shared, system-wide vision. One only need review business management and educational leadership literature to recognize the motivation for change brought forth by systems thinking (Kouzes and Posner, 1995). Senge (2000) described shared vision as “The collective discipline that establishes a focus on mutual purpose.” Failure to develop and communicate the vision was noted by Kotter (1996) as one of the predominant errors that will likely lead to failure of an initiative and possibly an organization.

In the context of this study, the lack of such shared vision for data analysis and utilization by professionals in District 2 (TS) emerged as a prevalent theme. The researcher believed that a direct and observable byproduct of such missteps was the notable lack of motivation and commitment observed in the traditional/status system. It may be that the mere adoption of a value-added model can serve as the system-wide foundation upon which teachers and administrators can recognize shared vision and forge greater intrinsic motivation for such work. Regardless of the selected model, it appeared clear that common and known leadership principles and organizational strategies must be considered concurrent with adoption of a model for data analysis.

The researcher also concluded that traditional or status models provide little incentive for leaders to promote readiness in teachers and administrators. One might conclude that leadership and implementation are equally influential as the assessment model chosen. Although the researcher believes that leadership and implementation are critical, it is likely that the deficiencies of traditional status models noted by several

researchers (Meyer, 2000, 2002 and Doran, 2003) diminished the perceived benefits of such models. In turn, leaders may be less eager to facilitate capacity building and improve readiness in teachers and administrators working with a traditional assessment model.

In keeping with this conclusion, the researcher recommends that school systems initiate full review of organization and leadership structures concurrent with development of a comprehensive assessment model. Such steps appear to be critical when seeking sustained motivation and commitment to the analysis and utilization of student achievement data by teachers and administrators.

Conclusion #4: Organizational systems and structures

As described previously, the role of leadership and shared-vision when planning for implementation of a new initiative or for transformation of an organization cannot be minimized or overlooked. Embedded within principles of organizational and educational leadership is the clear implication that school systems seeking improved and more frequent utilization of student achievement data must avoid ambiguity and build capacity for success. McCaskey (1982) described a series of sources of organizational ambiguity. Of note was ambiguity formed by: (1) multiple goals that are unclear or conflicting, (2) shortage of time, attention and/or resources, (3) role confusion, (4) no criteria to evaluate success, and (5) competing or unclear definition of purpose.

The researcher concluded that organizational systems and structures must be developed in order to maximize the impact of data analysis and utilization, especially when instituting a complex model such as value-added. To do so, the roles,

responsibilities and expectations of administrators, teachers and specialized staff must be well defined and known. The researcher contends that organizational systems and structures must be in place to ensure that access to data is not restricted or contained to a school, individual, office, or solitary stakeholder group.

Additionally, the researcher believes that the documented shortcomings associated with traditional/status data models may inhibit organizational and systems thinking. Specifically, the traditional/status model that measures students' scores at a point in time may prohibit longitudinal comparisons and tracking of the growth of individual students. Therefore, the use of a status model may not call for the creation of organizational and system-wide plans and structures due to the year-by-year accounting of student achievement. In other words, data are contained to a grade level or cohort rather than flowing freely throughout a system and with a child.

The researcher recommends a comprehensive review of existing organizational structures prior to introduction of a newly adopted assessment model. In turn, structures must be established to avoid ambiguities created by the conditions described by McCaskey (1982). Specific recommendations include:

1. Identify clear and manageable goals for each phase of implementation of an assessment model.
2. Plan for availability of time, support, and/or resources needed to successfully implement and sustain assessment model.
3. Clearly define the roles, responsibilities and expectations for all stakeholders including teachers and administrators.

- (4) Establish criteria to evaluate success and timeline for monitoring of progress.

Conclusion #5: Attitudes, beliefs, and perceptions

In order to avoid the possibility that student assessment data will remain vastly underused, unnoticed, or rejected by teachers and administrators, it is imperative that school leaders and policy makers consider the implications of the chosen model, purpose, and expectations for utilization. Failure to do so will likely conjure negative attitudes and possible resistance to change toward greater utilization of student achievement data.

The researcher concluded that adoption of a value-added model, when certain pre-conditions have been achieved, will have a positive impact on the perceptions, beliefs and attitudes of teachers and administrators expected to participate in data analysis activities. By focusing on value-added data as a tool to inform professional growth and decision making, rather than solely as an accountability tool, teachers and administrators appeared more accepting of potential findings and influences that data may have on their work. Conversely, the known limitations of traditional/status models appeared more likely to contribute to negative perceptions and rejection of student achievement data. Therefore, the researcher concluded that the combined effect of the selection of a value-added model with clear vision and expectations for utilization contributed to greater degrees of positive sentiments toward testing and data.

Additionally, all stakeholders must be engaged and included in data-informed, comprehensive planning efforts if utilization of analyses at all levels is expected to be embraced. Central office administrators, including the superintendent, must model such

efforts and become resident experts of data analysis procedures, especially when instituting a value added approach. Such leadership can influence the direct participation of administrators and teachers. Waters and Marzano (2006) reported that superintendents can have significant and positive impacts on student learning and performance when they have engaged administrators and teachers in inclusive leadership and collaborative goal setting processes. As such, the researcher concluded that the largely positive attitudes and perceptions observed in District 1 (VA) are likely attributable to inclusive, comprehensive, and data-informed goal setting efforts at each building and across the district.

Access to data, development of critical skill sets, and opportunities to employ data for goal setting and planning efforts appeared to be additional critical provisions by districts employing value-added models. The informative nature of value-added data coupled with the belief that data can and should be used for much more than harsh accountability requirements positions all stakeholders for full engagement in data-informed planning efforts. Wiggins (1994) argued, "The problem is not with tests per se, but the failure to be results-focused and data-driven." The researcher concluded that limiting focus to mere test results and annual measures of yearly progress of distinct cohorts of students (i.e., traditional or status model) prohibits deep evaluation of generated data for the purposes of targeted planning and goal setting aligned directly to student gains or regressions caused by the effects of school or classroom instruction while minimizing the effects of non-school variables. Schmoker (2006) found that "the more closely teachers study assessment tools, the less critical they are of standards

and testing- and the more apt they are to see that tests actually guide them toward essential skills in math, reading, and writing.”

In keeping with this conclusion, the researcher recommends that educational leaders recognize the ambiguity, negative attitudes and resistance that often emerge when educators view data as a tool to be used solely for accountability purposes. In this case, both sample districts had endured negative labels and classifications as a result of poor student achievement on state administered tests. Although such labels remain, District 1 (VA) had transformed data analysis so that positive gains are equally important and as informative as regressions or failure to meet Adequate Yearly Progress (AYP).

Additionally, the researcher recommends that school leaders consider using value-added assessment models rather than traditional or status models if teachers and administrators are expected to make positive contributions to the comprehensive program for data analysis. Leaders should resist suggesting that value-added models should become the predominant accountability and evaluation tool for administrators and teachers. Embracing the belief that assessments and data can be used for diagnostic purposes as well as a mechanism for accountability should promote positive response and acceptance. Such narrowing of value-added data for accountability only will likely foster resentment and unwillingness to see data as a tool for learning and growth. Furthermore, leaders must acknowledge imprecision and uncertainty known to accompany value-added systems. Similar to criticisms launched against traditional/status models that describe such systems as grossly unfair measures of

teacher effectiveness, leaders must openly acknowledge known weakness associated with value-added models as well.

Further Research

The findings and conclusions of this study have implications for additional and future research in the area of analysis and utilization of student achievement data by teachers and administrators. The researcher believes that further studies as suggested below will contribute to the growing bank of literature in the area of assessment and accountability:

1. A study could be conducted to delve deeper into the practical effects of assessment models on instructional decision making and practices. For example, does there appear to be a correlation between the type of assessment model utilized (value-added versus traditional/status) and the implementation of specific instructional practices (e.g., cooperative learning)?
2. Future researchers might also consider a study of the implementation of non-standardized assessment models for the purpose of evaluating value-added impacts on student learning. For example, how frequently and extensively do school systems implementing a value-added model rely on data collected from alternative assessment strategies (e.g., extended response, performance, project, etc.)?
3. Consideration may also be given to a study of the differences in attitudes, beliefs and perceptions of teachers and administrators operating in a school system that had voluntarily adopted a value-added assessment model versus

educators working a district that had been mandated to adopt a value-added approach (e.g., public schools in Tennessee, Pennsylvania, etc.)?

4. Future research may also include a study that explores the impacts of leadership strategies and models on the attitudes and beliefs of teachers expected to utilize student achievement data generated by value-added analyses.

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Appendix 1.

Data Collection Protocol

General Instructions:

The three parts of this case study were designed to be completed while visiting selected sites. Observations will be recorded using a note-taking form. Interviews will be recorded and/or transcribed. Pertinent information found during reviews of documents will be recorded.

Part I: Direct Observations:

For each observation:

Record identifying information at the top of the form (date, time, location).

Fill in the activity and sub-activities.

Record a brief description of the setting, activity, participants and purpose.

Maintain a narrative record of what is observed.

Use standardized abbreviations (e.g. T=Teacher, A=Administrator).

Review and expand notes within 24 hours of the observation.

Whenever meetings are observed, take thorough notes, paying careful attention to relevant discourse (e.g. data discussions).

Observation Protocol- Teacher/Administrator Data Analysis Activity

Date: _____ School: _____

Time: _____

Activity: _____

Participants: _____

Data Discussion Observation Protocol	Notes/Comments
<p>During the data analysis activity, I will take running notes of the meeting and I will make specific records of whether the following items are discussed and/or used:</p> <ul style="list-style-type: none"> • Informal student assessment data • Formal student assessment data • Classroom instruction • Teaching strategies • Student assignments • Organizational planning 	

<ul style="list-style-type: none"> • Curriculum design • Other <p>Other considerations:</p> <ul style="list-style-type: none"> • Did participants bring actual student achievement records? • Was there a formal agenda? • Who generated the agenda? • Were specific plans developed/ • Were minutes taken? 	
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Part II: Interviews:

Note: Each interview will begin with a brief introduction and explanation of the purpose of this study. Interviewees will also be informed that the entire interview will be tape recorded, that their responses will be strictly confidential and that follow up questions may be generated.

For each interview:

- Ask interview questions only during pre-scheduled times.
- Ask questions in a non-leading and non-judgmental way.
- Record teacher responses verbatim whenever possible.

- Record each interview in its entirety to confirm written notes.
- Review and expand notes within 24 hours.
- Close with objective summary and reassurance that all information will be held in complete confidence.

The following interview questions will be utilized:

Question #	Question
1	How have you participated in data analysis activities in your school?
2	Why did you choose to participate?
3	What benefits did you anticipate by participating in data analysis activities?
4	Did your school district develop and articulate a plan for data analysis and utilization?
5	What is your background with data analysis and/or statistics?
6	Did you receive training in data analysis prior to engaging in such activities?
7	Does your school/district employ value-added or traditional/status model for data analysis?
8	What do you see as the pros and/or cons of this model?

9	How is data used by your school/district?
10	How do you personally use student achievement data?
11	Do you feel confident when analyzing and/or utilizing student achievement data?
12	How has data analysis informed goal setting within your school/district?
13	How has data analysis informed professional goal setting for you
14	How does the interpretation and use of data influence school/district decision making?
15	How do classroom teachers use data and does data affect classroom pedagogy?
16	What kinds of data are collected by classroom teachers and how are the data analyzed?
17	Does your school/district use technology resources to assist with data analysis and reporting?
18	Do you feel that the data collected, analyzed and utilized by your school/district is relevant and helpful?
19	Does collected and analyzed data account for differences in non-school influencers (e.g., socioeconomics, etc.)?

20	What percentage of the staff in your school/district uses data regularly to inform their practices?
21	Is student achievement data used to evaluate teachers or administrators?
22	Is student achievement data utilized to evaluate programs or curriculum?
23	How interested is the staff in your school/district in utilizing student achievement data?
24	When does your school/district facilitate data analysis activities?
25	Does the data collected and analyzed by your school/district sufficiently measure and report the effect of teaching, program and policy on student learning?
26	How does your school/district articulate data analysis reports to parents and/or the greater school community?
27	Does your school/ district provide ample professional development for teachers and administrators in the analysis and use of student achievement data?
28	Please describe any other utilization of data that may not have been described thus far as part of this interview.

Part III: Document Review:

For all document reviews:

- Clearly identify the type, source and purpose of each document.
- Confirm permission to review each document with the administrator in charge.
- Use a standardized note-taking form to ensure consistency.

Appendix 2.

Types/Sources of Collected Data

District 1(VA)	District 2(TS)
Blackboard Assessments	Tests
Traditional Pencil and Paper	Quizzes
Achievement Series	DIBELS
Midterms	Rigby
Department Finals	PBIS
Regents Exams	Benchmark Assessments
Quarterly Assessments	
Authentic Assessments	
Rubrics	
Unit Tests	
Pre-Assessments	
Benchmark Assessments	
NYS Test Scores	

Appendix 3.

Time Scheduled for Data Analysis

District 1(VA)	District 2(TS)
Department Meetings Half-Day Data Meetings Full-Day Data Meetings Faculty Meetings Vertical Articulation Meetings Horizontal Articulation Meetings Team Meetings Building Leadership Team Meetings Grade Level Meetings Vertical Core Team Meetings	Staff Meetings Half-Day Professional Development