IMPACT OF ACCESS, ABILITY, AND ATTITUDE ON TEACHER AND ADMINISTRATOR USE OF DATA FOR COMPREHENSIVE PLANNING

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Abstract

This study explores the analysis and use of assessment and accountability data by teachers and administrators. It also examines the role that data play in school and district planning. Three general barriers to data access or data use by teachers and school administrators in New York State Public Schools were investigated. The attempt was to understand why educators, despite the claims that the use of data increases the effectiveness of teachers and administrators, are unable or unwilling to do so. A researcher-designed survey of members of the New York State Data Analysis Technical Assistance Group (DATAG) was administered in an attempt to uncover these barriers, which were found to be technical, institutional, and personal in nature. This study examined numerous types of data and the influence that access, ability, and attitude toward that data have on educators' use for comprehensive planning. The impact of technology, professional development, and other areas of access and ability were taken into consideration. Through a stepwise multiple regression the following areas were found significant in predicting use of data for planning: a) access to professional development, b) access to data tools (hardware, software or other), c) ability to understand and use accountability data, d) ability to plan effectively, e) attitude held toward state accountability data, and f) attitude held toward data in general. After reviewing the findings, a comparison to effective business models was made.

Key words:
Strategic planning, data-driven-decision making, Comprehensive District Educational Planning (CDEP), accountability, assessment, No Child Left Behind (NCLB), data, planning, school planning, school improvement, systems thinking , Data Analysis Technical Assistance Group (DATAG), state data, district data, data planning, data use, and data access.

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CHAPTER I

Introduction

Assessing student learning has long been a crucial aspect of education. Whether formative or summative, assessments open a window to students' understanding of educational content, as well as providing insight into pedagogical effectiveness and instructional program design. Single assessments may offer only a snapshot, but when multiple assessments and other data points are combined, a far clearer picture will emerge (Bernhardt, 2004).

The No Child Left Behind Act of 2001 (NCLB) has dramatically changed the potential impact of student assessments. Schools are now scrutinized by their performance on one exam, whether through the grades of individual students or the performance of entire classes. Under this act, American public schools have entered into an age of rigorous accountability.

This new program has provided schools with a wealth of data but there remains controversy over whether teachers and administrators have easy access to this potentially valuable source of information. Many wonder whether the data provided by these assessments are provided in a timely, searchable, and usable format. Still others have raised concerns over whether teachers and administrators have access to appropriate data and tools needed to make sense of the information for classroom planning. In addition, there have been difficulties with regard to educators' access to the professional development tools that they may need to interpret and respond to these data. Technology can also play a part in the way data are collected and the ways in which it may then be used. Since

increased access to assessment information has the potential to be dramatically impacted by the use of these technologies, this research explored school use of technology-based assessment or a data infrastructure.

Even if teachers and administrators have access to the data and the tools that they need, the question remains whether they can effectively use these tools. Access may not be the issue. Perhaps teachers and administrators do have access to all the data and tools they need. However, whether or not they use this data may depend on their ability to use it effectively. Educators' ability to use data towards effective planning was also explored in this study.

Another pressing issue is whether the mounting pressure on many schools to perform brought on by NCLB has colored their perception of assessments and assessment data. This is especially a concern in poorer rural and urban school districts which are often targeted by NCLB. If teachers have access to necessary data and tools, as well as the ability to use that data and those tools, then it may be that their attitude toward data and planning is determining their choice of particular data to use. Therefore, educators' attitudes are also addressed in this research.

Research Questions

For many years schools in New York State have been collecting data and developing systemic planning models for its use. The intent of this study was to determine if these data were being utilized for district planning; and if not, what were the barriers preventing teachers and administrators in New York State schools from using assessment and accountability data for comprehensive planning?

The purpose of this study was to explore the relationship between various forms of assessment and accountability data and their use in comprehensive planning. The use of data was defined by the perception of district leaders surveyed. Three research questions were addressed:

Research Question 1: What impact does teacher or administrator access to assessment and accountability data, assessment tools, as well as professional development, planning and data tools have on their overall usage for comprehensive planning?

Research Question 2: What impact does the ability of teachers or administrators to interpret or utilize the available assessment and accountability data, produce assessments, and use data tools have on their usage for comprehensive planning?

Research Question 3: What impact does teacher or administrator attitude toward assessment and accountability data have on their usage for comprehensive planning?

Significance of the Study

One can sum up the importance of planning to the success of a given organization in the valuable proverb that explains, “He who fails to plan, plans to fail.” Planning is essential to educational achievement and requires individuals in an organization to define goals and objectives based on their understanding of organizational needs, followed by the development of strategies to meet those needs. In order to best understand their needs, many businesses have redefined what data mean, how to collect it and how to use it for planning. This research drew from these new methods and compared them to the practices found in the schools studied.

By better understanding the data being used, the role technology plays, and the barriers preventing teachers and administrators from using data for comprehensive planning, this study will help leaders better understand ways to direct limited planning resources more effectively in order to ensure that successful planning occurs. In so doing, it will assist districts in determining the most effective areas in which to focus in order to maximize planning efforts.

Definitions of Terms

Barriers to appropriate student assessment, such as *access*, *ability* and *attitude* are explored in this work. The terms are defined as:

Access: The extent to which student data, assessment tools, planning tools and data tools are available to teachers and administrators. This includes access to: assessment and accountability data, assessment and accountability tools required to interpret the data, various forms of assessments and grading and planning tools.

Ability: The capability of teachers and administrators to interpret or utilize data, as well as to create assessments and use particular data tools. This includes ability to: understand the given assessment or accountability data, manipulate and make use of any assessment and accountability data, use the technology required to interpret assessment and accountability data, and draw actionable conclusions from data.

Attitude: The values and perceptions held by teachers and administrators toward the use of assessment data and tools for planning. This includes attitude toward: assessment and accountability data, and district-wide or local school planning.

Technology: The hardware and software used to administer assessments, collect data, or disaggregate the data available.

Limitations of the Study

While the study conclusions are significant, it should be noted that there are several limitations of this study that may limit its generalizability to the general education community. One such limitation was the sample size. Although this study represents a good portion of the target group surveyed, it does not represent a large number in comparison to the total number of teachers and administrators in the population.

The manner in which the sample was selected may also be a limitation to the study. For the purpose of strengthening the study, this researcher used a convenient sample of individuals with a strong data background, which was not randomly selected. The extensive data background of this group gave them better insight into the data utilization in their organizations but the presence of an individual with such data experience may not make that organization typical of the general school population. The sample also consisted only of educators from New York State. Because it was limited to one state its ability to be generalized to all teachers and administrators in other states is also in question.

The fact that this was a perceptual study is another limitation. Data experts that are members of DATAG were asked to give their judgment of teacher and administrator data utilization based on their own experience. This research design did not make it possible to measure the degree of impact that subject experience had on these findings or respondent accuracy.

The finial limitation is that of unit analysis. Some DATAG respondents work in a single school, others have district-wide positions that encompass several schools, and some work in regional centers with several schools or districts. Despite this disproportion each response was weighted equally.

CHAPTER II

Literature Review

Introduction

Over the past twenty-five years many states have developed systematic measures to assess education and maintain educator accountability. At first, these measures relied heavily on summative grade level assessments. With the 2001 enactment of No Child Left Behind (NCLB), assessment measures became a mandatory element of any state's accountability system and were utilized to identify underperforming schools (Mitchell, 2005). Despite their limitations, they nonetheless provide valuable feedback that can be utilized in classroom and district planning. Many schools have begun to develop or acquire other forms of assessment in addition to the required state assessments. Formative benchmark assessments, portfolio assessments, student grades, and other accountability measures allow teachers to adjust instruction and leaders to adjust programming as needed in order to maximize student performance (Reeves, 2000). More recently, states and schools have been exploring alternative assessment models, over time and provide districts with a more comprehensive look at the performance of a given school.

Schools are finding themselves with a mountain of data at their disposal and educational leaders are seeing more and more evidence that these data are beginning to be used by teachers for classroom planning. Teacher conferences and seminars often include themes such as 'assessment,' 'accountability,' 'data,' and 'planning,' in their title, which reflects the new usage of student information in educational planning. In addition, you need only to look at any education catalog to find book after book on these subjects.

Although schools are seeing an increase in the use of student data for classroom planning, this information is also being used for district comprehensive strategic planning. Proponents of so-called 'data-driven decision making' claim that school district administrators can use this information to determine goals for their schools and plan effective strategies to achieve these goals. While this is a catchy slogan, the essential questions remain: a) "How are these data being used?" and b) "What are the barriers that prevent its use?" The answer to these questions formed the main thrust of this study which focused on ways in which New York State school districts' use assessment and accountability data for comprehensive district planning. Close attention was given to the possible barriers preventing more effective data utilization. This study examined three barriers to data utilization: a) access b) ability and c) attitude, in terms that will be explained in greater detail.

Accountability and Assessments

Assessments: Digging Deeper

Throughout the literature, assessment systems are defined in different ways, but there was much common ground. Assessment can be defined as planned and serendipitous activities that provide information about students' comprehension and skill in a specific measurement topic (Marzano 2006). Danielson (2002) describes assessment as a system that permits educators to quantify how well their students are learning. According to Stiggens, it is a process of gathering evidence of student learning to inform instructional decisions and help students to meet specific performance standards (Stiggens as cited in Chappuis, 2005).

Assessment practices of teachers today seem remarkably similar to the practices that

have been used for decades. In failing to reform their practices, most educators perpetuate an ineffective assessment method that inhibits student achievement (Stiggins, 2004). Educators will often utilize student assessments built on right-wrong, true-false, and yes-no questions with little room for formative feedback or critical thinking. Marzano (2006) claimed that "feedback, although essential, is not always beneficial" to students (p. 3). By looking at the various research, it is clear that right/wrong feedback can produce a student percentile loss in student performance (-3%), while higher order feedback such as evaluation and interpretation provides students a significant (+32%) student gain (Marzano, 2006). Marzano analyzed the current research on student assessment and posited four guidelines for schools to utilize when assessing students: 1) Feedback from assessments should give students a clear picture of their progress toward learning goals and offer ways in which they may improve, 2) Feedback on classroom assessments should encourage students to improve, 3) Classroom assessment should be formative in nature, and 4) Formative classrooms assessments should be frequent (Marzano, 2006).

Based on his observation of the Milwaukee Public schools, Reeves (2000) coined the term "90/90/90 schools," referring to schools in which 90% of the students are eligible for free or reduced-price lunches; where 90% students are ethnic minorities; and students routinely generate 90% or higher academic achievement. Reeves, with the Center for Performance Assessment, has gone on to study this phenomenon in other schools and identified characteristics that these schools have in common. Among these characteristics is the increased frequency with which assessments and collaborative/external scoring occur and how they are used to provide feedback to students. Assessments in some schools were done on a weekly basis and, based on the results, students were not penalized with bad

grades but rather given multiple and diverse opportunities for improvement. Reeves' research indicates that these schools have discarded the notion of a bell curve and believe that all students can learn. Instead of relying on the judgment of a single teacher, students are assessed in groups or by an external grader. This collaborative grading allows for impartial and value free feedback (Reeves, 2000).

Shavelson (2007) suggests five characteristics of assessment, based on broad cognitive abilities. These characteristics include: open-ended tasks, using computers, focus, sampling, and reporting. Quality formative assessments are not developed in a vacuum but are typically the result of deliberate collaboration among teachers, students, administrators, and colleagues in an effort to gain systemic feedback (Reeves, 2003). Assessments have become to many synonymous with accountability since the passing of NCLB. This has dramatically impacted the perception and use of effective assessments.

Accountability: The Next Step

Accountability was the natural next step in the evolution in student assessments, but it is not without its controversy. For the New York State Education Department, accountability has traditionally been utilized to measure school performance and the effectiveness of schools (NYSED, 2007). NCLB has refocused attention and accountability toward low-performing schools (Elmore, 2004). This concept of accountability has been perpetuated by the media and often supported by parents, though there has also been opposition to assessments. Elmore (2004) suggests that accountability systems must "evolve" beyond the current federal mandates of ensuring that they can effectively rate low performing schools. The question is no longer whether schools require accountability, but rather, how leaders can effectively and fairly govern the current system (Reeves, 2002).

The line between accountability and assessment is often unclear. While accountability is not assessment, the two are interdependent. High stakes testing and accountability without supportive classroom assessment is counterproductive and possibly harmful to struggling students (Stiggins, 2004).

Reeves (2004) points out that accountability has become a "dirty word" in education. In fact, some superintendents have even requested that their subordinates not use the "a-word" (Reeves, 2004, p. 5). Despite this stigma, accountability takes many shapes in the education world. Under the NCLB, the way accountability is defined by states or the federal government is appropriately very different than how teachers or school administrators may define the term. Reeves (2002) has defined accountability for learning as "student-centered" or "holistic", a definition reflecting more than an annual high-stakes assessment.

Today's school leaders are still struggling with the transformation from a culture of internal to external accountability. Internal accountability refers to those assessments used to measure student progress within the classroom, school or district as a whole. External accountability refers to assessments imposed by external sources, mostly government, to produce conclusions about the performance of a particular school or district. In the past, teachers and schools defined their own accountability instruments and measures, and were only accountable to internal stakeholders. Modern systems hold teachers and schools accountable to a state or national standard. This two-way flow of internal information (teacher/school assessments data) and external information (state/federal assessment data) connects classroom practice with external accountability measures (Halverson, 2005).

Whether private, charter, or traditional public schools, all educational institutions must be accountable, as this accountability is equal to public acceptance (Reeves, 2003). The difficulty is determining whether schools ought to allow the state assessment to remain the sole source of their accountability, or whether multiple measures of accountability should be used. For instance, should administrators be required to provide a more detailed look at their school? In so doing, they can provide information regarding their students' progress toward researching the learning standards required by the state as well as student outcomes which are important to the community. Data driven decision making requires leaders to further examine the performance of their students against agreed upon standards.

School Use of Data

Data: Digging Deeper

One significant outcome of the accountability and assessment movement is the increase in the amount of data available to schools. Bernhardt has identified four types of data that schools can explore: demographic, student learning, perception and school process (Bernhardt, 2004). Bernhardt stresses the power of the intersection of these four areas of data, adding that exploring the areas in which these data sets intersect can illuminate a great deal more information than any single aspect of data (Bernhardt, 2004).

At this stage, there is still little in the way of systemic use of this data in education by teachers and administrators for lesson and school improvement (Khanna, 1999). As yet, the most common use of data is in the area of goal setting, but this is mostly due to state mandates to create school improvement plans (RAND Corporation, 2006). Goal setting is only one part of planning and does not reach the process reforms that are often needed to create lasting change.

The Education Commission of the States (2002), a nonprofit organization assisting governmental leaders in making policy decisions, conducted a study to see how 'exemplary' school districts use this kind of educational data. Their study analyzed six school districts in five states and found these schools collecting and combining four general types of data. The data collected by the subject schools included: demographic, achievement, instructional, and perceptual data (Education Commission of the States, 2002). These data sources are similar to those mentioned in Bernhardt (2004). Although schools have been collecting data for some time, it has not always been analyzed or used for school improvement or district planning. Data that are collected should be analyzed. According to White (2005), if schools are not analyzing the data they are collecting, they ought to stop collecting it.

The RAND Corporation report on data-driven decision making (2006) they explored the systemic collection and analysis of what they designated 'input,' 'process,' 'outcome,' and 'satisfaction' data. The intent was to identify data helpful in guiding a wide range of decisions in schools. They spent five years gathering information on school data use and analyzing the results of four research studies on public and charter schools. A pattern emerged across this research with regard to the types of data collected and used by various schools and school systems. One challenge is the ability of educators to translate student learning data, demographic data, perception data and school process data into useful information (RAND Corporation, 2006). Therefore, it is necessary to have an effective data-driven system that can operate in a way in which all the functions are combined to translate summative and formative assessment data into usable information (Halverson, 2005).

The Education Commission of the States (2002) also identified ways that school districts may support data use. The most effective among these techniques included five elements: leadership modeling of data use, partnering with other organizations for support, changing management strategies, linking interventions to needs, and securing resources.

Reeves goes on to show how data use can have a strong impact on the neediest students. In 90/90/90 schools one of the primary characteristics of these highly successful organizations was their constructive use of student data (2003). These schools focused intensely on multiple data sources, and specifically on cohort data. For these effective organizations, the analysis was not about comparing one year's data with last, but instead focused on so-called 'same student to same student' comparisons. He also found that these schools also used these data to make real time decisions that led to an immediate impact rather than the slower reform seen in schools that only changed year-to-year. Common assessments also provided consistency in teacher expectations (Reeves, 2000).

Simply put, almost every piece of research and literature available shows that high-performing districts use student data for decision making rather than relying upon instinct or experience (Datnow, 2006). The primary purpose of accountability must be the improvement of student achievement. If this is the central purpose, then it must provide more than grades or evidence for a political road show (Reeves, 2002).

Today's education system requires educators to engage in continuous school improvement and the measurement of success. In most cases, this kind of reform is not what teachers and administrators were hired to do, and few will feel comfortable and competent in this role (Elmore, 2002). Administrators are often tapped from the teaching

ranks with little or no training in data use. Therefore, these freshly-minted leaders are often unprepared to assist teachers or use available data constructively themselves. The role of superintendents, principals and other school leaders has changed greatly in the past decade. States are beginning to address these changes and have begun to make appropriate changes in their leadership standards, as well as in licensing and preparation programs (Vitaska, 2008).

Data-Driven Decision Making

Data-driven decision making in education is based on successful models borrowed from business and manufacturing spheres, such as Organizational Learning and Total Quality Management. Bernhardt has identified the ways data can be used by educators to help districts in continuous improvement. These methods include: replacing hunches and hypotheses with facts, facilitating clear understanding of the gaps, identifying the root causes of these gaps, understanding the impact of certain processes, ensuring equity among students, assessing needs to target services, ensuring the effective use of available funds, showing if goals and objectives have been accomplished, determining if staff are 'walking the walk', promoting the positive impact of efforts, processes and progress, generating answers for the surrounding community, continuously improving processes, predicting and preventing, and predicting and ensuring success. Bernhardt claims that school districts have a great deal of data and want to use it, but simply do not know how (Bernhardt, 2006). This difficulty addresses the issue of teacher and administrator ability, which was researched in this study.

Before schools can make data-driven decisions, Wellman claims that schools need to hold 'data-driven conversations'. A conversation around data strengthens the participants'

comprehension of the data, creates a sense of collaborative inquiry and builds a shared understanding of their collective goals. This practice shifts teaching from a private engagement to a collaborative practice (Wellman, 2004).

The McREL metanalysis reviewed over 5,000 studies on school leadership from 1970 to the present. Of these, 300 met the McREL initial conditions, and 69 met their final criteria which required that they: involved K-12 students, involved U.S. schools or schools that closely mirrored the culture of U.S. schools, directly or indirectly, examined the relationship between leadership and student achievement, measured academic achievement by a standardized state test, and could report or compute their effect sizes in correlation form. These studies encompassed 2,802 schools and an estimated 14,000 teachers and 1.4 million students (Marzano, 2005).

The McREL study's authors identified 21 leadership responsibilities that may affect student achievement. In addition, the authors used their research to compute the correlation between leadership and student achievement to average .25. On this scale, leadership activities which exhibited a higher correlation than others were identified. The top five positive correlations were Situational Awareness (with a correlation of .33), Flexibility (.28) and Discipline, Outreach, Monitoring/Evaluation (.27) (Marzano, 2005). Three of these five categories highly correlated leadership responsibilities related to planning, data, accountability and assessment (Marzano, 2005).

The researchers then considered school improvement initiatives and categorized them into either first or second order changes. First order changes were often extensions of past practice, requiring easily-obtainable knowledge, and were congruent with

organizational norms. Second order changes were more difficult to implement and usually required more planning. In addition, second order changes often represented breaks from current practice, and required complex new knowledge for effective implementation. Topping the list of first order changes is the category "Monitoring/Evaluation". The McREL research asserts that leadership is vital while stating that the most critical task leaders undertake is the use of assessment and accountability data for monitoring and evaluating program success (Marzano, 2005).

Reeves identified seven steps that school principals can take to improve student instruction. These steps included: a) understanding the standards, b) identifying faculty leaders, c) creating professional development opportunities, d) assessing student progress, e) analyzing classroom activity, f) recognizing outstanding performance, and g) reflex, revise, and improve (Reeves, 2003).

Again these tasks require assessment, accountability, planning, and data knowledge and offer the fundamentals of data-driven decision making. Educators' competent understanding of data is only the beginning. The overarching goal is the use of data for district planning.

Data and Comprehensive District Planning

A great deal of time and resources are spent on education but controversy remains whether these resources are focused in the right areas. District planning is a way to focus on these major aspects of educational work. Essential in this endeavor is the appropriate use of assessment and accountability data.

Planning, as a method, is another concept that has evolved over the past several years. Technology has dramatically changed the way data are utilized, and has changed the way that organizations make plans. Use of technology for organization and planning is far more evident in the business arena than in schools. Schools must embrace technology to fully take advantage of the robust databases and information available. Wayman (2005) said that "The advent of data analysis tools represents a new opportunity to provide access to large amounts of student information that will facilitate more informed decision making and improved school performance" (p. 298). He continues, claiming that access should not be limited to a given school's administration, but shared with teachers as well. He recognized that data warehousing and the associated technology tools offer both opportunities and obstacles to administrators and educators. Professional development in this area is a crucial part of utilizing data warehouses (Wayman, 2005). Questions relating to the measurement of technology planning were also included in the survey instrument used in this study.

There are many obvious benefits to using data for planning. Danielson believes that it is "virtually impossible to separate the benefits of collaborative planning from those of collegial professional development. When educators plan together they focus on continuous improvement" (Danielson 2002, p. 93). A school district's ability to plan and use data effectively reflects both the school's structure and their attitude toward planning and data. Vanderbilt University's Val-Ed Leadership Assessment, defined planning as "…articulating shared direction and coherent policies, practices, and procedures for realizing high standards of student performance" (Vanderbilt University, 2007, P. 7). Many researchers support the idea that planning is imperative to school improvement. However,

the key is having a systemic improvement plan coupled with access to and understanding of salient data.

In 2000 the Hawaii Department of Education created a formal system for doing systemic improvement through the Standards Implementation Design (SID) System (2000). The SID System is a "…framework for analyzing school performance, planning for improvements based on analysis, implementing the improvements, and evaluating results" (p. 14). The goal of the SID System was to create six key outcomes: inclusiveness, purposefulness, student-focused efforts, action-orientation, accountability and strong leadership. These outcomes were accomplished through the following key tasks: develop the school's profile; define, redefine, and/or clarify vision, purpose, and beliefs; develop and/or clarify school wide student outcomes; analyze instructional and organizational effectiveness; prioritize growth areas and develop an action plan for standards implementation, implement the plan and establish a follow-up process to monitor these implementations (Hawaii Department of Education, 2000). Through analysis of these elements, the benefits of planning become clear.

Data and System Thinking

Although the term 'systems thinking' was popularized by and is most associated with Peter Senge, it draws its roots from the world of ecology, referring to the small changes in a large system that have the potential to create powerful long term effects. A system is a group of elements that work together and affect each other over time (McREL, 2000). In the business world, systems-thinking is exhibited by the adjustment of input based on current and desired outcomes continuously measured by a specific and intentional feedback loop. In education, by comparison, 'input' can be considered the programs and

instruction that occur in a school system, 'output' is the intended learning, and the 'feedback systems' are accountability measures and assessments. It is crucial that schools adopt such a system if they hope to learn from their prior practices (Senge, 2000).

While this framework offers only a brief look at what are very complex schema, when implemented openly and honestly it forms the heart of an effective learning organization. The systems thinking framework is based on the idea that planning and management, when combined, produce success (McKinlay, 2006). In his metanalysis of over 8,000 studies, Hattie (1992) stated that "the most powerful single modification that enhances achievement is feedback" (p. 5). Feedback represents the implemented assessment and accountability systems. Hattie offers that "the simplest prescription for improving education must be 'dollops of feedback'" (Hattie, 1992, p. 5). Systems analysis, systems reform, systems restructuring, systems thinking, and systems in general are the foundation of much of the work of today's educational scholars (Bernhardt, 1999, 2000, 2004, 2006; Chappuis, 2005; Fullan, 2001; Marzano, 2003, 2005; Reeves, 2000, 2002, 2003, 2004, 2008; Stiggins, 2004; White, 2005).

Planning, Implementation, and Monitoring (PIM) research has been implemented and researched in over 2,000 schools, with its measures impacting more than 1.5 million students. Although still ongoing, the research has already reached some useful conclusions. PIM research consists of a double-blind review by two evaluators, both reviewing school planning, implementation, and monitoring processes. Most significantly, the results have shown that "schools with the highest monitoring scores have more than five times the gains in student achievement than schools with lower monitoring scores" (Reeves, 2008, p. 109). Monitoring scores measure the frequency with which goals are monitored, the specificity of

feedback, the measurability of goals, and the comprehensiveness of data collected. From this evidence, it becomes clear that planning with data is important and powerful tool. Despite this, two questions remain: a) "Are data being used for comprehensive planning?" and if not, b) "What are the reasons for its lack of use?"

Barriers to Using Data

Current assessment, accountability, and data literature focus on the use of data in the classroom and on data usage for district planning. It highlights exemplary programs and the enormous impact data utilization can have on both school and district initiatives. Despite this evidence most researchers acknowledge that many school districts have not yet adopted a specific protocol or systemic way of leveraging their available data into beneficial reform. Past research has shown that teachers have little understanding of data as an instructional tool and principals' understanding of testing and assessment was only slightly higher than teachers (Khanna, 1999).

When identifying why teachers and administrators are not utilizing data for systemic planning, a plethora of reasons emerge. The RAND (Research ANd Development) Corporation identified nine factors influencing the use of data. This included accessibility to data, the quality of data, motivation to use data, timeliness of data, staff capacity and support, curriculum pacing pressures, time pressures, organizational culture and leadership, and the history of state accountability (RAND Corporation, 2006). These areas can be divided into the three general areas that have been defined as: access, ability and attitude. The RAND Corporation's nine factors can be categorized into these three areas as indicated in Table 1.

Table 1.

Three General Categories of the Nine RAND Factors

Access	Attitude	Ability
a) accessibility	a) motivation	a) staff capacity
b) quality of data	b) organizational and leadership culture	b) support
c) timeliness	c) history of state accountability	c) curriculum pacing
d) lack of time		

White (2005) in his *Beyond the Numbers* and its companion volume *Show Me the Proof!* identified ten examples of what he deemed "acts of accountability" and the barriers to these acts. White identifies 39 barriers that can be easily consolidated into three general categories: access, attitude, and ability (White, 2005). Bernhardt (2006) also identified barriers to data usage. Bernhardt's barriers can be categorized into the three general areas that have been outlined in this study. Despite the reasons presented by the experts there is little research identifying the specific barriers and their significance. This discrepancy is the reason for this research.

Planning

Approaches to Planning

When instituting planning and organizational changes, less is often more. In 2003, Robert Marzano and McREL examined 35 years of research in schools and produced a list of factors that were found to yield high-impact results in schools. Among these factors was a "guaranteed and viable curriculum." Marzano explains that "a viable curriculum is unattainable without the benefit of time." His research goes on to show how it would be almost impossible to teach to the national standards (of which there are more than 200) as well as the total of 3,093 benchmarks in the current timeframe of schools. Marzano

calculated that it would take approximately 15,465 hours of instruction to teach the K-12 standards and there are currently only approximately 9,042 hours of instruction time available in a student's career. In light of these limitations, Marzano outlines ways to consolidate and prioritize outcomes in ways that create a "guaranteed and viable" curriculum (2003).

In addition, leaders should use this approach of consolidating and prioritizing when planning. Schools cannot continue to increase schools areas must address in planning and improvement without consolidating and prioritizing. For this reason consolidation into three overarching categories that encompass all of the factors identified in the reviewed literature is recommended. These categories are access, attitude and ability.

Three Barriers to Utilization

Access

The area of 'access' refers to any factor that prevents educators from accessing data for comprehensive planning for school improvement. Examples include a lack of time or timeliness in access to data, a lack of access to data itself, improper access to data tools or related technology, and a lack of access to planning tools or insufficient access to other assessment tools. One underlying barrier to educators' access to data is the timeliness of test results. Many researchers have explained that state test scores are made available to educators far too late to be usable (RAND Corporation, 2006). Another access concern relates to the amount of time educators have to assess and analyze available data. The Education Testing Service (ETS) claimed that "the most prominent barrier to quality assessment from the teacher's point of view is the lack of time" (Chappuis, 2005, p. 72). In addition to this familiar problem, ETS attributes the lack of access to appropriate

technology for data analyses, assessing, and planning as a reason for educators' lack of use. Leaders must provide available technology to all educators (administrators and teachers) with access to the large amounts of data necessary to improve school performance (Wayman, 2005).

Attitude

The area of 'attitude' refers to the educator's opinion of data, high stakes testing, assessments in general, and specific forms of assessment, technology, and comprehensive planning for school improvement. Although teachers and administrators have reported feeling pressure to improve test scores, many also feel that test scores are not very useful in helping improve instruction (Khanna, 1999). Teachers' complex conceptions of assessment and accountability have a profound impact on whether they choose to use tools that forward these methods.

Brown's research of conceptions of assessment among New Zealand teachers examined four distinct purposes of assessment. These were assessment used for: a) the improvement of teaching and learning, b) school accountability c) student accountability, or d) no relevant purpose. The teachers agreed that assessments were excellent for school and student accountability, but rejected the idea that they were useful for the improvement of teaching and learning (Brown, 2004). Some educators have difficulty depersonalizing the data before they can begin to discuss its implications for teaching practice and program development (Wellman, 2004). For some, impersonal sets of data can be deeply personal and the simple act of looking at it can be taken as threat or criticism. Depersonalizing data aids educators in emotionally separating themselves from the inferences derived from the information. The intention in depersonalizing this data is to turn it into something that can

be discussed objectively.

In a national survey of school administrators, a majority strongly agreed that assessment and evaluation is a very important function. By contrast, only a small number of the survey respondents agreed that they performed this function.

Table 2.

Survey of School Administrators

	Percent who strongly agree that they perform this function	Percent who strongly agree that this function is important
Uses the data to develop instructional strategies to improve instruction	40 %	75 %
Monitor student achievement to assess progress	41 %	73 %
Monitor student achievement on a regular basis to improve teaching practices	30 %	67 %

(Reeves, 2008, p. 156)

This lack of ownership of school improvement data demonstrates school administrators' attitudes toward school improvement. These attitudes allow individual educators to point fingers rather than take ownership and responsibility for their students' needs.

Ability

The area of 'ability' refers to the educator's capacity to manipulate and comprehend data, specific forms of assessment, assessment/data technology, and comprehensive planning for school improvement. The lack of teacher and administrator capacity in this regard has been a theme repeated throughout the literature. Wayman explains "…a characteristic of a data-driven district, professional development is particularly crucial to the sustainability of a data initiative" (Wayman, 2005, p. 299). Professional development has been at the core of policy discussion and licensing requirements (Vitaska, 2008). As

established in the literature, an educator's ability to use data is a key contributor to its use.

Leadership and Assessment

Leadership Assessment

The few leadership assessments that exist are grounded through varying degrees of research. The Vanderbilt Assessment of Leadership in Education (VAL-ED) is a leadership assessment based on six core components and six key processes of school performance (Vanderbilt University, 2008). These core components and key processes were identified through extensive research (Murphy, 2006).

The McREL Leadership Profile was created utilizing research presented in *School Leadership that Works* (Marzano, Waters, & McNulty, 2005), which describes this profile's approach to balanced leadership (McREL, 2008). This approach was developed through a metanalysis of 69 research studies from the 1970's to 2000 focusing on the link between school principal behavior and the achievements of their students (Marzano, 2004).

Douglas Reeves and the Leadership and Learning Center developed a Leadership Map predicated on research that they conducted on educational leadership over the past decade. Each leadership map provides a range of responses along a continuum, allowing respondents to carefully assess their knowledge (2008).

The Stanford Educational Leadership Institute (SELI) at Stanford University Graduate School of Business and School of Education, The Wallace Foundation, and the New York City Leadership Academy have all provided much research into the area of leadership and leader assessment. In particular, The Wallace Foundation has funded many relevant research studies and pilot projects (Stanford Educational Leadership Institute, 2008). Data, planning, assessment, and accountability were found to be key components of

these leadership assessments.

New York

New York State administered the first Regents Exams in 1865 as an entrance exam for students wishing to attend high school. Although New York started testing in 1865, the success of standardized testing following the First World War is generally regarded as the beginning of the standards movement (Shavelson, 2007). The Regents exams started with five exam areas, growing by 1879 to 42 exams. In the 1920s and 1930s vocational education exams were added, but these were discontinued in the 1970s. By the mid-1970s, the Regents exams in New York State became largely what they are today, and change yearly to reflect minor changes in curriculum (New York State Education Department, 1987). Today, except for a small group, every student in New York State is required to take the Regents exams. It is due to the Regents exams that New York can be considered among the first education systems in the country to adopt assessment and accountability measures.

In their 2004 paper *Learning from Student Assessment Results*: *Lessons for New York State*, Murnane and Sharkey of Harvard University Graduate School of Education offered five recommendations for the New York State Accountability and Assessment System. Sharkey and Murnane's recommendations include: provide educators with the results of student assessments as quickly as possible, develop formative assessments, develop a statewide student identification system, examine score trends, and examine effectiveness of software/training for analyzing assessment results (2004).

In 1998, New York designed a district-planning protocol known as Comprehensive District Education Planning (CDEP). Piloted from 1998-2002, CDEP was focused on the achievement of two major goals: 1) Provide statewide support and capacity-building skills

to school districts in the deep analysis of data, planning strategies to address needs as identified through this data analysis, and in creating collaborative stakeholder ownership of school and district improvement goals; and 2) Reduce the redundancy inherent in multiple plans in favor of a comprehensive plan that considers all the important aspects of school improvement (NYSED, 2008). CDEP was never mandated by the New York State Education Department and although adopted by some schools, not all have embraced it.

New York State's rich history of assessment and accountability makes it an ideal place to study these ideas. In addition, over the years a variety of groups in New York have offered support for data use by educators. This study worked with the Data Analyses Technical Assistance Group (DATAG). DATAG is an organization dedicated to supporting educational leaders across New York State, including school districts, Regional Information Centers, Boards of Cooperative Education Service (BOCES), and the New York State Education Department. Since its formation at a Comprehensive District Education Planning (CDEP) conference in 2000, DATAG has brought together data and assessment specialists to share information and strategies regarding data collection and use (DATAG, 2008). Since New York was one of the first states to implement a statewide assessment system, one might assume that New York educators should be accustomed to utilizing student data for both classroom and district planning. This research was intended to explore New York schools' use of accountability and assessment data for effective district planning.

The areas which were the focus of this study were educators' ability to use data, and their access to and attitudes toward accountability and assessment of data, planning, and data/technology tools and their impact on comprehensive planning. Each of these factors

was considered as part of an effort to expand upon existing research in the area with a focused look on the barriers to data usage.

CHAPTER III

Research Methodology

The purpose of this study was to explore the relationship between various forms of assessment and accountability data and their use in district planning. Factors such as attitude, access, and ability, as well as the interrelationships between these factors and their impact on use in district planning were explored. Three research questions were addressed:

Research Question 1: What impact does teachers or administrator access to assessment and accountability data, assessment tools, as well as professional development, planning and data tools have on their overall usage for comprehensive planning?

Research Question 2: What impact does the ability of teachers or administrators to interpret or utilize the available assessment and accountability data, produce assessments, and use data tools have on their usage of data for comprehensive planning?

Research Question 3: What impact does teacher or administrator attitude toward assessment and accountability data have on their usage for comprehensive planning?

This study explored the perceptions held by school administrators and data specialists who are part of the Data Analysis and Technical Assistance Group (DATAG). The focus was on the access, ability, and attitudes held by teachers and administrators toward assessment and accountability data and its use in district planning. This topic was studied through an online survey administered both face-to-face and online. For the purpose of this research, the following seven assessment categories were established: Common Formative Benchmark Assessments (teacher designed), Common Formative Benchmark Assessments

(externally designed), State Accountability Data, Common Summative Assessments (teacher designed), Common Summative Assessments (externally designed other than state), Perceptual Data (Student, Staff, Parent, or Community), and Portfolio (online or traditional)

The degree to which the assessment was used for school planning was measured on a Likert five point scale of 0-4. With the NCLB mandate, the area of accountability and assessment that has seen the greatest loss in usage is portfolio or visual data (Ganesh, 2007). The collection of students' visual samples in a portfolio has dropped from the mainstream conversation. To determine if portfolio assessments are being utilized, questions that elicited information on portfolio use were used as part of the survey instrument.

Population and Sample

The survey population in the study was the Data Analysis and Technical Assistance Group (DATAG). This organization defines itself as support for educational leaders throughout New York State. Members include superintendents, assistant superintendents, chief information officers, data specialists, and other technical specialists from public and private schools, Regional Information Centers, the Boards of Cooperative Education Services (BOCES), the New York State Education Department (NYSED), and private consultants. Since its establishment in 2000, DATAG has brought together data and assessment specialists to share information and strategies regarding data collection and use in education. DATAG offered a conveniently selected sample population that works with a large number of schools across New York and despite some limitations allowed the researcher to make inferences about the general population.

All Members of the DATAG were asked to participate in the survey at the December, 2008 meeting in Albany, New York. Participants were invited to complete the online survey with a laptop available on-site and asked to sign a roster. The purpose for the roster was to prevent sending the survey electronically to those members who had already participated. A follow-up request via e-mail was then sent to DATAG members who had not yet completed the survey. The data collected was stored on a secure server and analyzed on one secure computer. This researcher made three more attempts to those remaining members not at the conference.

Data Collection Procedure

This survey was completed anonymously. No names or identifying information from those who participated in the survey was collected. However, participants were asked to identify the Board of Cooperative Education Service (BOCES) in which they reside. This was to determine if the survey had statewide representation, but cannot be used to match any response to any particular person.

Instrumentation

The researcher developed the survey utilized in this study. It consists of six main sections, four of which included multiple supplementary items totaling 52 questions in all. The survey took approximately ten minutes to complete and was delivered through Survey Monkey, an online survey tool. A Likert scale was used to measure the parameters, and subjects answered questions on a scale from 0-4 where 0= Never or No, 1= Seldom or Limited, 2 = Sometimes or Average, 3 = Often or Good and 4 = Always or Excellent.

The survey was piloted by 14 volunteers with similar backgrounds as those of DATAG members. The pilot included assistant superintendents, data analysts and other administrators. These initial subjects were asked to complete the survey at a regional meeting. The pilot also solicited additional subjects through e-mail. After the pilot, these volunteers were asked questions to improve the survey for readability and ease of use. No names were associated with any of the responses, which were handled securely. For a copy of the script refer to Appendix A. For a copy of the email invitation refer to Appendix B. For a copy of the survey instrument refer to Appendix C.

Variables

There were three independent variables categories. These were 1) access to: data, assessment tools, planning tools and data tools; 2) ability to: interpret/utilize data, create assessments, and use data tools; 3) attitude toward: data and district planning.

There was one dependent variable, the use of various forms of accountability and assessment data in comprehensive planning.

Validity and Reliability

The validity of the survey instrument was checked though a series of reviews. Ten assistant superintendents and professionals who hold primary responsibility for planning in their districts completed an initial review of the survey instrument. This group also piloted the assessment to help ensure its ease of use. The expert panel was used to determine the internal validity of the survey instrument and to ensure that the questions measured the constructs they were intended to measure. The modified instrument was then reviewed by the researcher's doctoral team and by a panel of experts. Four data specialists were asked to identify the questions that they felt addressed the four major areas in the study. The two

greatest threats to internal validity in the research design were in the area of selection and instrumentation. The main threat to external validity was the interaction of setting.

Since the study population is a group that is dedicated to the use of data in education, it is possible that this group may focus more on data than the average school district employee. This is a limitation of the study but the geographic reach of DATAG also increases the generalizability of the study. The survey was delivered anonymously, so a follow up survey for validity was not possible.

Cronbach's Alpha was conducted to measure internal consistency and reliability of the data. Statistical analysis regarding the reliability of this study is discussed in greater detail in chapter 4 of this paper. The independent teams of four data specialists, all of whom belonged to DATAG in the past, were asked to identify questions that they felt were addressed in the four major areas being assessed. This series of pilots and reviews were used to determine the instrument's ability to measure the appropriate variables.

Data Analysis

A computer program, SPSS 17, was used to analyze the data. A stepwise multiple regression and a Pearson correlation were performed, the results of which are reported in Chapter IV. In an attempt to measure both variable interaction and compound effect multiple independent variables were combined and the interaction with the dependent variable was measured, thus treating the independent variables as moderating variables.

Data Analysis and Interpretation Procedure

Step One. The survey was distributed at a meeting of DATAG. Approximately 248 school district leaders from schools across New York State were surveyed.

Step Two. The survey was distributed through the statewide DATAG list-serves to participants who were unable to participate on-site. The BOCES region data was collected in an effort to ensure the results reflected statewide data.

Step Three. A review and analysis of survey data utilizing necessary software was completed.

CHAPTER IV

Results and Findings

Introduction

This study was conducted in an attempt to explore three possible barriers to educators using student and district data for district planning. These barriers were educators': 1) access to data, professional development and technology; 2) ability to utilize data and tools for planning, and 3) attitude toward this data and planning. Several forms of assessment and accountability data were explored.

Purpose of Study

Teachers and administrators have access to a wealth of data that could be valuable to district planning processes. This information can assist them in adjusting teaching programs, implementing new programs, and eliminating ineffective or underutilized programs. The purpose of this study was to provide information to school leaders on the possible barriers teachers and administrators face in using data for planning. The barriers of access, ability, and attitude were defined and researched in this study.

Description of Sample

Members of the New York State Data Analysis Technical Assistance Group (DATAG) were asked to participate in the survey during a DATAG December 2009 meeting or through follow up email invitation. An attempt was made to get responses from each of the 37 BOCES regions in the state.

The electronic survey generated 129 responses. Of these, 103 were fully completed surveys and 26 were missing data and excluded from the analysis. This represents a response rate of 52% among DATAG members and a completion rate of 41% of all DATAG members. Responses were disaggregated by region based on BOCES of residence to determine the geographic reach of the instrument in New York State without requiring specific information that may have affected the anonymity of the survey. DATAG participants represented 31 of the 37 BOCES in the state. It should be noted that the regions that did not respond to the survey represent the most rural BOCES regions of New York State.

As noted in Table 3, the respondents can be organized into three groups: administrators, analysts/technical personnel, and consultants/trainers. These groups were representative of the DATAG group as a whole.

Table 3.

Job Title of Survey Participants

Job title	Frequency	Percent
Director	21	20.4
Supervisor for Data	19	18.4
Assistant Superintendent	17	16.5
Coordinator	8	7.8
Data Analyst	8	7.8
Superintendent	8	7.8
Technical	6	5.8
Consultant	4	3.9
Other	8	7.8
Principal	8	7.8
Staff development	8	7.8
Supervisor	8	7.8

The survey instrument was organized into the following eight sections: 1) descriptive information, 2) use of data for planning, 3) teachers' access to data, tools, and tools for professional development, 4) administrators' access to data, tools, and tools for professional development, 5) teachers' ability to use data and tools, 6) administrators' ability to use data and tools, 7) teachers' attitude toward data and district planning, and 8) administrators' attitude toward data and district planning. Three primary research questions were addressed:

Research Question 1: What impact does teacher or administrator access to assessment and accountability data, assessment tools, as well as professional development, planning and data tools have on their overall usage for comprehensive planning?

Research Question 2: What impact does the ability of teachers or administrators to interpret or utilize the available assessment and accountability data, produce assessments, and use data tools have on their usage for comprehensive planning?

Research Question 3: What impact does teacher or administrator attitude toward assessment and accountability data have on their usage for comprehensive planning?

Data were input into a computer and a series of tests were completed to determine validity, reliability, correlation and statistical significance of the findings. The descriptive analysis of the data included the mean, standard deviation, and frequency. A Pearson's correlation analysis was administered in order to measure predictability and *r* was reported on a scale of -1 to 1. This researcher considered factors at or above the .05 level to be significant. Pearson's Correlation and a Multiple Regression analysis were used to determine if a statistical relationship between variables existed.

Validity and Reliability

The survey consisted of 50 questions or items. A Cronbach's Alpha to measure the study's internal consistency, as well as the reliability of the data collected was conducted. The study was conducted on the complete item set, N=50 and each item set of the subcategories studied. The reliability of all items was measured and considered reliable (N=50, α =.917). The reliability of the category 'use of data for planning' was acceptable (N=7, α =.789). The reliability of the category 'access to data, tools, and tools for professional development' was also reliable (N=14, α =.944); as were the categories 'ability to use data and tools' (N=12 and α =.944) and 'attitude toward data and planning'

(N= 10, α =.929). After performing this Cronbach's Alpha the data were found to be positively correlated and reliable.

Table 4.

Cronbach's Alpha Test for Reliability

Items/Constructs	Items (N)	Alpha α
Total Items	50	.917
Use of data for Planning	7	.789
Access to data, tools, and PD	14	.944
Ability to use data and tools	12	.944
Attitude or value of data and planning	10	.929

Perceived Use of Data

The first survey question asked participants to address the degree to which schools were perceived to use student data for district planning. The specific question was: How often do you feel the teachers and administrators in school(s) you work with use the following assessment and accountability data in district planning for school improvement?

Seven items related to perceived usage of accountability data were then explored. These seven types of data included: common formative benchmark assessments (teacher designed), common formative benchmark assessments (externally designed), state accountability data, common summative assessments (teacher designed), common summative assessments (externally designed by a party other than New York State), perceptual data (of students, staff, parents, or among the general community), and portfolio-based assessments (online or traditional).

Table 5 shows the results of these questions. It is notable that state accountability data is the category one perceived to be significantly used for district planning in the

observation of respondents with a mean score of 3.07 on a Likert five point scale. For this reason, the three barriers to student data use (access, ability, and attitude) were only compared and correlated to Use of State Accountability data. It is also worth noting that all of the other data sources, except 'state accountability data' and the 'common summative assessment data,' were rarely perceived to be used in district or local planning.

Table 5.

Perceived Use of Data for Planning

	Mean	Std. Dev.
Common Formative Benchmark Assessments (teacher designed)	1.81	1.094
Common Formative Benchmark Assessments (externally designed)	1.67	1.149
State Accountability Data	3.07	.921
Common Summative Assessments (teacher designed)	2.07	1.247
Common Summative Assessments (externally designed other than state)	1.45	1.055
Perceptual Data (Student, Staff, Parent, or Community)	1.88	1.060
Portfolio (online or traditional)	1.04	1.084

Perceived Technology-Based Assessment

Table 6 explored the perceived use of computer hardware, software, peripherals, and other devices in administering, collecting, interpreting and disaggregating student data for planning. An attempt was made to measure whether technology impacted the use, access, ability, and attitude of teachers and administrators toward data. Since such a small number of participants reported using a technology-based assessment or usage of technology tools, this researcher was not able to measure the interaction of technology with

the other variables. Most respondents reported seldom or never witnessing technology-based assessments or use of other technology tools, with scores in this area ranged from .75 to 2.11 on a five point Likert scale.

Table 6.

Use of Technology Based Assessment and Data Analysis Perceived

	Mean	Std. Dev.
Common Formative Benchmark Assessments (teacher designed)	1.04	1.128
Common Formative Benchmark Assessments (externally designed)	1.47	1.342
State Accountability Data	2.11	1.434
Common Summative Assessments (teacher designed)	1.15	1.175
Common Summative Assessments (externally designed other than state)	1.33	1.279
Perceptual Data (Student, Staff, Parent, or Community)	1.33	1.271
Portfolio (online or traditional)	.75	1.045

Perceived Access to Data, Tools, or Professional Development Tools

Research Question 1: What impact does teacher or administrator access to assessment and accountability data, assessment tools, as well as professional development, planning and data tools have on their overall usage for comprehensive planning?

The relevant survey question asked participants the manner in which access to data inhibits its use in planning. Access of ‘Teachers’ and ‘Administrators’ access were examined at independently. The specific question asked was: “What access do you feel the

teachers and administrators you work with have to the following assessment and accountability data for district planning"?

The responses to seven items related to the perceived access to accountability data were analyzed. These items included: a) access to common formative benchmark assessments, b) access to state accountability data, c) access to common summative assessments, d) access to planning tools (hardware, software, or others), e) access to data tools (hardware, software or other), f) their access to professional development on planning, and f) access to overall access to professional development towards effectively using data.

As the perceived use of state accountability data rated highest, it is logical that both teachers and administrators indicate that state accountability data are the most accessed. (Table 7).

Table 7.

Teacher and Administrator Perceived Access to Data, Tools and Professional Development

	Teacher Mean	Teacher Std. Dev.	Administrator Mean	Administrator Std. Dev.
Access to Common Formative Benchmark Assessments	1.95	1.124	2.16	1.194
Access to State Accountability Data	2.51	1.018	3.22	.885
Access to Common Summative Assessments	1.95	1.106	2.16	1.194
Access to Planning Tools (Hardware, Software, or Other)	1.89	1.228	2.22	1.260
Access to Data Tools (Hardware, Software or Other)	1.96	1.171	2.47	1.187
Access to Professional Development on Planning	2.04	1.283	2.51	1.212
Access to Professional Development on Using Data	2.20	1.149	2.73	1.095

A two-tailed Pearson's correlation of the perceived use of state accountability data and teacher access to data, tools, and professional development indicated that all areas of access were both significantly and positively correlated with perceived use of data for planning (Table 8). To better understand the significance of this correlation, a Stepwise multiple regression independently for teachers and administrators was performed.

Table 8.

Correlations Between Perceived Use of State Accountability Data and Access

	Teacher	Administrator
Access to Common Formative Benchmark Assessments	.344**	.293**
Access to State Accountability Data	.391**	.438**
Access to Common Summative Assessments	.408**	.400**
Access to Planning Tools (Hardware, Software, or Other)	.475**	.426**
Access to Data Tools (Hardware, Software or Other)	.530**	.491**
Access to Professional Development on Planning	.462**	.487**
Access to Professional Development on Using Data	.589**	.514**

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

A stepwise multiple regression for teacher and administrators' perceived access to these data tools was completed against perceived use of state accountability data. The regression model shows an adjusted R Square of .386 (38.6%). Several areas were positively correlated with the category 'access to professional development on using data,' significant at the .000 level. The category 'access to data tools (hardware, software or other)' was significant at .004 (Table 9). The other access areas were eliminated during the stepwise multiple regression.

Table 9.

Stepwise Multiple Regression of Perceived Teacher Access to Data and Use of Data

	B	Std. Error	Beta	t	Sig.
Access to Professional Development on Using Data	.340	.077	.424	4.416	.000
Access to Data Tools (Hardware, Software or Other)	.220	.076	.280	2.919	.004

a. Dependent Variable: State Accountability Data - District Planning

A stepwise multiple regression focused on administrators' perceived access to data tools or professional development against perceived use of state accountability data was analyzed. The regression model shows an adjusted R Square of .295 (29.5%). Several areas were positively correlated with the category 'access to professional development on data,' significant at .007. The category 'access to data tools (hardware, software or other)' was significant at .039 (Table 10). The other areas of access were eliminated during this stepwise multiple regression. 'Access to professional development' and 'access to tools' were identified in both.

Table 10.

Stepwise Multiple Regression of Perceived Administrator Access

Coefficients	B	Std. Error	Beta	T	Sig.
Access to Professional Development on Data	. 280	. 101	. 333	2.769	.007
Access to Data Tools (Hardware, Software or Other)	. 196	. 093	. 252	2.092	.039

a. Dependent Variable: State Accountability Data - District Planning

Perceived Ability to Use Data, Tools, or Planning

Research Question 2: What impact does the ability of teachers or administrators to interpret or utilize the available assessment and accountability data, produce assessments, and use data tools have on their usage for comprehensive planning?

The relevant survey question asked participants about educators' perceived ability to understand and use data, data tools or planning tools. Ability of 'teachers' and 'administrators' were looked at independently. The specific question asked was: "Do you feel the teachers and administrators you work with have the ability to understand and use assessment and accountability data effectively in district planning for school improvement".

The participants' responses were analyzed into the six items related to accountability data. The items were: 1) educators' ability to understand and use formative benchmark assessments, 2) educators' ability to understand and use state accountability data, 3) their ability to understand and use summative assessments, 4) their ability to understand and use planning tools (hardware, software, or other), 5) their ability to understand and use data tools (hardware, software or other), and 6) their overall ability to plan effectively.

Descriptive analysis revealed the abilities of teachers to utilize data for planning was perceived to be slightly lower than the ability held by administrators. Both groups' ability to 'understand and use planning tools' and 'ability to understand and use data tools' were found to be low with a mean score between 1.59 and 2.05 (Table 11).

Table 11.

Teacher and Administrator Perceived Ability to Understand and Use Data

	Teacher Mean	Teacher Std. Dev.	Administrator Mean	Administrator Std. Dev.
Ability to Understand and Use Formative Benchmark Assessments	1.67	.809	2.08	.893
Ability to Understand and Use State Accountability Data	1.97	.912	2.48	.895
Ability to Understand and Use Summative Assessments	1.96	.851	2.23	.866
Ability to Understand and Use Planning Tools	1.59	.834	1.94	.895
Ability to Understand and Use Data Tools	1.64	.827	2.05	.890
Ability to Plan Effectively	1.94	.873	2.28	.809

A two-tailed Pearson correlation on the overall perceived use of state accountability data and the teacher's perceived ability to understand and use data, tools, and planning was performed. The correlation indicated that all areas of ability were significantly correlated with both teacher and administrator use of data for planning (Table 12). To better understand the significance of this correlation, a Stepwise Multiple Regression was performed independently for both teachers and administrators.

Table 12.

Correlations Between Perceived Use of State Accountability Data and Ability

	Teacher	Administrator
Ability to Understand and Use Formative Benchmark Assessments	.320**	.327**
Ability to Understand and Use State Accountability Data	.562**	.472**
Ability to Understand and Use Summative Assessments	.416**	.361**
Ability to Understand and Use Planning Tools	.420**	.397**
Ability to Understand and Use Data Tools	.444**	.367**
Ability to Plan Effectively	.408**	.487**

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

A stepwise multiple regression on the 'teachers ability to understand and use data, tools, and planning' against perceived use of state accountability data was performed. The regression model shows an adjusted R Square of .316 (31.6%). Several areas arose that were positively correlated with the category 'ability to understand and use state accountability data, significant at .000 (Table 13). This may relate to significance of professional development found in the access question. Other areas of ability were eliminated during the stepwise multiple regression.

Table 13.

Stepwise Multiple Regression of Teacher Perceived Ability

Coefficients	B	Std. Error	Beta	T	Sig.
Ability to Understand and Use State Accountability Data	.568	.083	.562	6.835	.000

a. Dependent Variable: State Accountability Data - District Planning

A stepwise multiple regression for participating administrators' perceived ability to understand and use data, tools, and planning against use of state accountability data was performed. The regression model shows an adjusted R Square of .276 (27.6%). Several areas proved to be positively correlated with the category 'ability to plan effectively,' significant at .008, and the category 'ability to understand and use state accountability data,' significant at .022 (Table 14). This may also relate to the significance of professional development found in the access question. Other areas of ability were eliminated during the stepwise multiple regression.

Table 14.

Stepwise Multiple Regression of Administrator Perceived Ability

Coefficients	B	Std. Error	Beta	t	Sig.
Ability to Plan Effectively	.353	.130	.310	2.721	.008
Ability to Understand and Use State Accountability Data	.273	.117	.265	2.326	.022

a. Dependent Variable: State Accountability Data - District Planning

Perceived Attitudes toward Data and Planning

Research Question 3: What impact does teacher or administrator attitude toward assessment and accountability data have on their usage for comprehensive planning?

The relevant survey question posed to participants regarded perceived teacher and administrator attitudes toward student data and district planning in general. Attitude of 'teachers' and 'administrators' were looked at independently. The following specific question was asked: What do you feel is the teacher and administrator you work with attitude toward the use of assessment and accountability data for district planning and school improvement?

Participants' responses to five items related to attitude were analyzed. The items were: a) value of formative benchmark assessments, b) value of state accountability data, c) value of summative assessments, d) value of data, and e) value of planning. In all the areas assessed the perceived attitudes toward data and planning was higher than access and ability. Both groups' mean score and values were above 2 on a scale of 0-4. (Table15)

Table 15.

Perceived Value of Data and Planning Among Teachers and Administrators

	Teacher Mean	Teacher Std. Dev.	Administrator Mean	Administrator Std. Dev.
Value of Formative Benchmark Assessments	2.13	.977	2.63	.960
Value of State Accountability Data	2.04	.917	2.56	.893
Value of Summative Assessments	2.16	.916	2.44	.904
Value of Data	2.22	.989	2.94	.938
Value of Planning	2.32	1.002	2.88	.973

A two-tailed Pearson correlation of perceived use of state accountability data and teacher valuing of data and planning was conducted. The correlation indicated that all areas of ability were significantly correlated with teacher and administrator data use for district planning (Table 16).

Table 16.

Correlation Between Perceived Value of State Accountability Data and Its Use

	Teacher	Administrator
Value of Formative Benchmark Assessments	.383**	.395**
Value of State Accountability Data	.507**	.573**
Value of Summative Assessments	.301**	.435**
Value of Data	.467**	.572**
Value of Planning	.444**	.512**
Value of Formative Benchmark Assessments	.395**	.395**

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

To better understand the significance of this correlation, an independent Stepwise Multiple Regression was performed for teachers and administrators. A Stepwise Multiple Regression of teachers' perceived attitude or value of data and planning against perceived use of state accountability data was conducted. A positive correlation with an R Square of .296 (29.6%) was indicated. Although a positive Pearson correlation was found, there were no areas that arose as positively correlated (Table 17).

Table 17.

Stepwise Multiple Regression of Teacher Perceived Attitude or Value

Coefficients	B	Std. Error	Beta	t	Sig.
All variable excluded (no significant correlations					

a. Dependent Variable: State Accountability Data - District Planning

A stepwise multiple regression for administrators' perceived value of data and planning against their perceived use of state accountability data was performed. There was a positive correlation with an R Square of .412 (41.2%). Several areas also arose as positively correlated with 'value of state data' significant at .000 and 'value of data' significant at .000 (Table 18).

Table 18.

Stepwise Multiple Regression of Administrator Perceived Attitude or Value

Coefficients	B	Std. Error	Beta	t	Sig.
Value of State Accountability Data	.372	.098	.361	3.800	.000
Value of Data	.353	.093	.359	3.787	.000

a. Dependent Variable: State Accountability Data - District Planning

The research identified several key areas that require further exploration in greater detail. These items include the perceived lack of alternatives to state accountability data, lack of technology for use in district planning, need for professional development, need for data and planning tools, and need for alternatives to state assessment data as a means of accountability. These areas are explored in greater detail in chapter 5.

In summary it is important to note that the only assessment and accountability data perceived to be used for comprehensive planning was 'state accountability data'. Respondents' also noted rarely witnessing technology based assessment or use of technology tools. Each of the independent variables (access, ability, and attitude) noted in Table 19 were significantly correlated to the perceived use of state accountability data for planning.

Table 19.

Barriers to Utilizing State Accountability Data

Access	Ability	Attitude or Value
Access to State Accountability Data Access to Planning Tools (Hardware, Software, or Other) Access to Data Tools (Hardware, Software or Other) Access to Professional Development on Planning Access to Professional Development on Using Data	Ability to Understand and Use State Accountability Data Ability to Understand and Use Planning Tools (Hardware, Software, or Other) Ability to Understand and Use Data Tools (Hardware, Software or Other) Ability to Plan Effectively	Value of State Accountability Data Value of Data Value of Planning

The perceptual data collected yielded six more specific findings in the Stepwise Multiple Regression that can be used to predict the use of state accountability data for comprehensive planning. These include: 1) access to professional development on using data, 2) access to data tools (hardware, software or other), 3) ability to plan effectively, 4) ability to understand and use state accountability data, 5) attitude or value of state accountability data, and 6) attitude or value of data in general. Table 20 shows the significance of each of these areas as calculated by the Stepwise Multiple Regression independently for teachers and administrators.

Summary of Stepwise Multiple Regression Findings

Table 20.

Combined Significant Findings in Each Area of Access, Ability, and Attitude

	Teacher	Administrator
Access to Professional Development on Using Data	.000*	.007*
Access to Data Tools (Hardware, Software or Other)	.004*	.039*
Ability to Plan Effectively		.008*
Ability to Understand and Use State Accountability Data	.000*	.022*
Attitude or Value of State Accountability Data		.000*
Attitude or Value of Data in General		.000*

*Significant to which these areas are positively correlated to the perceived use of sate accountability data.

CHAPTER V

Findings and Recommendations

Background

The intent of this study was to determine whether teacher and administrator access, ability and attitude toward various formative/summative assessments, assessment data, planning tools, and data tools influence their use of various forms of data for planning. A survey of members of the DATAG was administered over a three-month period. The perception of these DATAG members toward teacher and administrator access, ability, and attitude toward data usage was measured.

Conclusions and Findings

Conclusion and Finding 1

The first research question asked: What impact does teacher or administrator access to assessment and accountability data, assessment tools, as well as professional development, planning and data tools have on their overall usage for comprehensive planning?

Conclusion 1: This research found that access impacts the use of data for planning in two of the areas studied. Teacher and administrator 'access to professional development' and 'access to data tools' impact their use of data for planning.

Finding 1: The stepwise regression revealed more specific and statistically significant findings. In the area of teacher and administrator access to a) assessment and accountability data, b) assessment tools, c) planning tools and data tools, two significant findings were made:

- Access to professional development
- Access to data tools (hardware, software or other)

This shows a need for training in data utilization and planning, as well as increased access to tools that would assist teachers and administrators in utilizing and disaggregating data. Access to state accountability data was eliminated as a coefficient in the stepwise regression. This elimination may be due to the availability of these data through New York State data repositories (NYSTART) and New York State School Report Cards, as well also due to the high stakes nature of these data as these relate to NCLB.

Conclusion and Finding 2

The second research question asked: What impact does the ability of teachers or administrators to interpret or utilize the available assessment and accountability data, produce assessments, and use data tools have on their usage for comprehensive planning?

Conclusion 2: Ability impacts the use of data for planning in two of areas studied. Teacher and administrator 'ability to plan effectively' and 'ability to understand and use state accountability data' impact their use of data for planning.

Finding 2: The stepwise regression had more specific and statistically significant findings in the area of ability. The following areas were significant in predicting teacher and administrator use of data for planning:

- Their ability to understand and use state accountability data
- Their ability to plan effectively

Teachers' and administrators' 'ability to understand and use state accountability data' is related to the finding that 'access to professional development' also arose as a significant finding and is highly needed. Their ability to understand and use both planning

and data tools (hardware, software or other) was eliminated as a coefficient in the stepwise regression. Individuals expressing not having access to these tools may have played a role in this finding. Those without access to something may not know if they are able to use that to which they do not have access. As access increases, ability to use may decrease, unless professional development is provided.

Conclusion and Finding 3

The third research question asked: What impact does teacher or administrator attitude toward assessment and accountability data have on their usage for comprehensive planning?

Conclusion 3: Attitude impacts the use of data for planning in two of the areas studied. Teacher and administrator 'value of state accountability data' and 'value of data' in general impact their use of data for planning.

Finding 3: The stepwise regression had more specific and statistically significant findings with regard to attitudes held by teachers and administrators. The following areas were significant for both teachers and administrators:

- Value or attitude held toward state data
- Value or attitude held toward data in general

Values or attitudes held toward school or district planning was not significantly correlated to data use for planning. This infers that the value placed on planning is not inhibiting use but rather the value placed on the data itself is inhibiting its use. From this finding, one can argue that there is a significant negative attitude toward data in the schools and this attitude is inhibiting its use. This attitude is most likely due to the positively emphasis placed on the

data and other quantitative evaluation. The NCLB School Identification System is an example of high stakes attitude toward data.

Additional Findings and Conclusions

Finding 4: Of the seven areas studied, only state accountability data had a mean score greater than two on the five point Likert scale.

Conclusion 4: The descriptive data show that participants did not feel that their teachers and administrators highly utilized any of the seven types of assessment data. Although much of the research in the literature review identified the importance of multiple measures of data (Bernhardt, 1999, 2000, 2004, 2006; Halverson, 2005), the only area that scored higher than a mean score of two on a Likert scale range of five was the category 'State Accountability Data'. With the passage of the NCLB, there has been an increased emphasis on 'state accountability data.' Other data appear to be less significant and were consequently used less for planning purposes. Data that are difficult to quantify, such as 'perceptual data' and 'portfolio data,' was rarely used for planning by those surveyed. The survey shows no evidence that districts used multiple measures and intersection of data for planning.

Finding 5: All of the areas studied under access, ability and attitude positively correlated with the use of data for planning.

Conclusion 5: It is important to note that the Stepwise multiple regressions yielded more specific findings, but all areas of access, ability, and attitude (Table 20) show a positive correlation to the use of 'state accountability data' for planning. It may be important to consider all of these areas when implementing any planning initiative that is related to teacher and administrator use of data for comprehensive planning.

Finding 6: The mean score regarding the use of technology for administering assessments and disaggregating assessment data was below 2.11 in all seven areas studied.

Conclusion 6: Participants in the survey indicated a limited use of technology for district planning. The response rate in this area was so low that it needed to be excluded from analysis because too few respondents expressed that technology was used to collect or disaggregate assessment data. If supported with professional development, technology can be a powerful tool for schools, beneficial to those participating in both the planning and data collection/exploration processes.

Recommendations

Based on the findings and conclusions, three general recommendations are offered.

Recommendation 1

An increase in professional development for both teachers and administrators in the areas of interpreting data, using data tools, planning with data, and using planning tools is suggested.

Professional development is needed for both teachers and administrators in the area of interpreting data, using data tools, planning with data, and using planning tools. Guskey (1994) explained that "never before in the history of education has there been a greater recognition of the importance of professional development. Every modern proposal to reform, restructure, or transform schools emphasizes professional development as a primary vehicle in efforts to bring about needed change" (Guskey, 1994 p. 2). Since 2001 the accountability pressures of NCLB and other initiatives in the schools have further intensified the need for effective professional development (Killion, 2008).

There are many forms of professional development, such as coaching, mentoring, literature studies, reflective evaluation, workshops, online classes, simulations, and workgroups. Workshops are the most common among these, but of what has been learned about professional development continues to indicate that the most effective professional development is a collaborative or team process (Reeves, 2008; Wellman 2004; Love 2009; DeFour, 2002; Glazer & Hannafin, 2006).

Many experts in the area of data training have embraced the team or collaborative approach to professional development. This approach goes by many names, such as "data teams" (Reeves, 2008), "data dialogue" (Wellman, 2004; Love, 2009), "professional learning communities" (DarFour, DarFour, Eaker, & Many, 2006; Eaker, DuFour, & DuFour, 2002), and "collaborative apprenticeships" (Glazer & Hannafin, 2006). Regardless of the name, collaborative approaches to exploring and training in data usage continue to be found as most effective.

It will take more than a simple change in professional development before educators can effectively integrate student data into their planning process. This kind of change will require a systemic approach to data integration that should include: a) resources (data, tools, and support materials), b) technical capacity (data and technology infrastructure and technical support), c) systemic structure (policies, time allotted for planning and professional development and organizational support), and d) a professional development plan which offers a varied professional development approach and structured learning communities (or teams).

Use of student data for planning and professional development must become a part of the fabric of schools. As Tienken and Stonaker say, "every day is a professional

development day" and "learning occurs daily, not just on one day in October and February" (Tienkenadle & Stonaker, 2007 p. 24).

Measuring professional development is hardly easy work but it is essential if educational professionals hope to improve their schools. Data use and planning must be both an independent activity and an integral component to all professional development. In addition, educational leaders must be advocates for professional development opportunities (Killion, 2008).

Recommendation 2

An increase in access to appropriate tools for data analysis and district planning.

Schools should analyze all four areas of data that are currently collected: demographic data, student learning data, perception data, and school process data (Bernhardt, 1999, 2000, 2004, 2006), as well as social data, which is an emerging form of data being amassed by schools. The methods through which organizations collect data and plan new initiatives are rapidly changing. Schools should explore these alternatives and, when appropriate, adopt new tools for data analysis. These tools could be obtained by:

a. Adapting appropriate models from the business world, particularly business planning and data analysis tools and protocols.
b. Designing tools specifically for school district planning and K-12 data mining.

Businesses have developed sophisticated tools that allow them to analyze data and derive actionable plans from that information. It is necessary for schools to explore the tools that businesses have created and evaluate those that fit (or be adapted to) the K-12 school district paradigm.

The Internet has brought with it an ocean of data. One way in which businesses are utilizing these data is called collaborative filtering. Collaborative filtering is the presenting of information based on patterns within multiple data points. This technique stems from the growing amount of research and support for the philosophy of "the wisdom of crowds." This refers to the idea that a group's collective work can be far more powerful than the work performed by any individual in the group (Surowiecki, 2004). Used as a business model, this is often call crowd sourcing. This technique can be used in many ways including in product development, customer service, sales, financing, management and planning (Libert & Spector, 2008).

Ayer (2007) describes the "struggle of intuition, personal experiences, and philosophical inclination waging war against the brutal force of numbers" (p. 166). Schools now have access to data more than they ever have before. Schlanger, Farooq, Fusco, Schank, & Dwyer (2009) found that "cyber-enabled social networks offer the ability to capture and analyze a more complete and objective record of peoples' actions and interactions automatically over time" (p. 90). Penuel, Sussex, and Korbak found that this social network analysis "has great potential as a method for studying teacher community and the implementation of reform" (2005, p. 31).

As educational administrators explore new ways of collecting and analyzing data in schools it may require the creation of new and unique software that will assist school districts in data collection and disaggregation. This is a virtually untapped market where only a few companies are working. In this field, proportional to the business world, the educational community is far behind. Of course, any new software should meet the Schools Interoperability Framework (SIF). SIF is a data base design standard specifically for K-12

software programs. This includes, but is not limited to, student information systems, instructional software, learning management software, and library automation software. This ability to connect databases makes it easier for schools to disaggregate multiple data points.

Today's top companies are fast realizing that they must blend their internal and external experts to best capitalize on available knowledge and talent (Tapscott & Williams, 2006). By opening planning initiatives to "crowd sourcing" (Ayres, 2007; Baker, 2008; Libert & Spector, 2008), all stakeholders can provide feedback in an open and continuous environment. In an ideal scenario, this feedback could be far more valuable and comprehensive than the work of any internal group, no matter their level of expertise.

The Internet has decentralized everything from customer services to communication, technical services, financial services, planning and problem solving. Decentralization is the distribution of power, information, and responsibilities within an industry or organization in a way that allows many individuals to contribute to larger projects and be a part of the greater good. Ultimately, any organization faced with a strong decentralized competitor will have no choice but to decentralize themselves (Brafman & Bechsrom, 2006). As education embraces this business model it will dramatically change the way schools plan and function. Organizations must realize that "they can hold a great deal more in an open hand than they can in a closed fist" (Tapscott & Williams, 2006, p.142). This process starts with and is monitored through constant collection and analysis of data and is a paradigm shift for most organizations. If internal and external stakeholders work together, with a purpose, and make decisions as a group the whole system will be stronger (Mader, 2008).

This recommendation will require the thoughtful restructuring of any organization and if done poorly will likely have a negative impact on the organization as a whole. If done thoughtfully, this kind of reform will lead to a dramatic rebirth of the institution. This is not to suggest that an in-depth statistical analysis is required of every variable in a given school system, although some decisions and plans may warrant this kind of attention. Rather than relying on perception or intuition, school leaders must pay full attention to the data to which they have access before they can claim to have made an informed decision.

Recommendation 3

Educational leaders must redefine school accountability at the state and federal level and explore other models of accountability that do not rely solely on an externally created summative assessment.

The research showed that the attitudes held by teacher and administrators toward state accountability data and data in general is poor and this negative attitude impacted the overall use of that data for planning. These negative attitudes toward data are likely due to the negative impact teachers and administrators feel that data have on the system that they serve.

The public nature of the data increases the importance of that data. This new exposure often results in teachers and administrators feeling poorly about their work, their schools, and accountability systems in general. Reeves calls this “guilt by association” and indicates that, more significant than a poor attitude, this silent judgment often causes qualified teachers and administrators to leave failing schools (2002). Schools require systems of accountability and it falls to state and federal departments of education to explore a new system that takes into consideration multiple measures and utilizes a more

comprehensive system of accountability, one that analyzes the underlying causes of results. Reeves calls this concept "holistic accountability" (2002). State and federal accountability systems must do more than implement reforms based on snapshots.

Most states have created or are creating data warehouses, facilities that act as repositories of state assessment and school demographic data. The types of data collected and the ways in which these data are used must be explored using the business philosophies mentioned earlier. Revamping this system to look at multiple instructional data points in determining the school and student rankings is imperative. In addition, this strategy would limit the impact of any one data element and may improve teacher and administrative attitudes toward these data. Many states are exploring other options that take into consideration other factors in determining a given school's accountability status. These alternative systems fall into two general categories; increasing data points or a longitudinal approach.

Recommendations for Future Research

The area of data and planning is in need of additional research. Much of the current research revolves around the utilization of data to improve instruction. In this field, the current literature mostly focuses on teacher's use of formative and summative assessment data for instructional planning. Future research in this area must address: protocols for using data for planning, comparisons of differing planning methods, implications of social data for planning, electronic planning tools, value of data warehousing (state and local), visualization tools and data comprehension, and professional development and data utilization

The success of any school will be greatly enhanced by their ability access to the required data, expand the definition of data, identify protocols that will assist in the use of that data, and provide required professional development. There is much to do, and this field is in drastic need of additional research and studies.

As technology becomes quicker, cheaper, and better designed, the area of data-driven decision making will remain a meaningful area of education that will shape the look and feel of the schools of tomorrow. Schools must embrace the analysis of accountability and assessment data, as this is the most efficient method of ensuring effective reform. However, data can only shape the planning process if schools have teachers and administrators that have access to necessary data and appropriate tools, and have been properly trained in the use of these tools and have the skills and attitude necessary to productively analyze these data.

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APPENDIX

Appendix A- Face-to-Face Script

Hello-

As a member of the New York State Data Analysis Technical Assistance Group (DATAG) you are being asked to participate in a research project on the utilization of accountability and assessment data for district curricular planning.

http://tinyurl.com/aamsurvey

The purpose of this study is to explore the relationship between various assessment and accountability data and their use in district planning. This survey will provide valuable information for data specialists and district planners. Results of the survey will be compiled and reported back to DATAG via DATAG ListServ and/or at the DATAG Summer 2009 Conference.

The survey will be completed anonymously. No names or identifying information will be collected or associated with the collected data.

Thank you for your time and consideration.

Andrew Taylor

Appendix B- E-Mail Request

Hello-

As a member of the New York State Data Analysis Technical Assistance Group (DATAG) you are being asked to participate in a research project on the utilization of accountability and assessment data for district planning.

http://tinyurl.com/aamsurvey

The purpose of this study is to explore the relationships between various forms of assessment and accountability data and their use in district planning. This survey will provide valuable information for data specialist and district planners. Results of the survey will be compiled and reported back to DATAG via DATAG ListServ and/or at the DATAG Summer 2009 Conference.

The survey will be completed anonymously. No names or identifying information will be collected or associated with the collected data.

Thank you for your time and consideration.

Andrew Taylor

Appendix C- Instrument

Study of data use in school planning

1. Accountability and Assessment Data Survey

This research is being conducted by:
James Butterworth and Andrew Taylor

The purpose of this study is to explore the relationship between various forms of assessment and accountability data and their use in district planning. Barriers such as: access to, ability to and attitude toward data, assessment tools, planning tools and data tools. At this stage in the research, the use of assessment and accountability data for systemic planning will be defined by the perception of district leaders' surveyed.

This study will survey members of New York State Data Analysis Technical Assistance Group (DATAG). Participants will be asked to complete a short 10 minute survey. This survey will provide valuable information for data specialist and district planners. Results of the survey will be compiled and reported back to DATAG via DATAG ListServ and/or DATAG Summer 2009 Conference.

The survey will be completed anonymously. No names or identifying information will be collected or associated with the data collected.

*** 1. What BOCES is your district in:**
Note: If you are in the big 5 please select "Big 5 School"

*** 2. What best matches your job description?**

- Superintendent
- Assistant Superintendent for Curriculum and Instruction
- Supervisor for Data
- Other

Other (please specify)

Study of data use in school planning

2. Accountability and Assessment Data Survey

*** 1. How often do you feel the school(s) you work with uses the following assessment and accountability data in district planning for school improvement?**

On a scale of 0-4 rate
0- Never use
1- Seldom use
2- Sometimes Use
3- Often use
4- Always use

	District Planning	Is this a Technology Based Assessment (Online, palm, scan tron, mobile, etc.)
Common Formative Benchmark Assessments (teacher designed)		
Common Formative Benchmark Assessments (externally designed)		
State Accountability Data		
Common Summative Assessments (teacher designed)		
Common Summative Assessments (externally designed other than state)		
Perceptual Data (Student, Staff, Parent, or Community)		
Portfolio (online or traditional)		

*** 2. What access do you feel the teachers and administrators you work with have to the following assessment and accountability data for district planning?**

On a scale of 0-4 rate
0- No access
1- Limited access
2- Average access
3- Good access
4- Excellent access

	Teachers	Administrators
Access to Common Formative Benchmark Assessments		
Access to State Accountability Data		
Access to Common Summative Assessments		
Access to Planning Tools (Hardware, Software, or Other)		
Access to Data Tools (Hardware, Software or Other)		
Access to Professional Development on Planning		
Access to Professional Development on Using Data		

Study of data use in school planning

*** 3. Do you feel the teachers and administrators you work with have the ability to understand and use assessment and accountability data effectively in district planning for school improvement?**

On a scale of 0-4 rate
0- No ability
1- Limited ability
2- Average ability
3- Good ability
4- Excellent ability

	Teachers	Administrators
Ability to Understand and Use Formative Benchmark Assessments		
Ability to Understand and Use State Accountability Data		
Ability to Understand and Use Summative Assessments		
Ability to Understand and Use Planning Tools (Hardware, Software, or Other)		
Ability to Understand and Use Data Tools (Hardware, Software or Other)		
Ability to Plan Effectively		

*** 4. What do you feel is the teachers and administrators you work with attitude toward planning, assessment and accountability data in district planning for school improvement?**

On a scale of 0-4 rate
0- No value
1- Limited value
2- Average value
3- Good value
4- Excellent value

	Teachers	Administrators
Value of Formative Benchmark Assessments		
Value of State Accountability Data		
Value of Summative Assessments		
Value of Data		
Value of Planning		