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An Evaluation of How Fourth- and Fifth-Grade Teachers Use Data in Monroe Township

by

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TEACHER DATA USE IN MONROE TOWNSHIP

Abstract

An Evaluation of How Fourth- and Fifth- Grade Teachers Use Data in Monroe Township

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There are factors that impact a teacher's use of student data for instructional decisions. Using a modified version of a framework of factors that impact teacher data use (Kerr, Marsh, Ikemoto, Darilek, & Barney, 2006), this study explored how accessibility of and timeliness to data, support and training in analysis and interpretation, alignment to initiatives, and perception of validity impact teacher data use by fourth- and fifth-grade teachers.

The purpose of this study was to conduct a program evaluation to determine the needs of the teachers so that the district can improve its supports to better meet teachers' data use needs. Study participants included 27 teachers who participated in focus-group interviews representing two upper-elementary schools.

The findings established various needs within each of the four factors that shape teacher data use that could benefit from additional support at the school or district level. For teachers to use assessment data for instructional planning, they need access to relevant data quickly and easily. They need to be supported through ongoing professional development on accessing these data and prioritizing and filtering data. Also important is the prioritization of aligning current and future district initiatives to focus on or embed within them teacher data use, as well as a review of each assessment's purpose, content, and timing to address issues of perceived validity.

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The implications call for the district to leverage its current supports in place based on teachers' needs. This includes coordinating the district's professional development framework at a district and building level to support their data use. This would be accomplished using a yearlong overarching approach complemented by a targeted approach at the building level. A district-wide review of current and future initiatives and common assessments is needed that involves all stakeholders, with a focus on data use. This study shows the importance of coordinating resources and aligning priorities to manage the factors that impact teacher data use.

Acknowledgments

I am thankful to everyone who has supported me throughout this process. Thank you to all of my Rutgers professors. You challenged me to look at issues from new perspectives and reinforced the fact that there is always work to be done in education. Everything I see and read I view from a different lens thanks to all of you.

To the teachers in Monroe Township: Thank you for your time, your welcoming approach to participation in this study, and your candid responses within the discussions. This feedback helped me personally complete my dissertation, and I am confident will influence supporting your student data use needs in the future.

Dr. Fancera, a special thanks to you and your contributions during this process. Your perspective as an upper-elementary principal and collegiate professor have been immeasurably helpful.

To my family: Thank you for supporting me, motivating me, and inspiring me to pursue this work. Sam and Steven, I hope watching me go through this process inspires you to be lifelong learners. Kim, without your never-ending patience and encouragement I would not have made it to where I am today. Thank you for all the things you sacrificed while I completed this important work.

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Dedication

To Kim, Sam, and Steven—

Remember, the sky is the limit and never give up on your dreams.

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Chapter 1: Introduction

Widening interest in a variety of student assessments, accountability policies, and improved technology has increased the amount of student data available to educators. Educators can effectively use data-driven instruction to monitor a student's understanding of content as a basis for making adjustments to instruction. They can use these data to learn more about students and to support communication within and across grade levels. Educators can use these data to improve their teaching, improve ineffective programs, and expand the function of the school relative to student achievement (Farrell & Marsh, 2016a; Feldman & Tung, 2001; Young, 2006).

These data, if used ineffectively, have been shown to negatively impact educators. Using data may conflict with everyday work and may be excessively time-consuming. These data may measure something that the educator believes is not important (Farrell & Marsh, 2016a; Ingram, Louis, & Schroeder, 2004; Valli & Buese, 2007; Wayman, Cho, & Johnston, 2007; Wayman, Cho & Shaw, 2009).

Educators are in favor of gaining additional information about their students. Resistance to this additional information stems from teachers feeling their judgment is ignored or that when using these data is difficult. Educators can make decisions regarding adjusting their instructional practice by using traditional data, such as including tests and quizzes (Wayman, Rangel, Jimerson & Cho, 2010). The challenge is merging these new data streams with their current practices.

Problem of Practice

Monroe Township School District was the setting for this study because it was where the researcher worked. It was an appropriate place to study because Monroe Township's focus on teacher data use fit into the factors impacting teacher data use in many schools, as documented in the research literature. Monroe Township has been encouraging teacher data use in the hope of encouraging classroom teachers to use data to make instructional decisions. These decisions can promote lesson development focusing on differentiated learning. This focus on data has been ongoing for several years and could benefit from an assessment. Over the last few years, data use has become expected in lesson development, but access to data and training on its use has not been available. Therefore, this study is a formative program evaluation designed to provide feedback to Monroe Township on how it can support teacher data use.

The Core Beliefs section of the district's Mission, Vision, and Core Beliefs states Monroe Township's focus on data use. In 2009-2010 stakeholders from throughout the Monroe Township school community participated in a process to develop the mission, Vision, and Core Beliefs of the school district. The core beliefs remain the same in 2018, and Core Belief #5 (stated below) focuses on collecting, analyzing, and reflecting on data.

Core belief #5

We are committed to a process for continuous improvement based on collecting, analyzing, and reflecting on data to guide our decisions.

(<https://www.monroe.k12.nj.us>)

With this Core Belief statement adopted by the district, many teachers have attempted to use data for instructional purposes. In doing so, the directive for teachers to use data and the overwhelming quantity of data created a conflict. This feeling developed into frustration and eventually resentment toward using data. A gap formed between the desired teacher data use and actual teacher data use.

Evaluation Purpose

A utilization-focused developmental program evaluation was used to assist in defining Monroe Township's needs for supporting teacher data use. The questions that guided this evaluation focused on the factors that this has had on teachers' data use. These include accessibility and timeliness of data, perceived validity of data, support/training in analyzing data, and alignment with other initiatives (Kerr, Marsh, Ikemoto, Darilek & Barney, 2006).

In Monroe Township, the intended users of this evaluation are the district stakeholders, including teachers and administrators. Utilization-focused evaluations are conducted for the intended users (Patton, 2008). In developing the evaluation, the intended users were included to increase the likelihood that they would use the finding of this study. Throughout the evaluation process, users were kept aware of preliminary findings and were included in decisions made.

Questions Guiding This Evaluation

Central Question

What is the current state of teacher data use in grade four and five and how does this relate to the data use statement in the Core Beliefs?

Research Questions

1. How has the accessibility/timeliness of data and the perceived validity of data affected teacher data use?
2. How has support/training of analyzing data and alignment with other initiatives affected teacher data use?

Chapter 2: Literature Review

Research on factors that impact teachers' use of data will be reviewed to help provide a framework for the methods and analysis. Data-driven instruction is an approach taken by many districts to address growing achievement gaps and to meet the requirements of growing accountability standards (Marsh, 2012; Orland, 2015; Wayman & Stringfield, 2006a). The idea of utilizing formative assessments to identify gaps in individual students' learning, adjust instructional strategies, and therefore increase student achievement is reasonable in its assumptions. However, in actuality, there is a gap embedded in this approach. The gap is in the institutional implementation and ongoing support of the data management process: Specifically, accessibility, and timeliness of data; perceptions of the validity of the data; training and support of analysis and interpretation of data; and alignment of the data process with other initiatives (Kerr, Marsh, Ikemoto, Darilek, & Barney, 2006). Formalized building leadership (principals, assistant principals, supervisors, and directors) influences supporting and encouraging these factors (Marsh & Farrell, 2015; Sutherland, 2004).

Accessibility and Timeliness of Data

Accessibility and timeliness of data are essential for teachers in Monroe Township if they are to use these data for instructional purposes. Data should be current and readily available for lesson design, student intervention development, and curricular pacing and development. Specifically, teachers need to be able to access current data where and when they need it throughout the ordinary course of their workday (Schildkamp & Poortman, 2015; Gerzon, 2015).

When teachers use assessment data to inform and drive lesson planning, those data need to be current and accessible. Teachers should be able to input new data and analyze and extract data or reports quickly and efficiently. In some cases, multiple teachers need access to the same students' progress data. Data use in schools is often an inefficient process. Technology tools that facilitate analysis and report the required data can lead to the timely identification of at-risk students and support interventions to meet their needs, thereby resulting in improved performance (Chen, Heritage, & Lee, 2005).

A data warehouse can facilitate access to timely data. Technology is essential in facilitating data access to the data warehouse. Effective data use is not possible without the appropriate technology (Wayman, Stringfield, & Yakimowski, 2004). A districtwide, technology-based data management system gives teachers the ability to get reports or raw data as needed. A teacher who can independently access data will be able to input or export data as a part of their everyday working routines. Something frequently ignored in the development of a data management system is the teacher's input (Wayman & Cho, 2008). For teachers acting as a primary user of the system, input regarding accessibility options, user interface design, and a training plan is essential. Widespread access to the data warehouse increases the timeliness of district and classroom assessment data. Access to these data is crucial for multiple teachers using the same student progress data when planning and preparing for another class. Similarly, district and building leadership utilizing the data management system can quickly and accurately distribute data to teachers. A critical step in effective data use is organizing data from multiple sources into one database accessible through one access point or user login (Lachat & Smith, 2005).

Data sets available within the data warehouse vary in their timeliness. State test scores gathered during the previous school year should be reported months later.

Classroom formative assessment scores should be reviewed almost immediately.

Although each data set serves a different purpose, using the correct data for its intended purpose is a factor to consider in the perception of data use.

Perception of the Validity of Data

Teachers in Monroe Township are expected to have a data-focused classroom; for this reason, the perception of the validity of data is a factor to review. For Monroe Township to maintain this expectation, the teacher's perception that these data are valid is essential for their use in influencing classroom instruction, for the development of interventions, and for curricular pacing and development.

Perceptions of data validity are based on teachers' judgment regarding the quality, accuracy, and reliability of state-, district-, or classroom-level assessments. As teachers use data, they consider the types of data that they are using and what they are going to do with that data. Teachers are less likely to use data to influence their classroom instruction, develop interventions, and for curricular pacing and development if they feel that the type of data and its intended use do not align with how they intend to use these data. Teachers who begin to use data for instructional purposes and those who are currently embedded in using data feel the impact of that misalignment. State assessments are perceived as not providing student- or classroom-level analysis. District assessments can be perceived as unreliable as they often change from year to year. Classroom-level assessments are perceived as having validity issues being created, given, and scored by the teacher. Teachers are less likely to trust results from assessments developed by external groups

compared to their own assessment (Farrell & Marsh, 2016a). Conversely, state assessment data are perceived as providing a baseline for generalizations about districts, schools, and grade levels. At the classroom and student level, district benchmark assessment and classroom-level assessment data are perceived as current and can be analyzed (Farrell & Marsh, 2016b). When looking at data and comparing teachers' beliefs in the data and taking ownership of it, a study by Huffman and Kalnin (2003) identified that teachers who collected their data took ownership of the issues that were identified from the data. The fact that the teachers collected the data even though it was sometimes perceived as time-consuming helped them to realize that they could influence outcomes.

Training and Support of Analysis and Interpretation of Data

Monroe Township's training and support of teachers is a strength of the district. It is known for creating a teacher-driven and differentiated professional development program. Given the teacher-centric approach of professional development in Monroe Township, the review of the literature will focus on the importance of specific training in analyzing and interpreting data.

Training and support of data analysis and interpretation in the context of this study means building capacity within the teachers to identify, analyze, interpret, and develop interventions based on the data with which they interact. Teachers are more likely to use data if they are prepared to use it. Through ongoing training and differentiated professional development specific to the data management program and processes of analyzing, interpretation and implementation of the intervention increases the teacher's capacity and the likelihood of utilizing data. Learning is situational in

nature. Ongoing professional development engages teachers in analyzing, interpreting, and discussing their actual data while increasing their technical skills. An absence of professional development focusing on data use has impeded teachers' effort in using data (Datnow & Hubbard, 2015). An organizational commitment is required from leadership to support the teachers providing time to analyze, interpret, and discuss data with their colleagues (Gerzon, 2015; Datnow, Park, & Wohlstetter, 2007; Park & Datnow, 2009; Wayman, 2005). Developing regularly scheduled data sessions for teachers to interact with and discuss data increases teacher capacity (Park & Datnow, 2009; Sutherland, 2004; Young, 2006).

Collaboration between teachers is an essential aspect of supporting teacher data use. Using substantial time to regularly review data and develop plans based on these data are foundational in connecting teacher data use to student achievement (Burbank & Kauchak; 2003, Wayman, 2005; Wohlstetter, Datnow, & Park, 2008). The development of collaborative data teams is a way to increase teacher involvement and collaboration (Wayman, Midgley, & Stringfield, 2006). The collaborative data teams consist of administrators and teachers who analyze data to improve educational practice within the school. Within these teams, collaboration assists teachers in learning from each other about how to use data and allows for an exchange of strategies and ideas (Bocala & Boudett, 2015; Marsh, Bertrand, & Huguet, 2015; Marsh & Farrell, 2015; Wayman, 2005; Wohlstetter et al., 2008). Other benefits of teachers collaborating focus on reducing the isolation within the profession and enhancing individual teacher's professional growth (Huffman & Kalin, 2003).

Alignment of the Data Process with Other Initiatives

Within a constantly evolving educational environment, Monroe Township is regularly revising and rewriting curricular documents, evolving technologically and adapting to new statewide assessments. Within this environment, Monroe Township continues to bring new initiatives forward. As initiatives come and go the use of data to inform instruction has been steady.

Alignment of data use with other initiatives, meaning datum used for instruction, complements the current or planned school and district focus, goals, programs, instructional philosophies, and curriculum. Establishing a clear vision for data use is essential for consistent and effective data use (Hamilton et al., 2009). Teachers get pulled in many directions, and data-driven instruction could be one of those directions if it is not aligned with other priorities. Teachers feel pulled in different directions and are given strict timelines and benchmarks to administer, while, on the other hand, they are asked to be flexible in their instruction and revisit/reteach topics based on data. Professional development, meeting agendas, time, alignment of instructional philosophies, and program alignment facilitates data use and supports lesson planning and design (Kerr et al., 2006).

The alignment of initiatives, including a data initiative, begins with school leaders and key stakeholders developing a shared vision, goals, and norms for data use (Datnow, Park, & Wohlstetter, 2007; Earl & Katz, 2006; Feldman & Tung, 2001; Kerr et al., 2006; Marsh, Farrell, & Bertrand, 2016). There is often an overarching fear that data are used to assign blame when reviewed and analyzed. This fear impacts teacher buy-in for using data to inform instruction, and other teachers may be resistant to change. Each factor is

contributing to a reason to find perceived issues with the validity of data sources (Feldman & Tung, 2001). Developing a climate with a focus on data used as a tool for continuous inquiry, learning, and improvement provides a safe environment for teachers. Within the safe environment, teachers can discuss data openly without fear of repercussion (Datnow et al., 2007; Earl & Katz, 2006; Feldman & Tung, 2001, Kerr et al., 2006). Using the vision as a guide, the development of the specific school, teacher, and student goals then becomes the culture of the school (Sutherland, 2004).

Conceptual Framework

Creating an environment in which teachers use data to inform their instruction begins with the needs of the teachers in relation to the conceptual framework. This framework utilized four factors that impact teacher data use: accessibility to and timeliness of data, training and support in analysis and interpretation, alignment with initiatives, and perception of validity from Kerr et al.'s (2006) study. This is conceptualized in Figure 1., the Concept Map of this study, and will be used to guide the methodology.

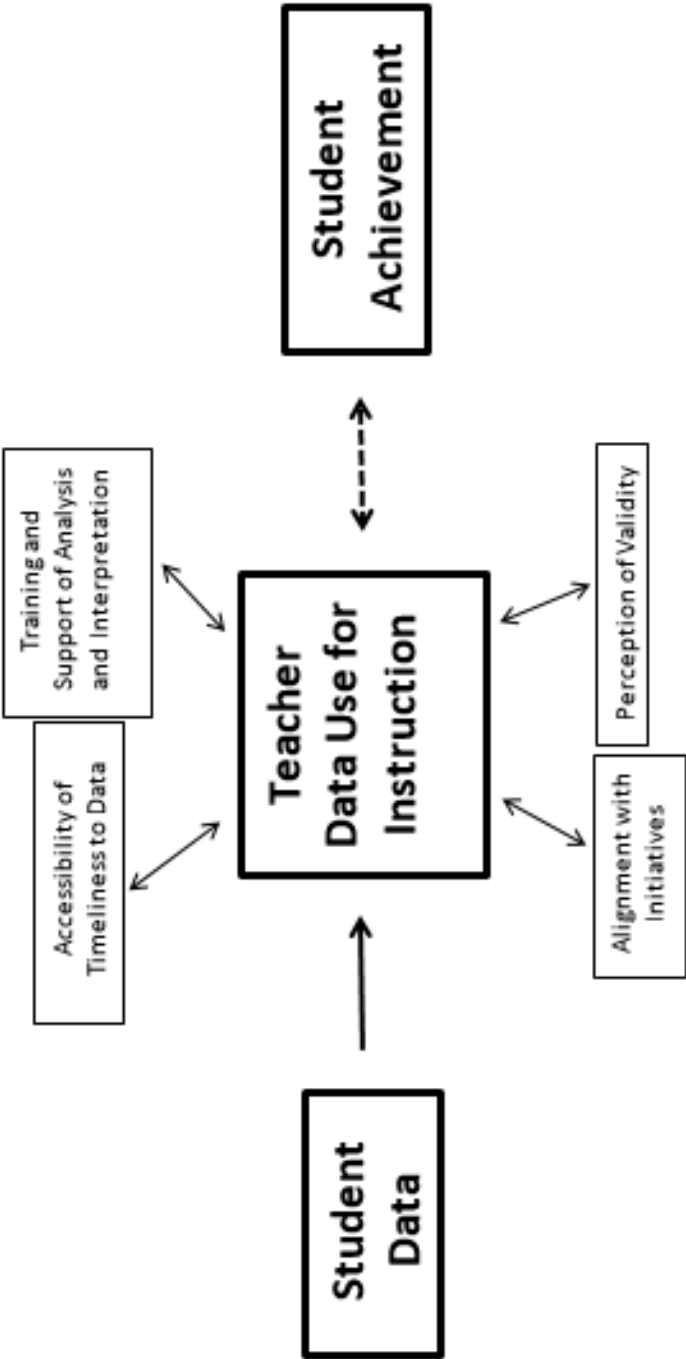


Figure 1. Factors Influencing Teacher Data Use

Chapter 3: Methodology

Evaluation Design

To answer the research questions, I utilized an exploratory case study program evaluation (Creswell, 2009). The evaluation was a formative assessment since it was meant to inform Monroe Township on how to support teacher data use (Patton, 2008). A qualitative design was suited for this evaluation because its methods helped to collect data that provided an in-depth, detailed description of teacher data use. The research questions were qualitative in nature. Teachers from grades four and five participated in focus-group interviews. These were analyzed to identify detailed information to support teacher data use. Detailed in Table 1 is the alignment among the research questions, the data sources, and the analysis.

Table 1

Research Questions, Data Sources, and Data Analysis

Research Question	Data Source	Data Analysis
1. How has accessibility/timeliness of data and perceived validity of data affected teacher data use?	1. Teacher focus groups 2. Teacher artifacts 3. School artifacts 4. District artifacts	1. Teacher focus groups: Interpretation, Member Check, Code for Accessibility, & Timeliness and Perceived Validity. 2. Teacher, School, and District artifacts: Used to validate teacher focus groups.
2. How has support/training of analyzing data and alignment with other initiatives affected teacher data use?	1. Teacher focus groups 2. Teacher artifacts 3. School artifacts 4. District artifacts	1. Teacher focus groups: Interpretation, Member Check, Support & Training of Data Analysis, and Alignment with Initiatives. 2. Teacher, School, and District artifacts: Used to validate teacher focus groups.

The primary users of this evaluation were the principals of the two elementary schools, which were studied because they have the greatest influence over training and support resources in the schools. Secondary users of this evaluation were the superintendent, assistant superintendent, curriculum supervisors, and teachers. From the start of this evaluation, I was in contact with the principals of the two elementary schools. They reviewed the protocols and were given the opportunity to include ideas. Feedback was also given to the assistant superintendent. In Table 2 is the data collection and analysis timeline.

Table 2

Data Collection and Analysis Timeline

Activity	Time Period
Teacher Focus Groups	February/March 2015
Teacher, Building, District Artifact Collection	February/May 2015
Analyzed Focus-Group Data	March 2015 to August 2018
Analyzed Teacher, Building, District Artifact Data	May 2015 to August 2018
Interpretation and Analysis of all Data	May 2015 to August 2018

Setting

Monroe Township School District is a K-12 suburban school district with 6,293 students in Middlesex County, New Jersey (New Jersey Department of Education 2014-15 Enrollment Data). Monroe Township has one high school (grades 9-12), one middle school (grades 6-8), and six elementary schools. The elementary school configuration consists of two elementary school's grades (K-3), two elementary schools (grades 4-5), one elementary school (grades K-2,) and one elementary school (grades 3-5). The elementary schools are organized in a "sister" school format in which a lower elementary school feeds an upper elementary school. Monroe Township is classified "FG" in the District Factor Group (DFG) classification system. New Jersey classifies school districts using a DFG in an attempt to group school districts with similar demographics using factors like income level, education level, and unemployment rates of the town's population. Monroe Township's "FG" DFG rating represents a slightly above-average income and education level relative to other districts. Its student population is primarily White (59%), and Asian (29%), with smaller Hispanic (6%) and African American (4%)

populations. The free and reduced lunch population is 7.8%, and less than 1% of students are Limited English Proficient (New Jersey Department of Education 2014-2015 Enrollment Data).

Research Participants

All grade four and five general and special education teachers in two of the three upper elementary schools were asked to participate in the teacher focus groups. The researcher is a principal in the third upper elementary school, excluding it from the study. Grades four and five are the overlapping grades in the remaining two elementary schools; thus, they create the group of participants. In the 2014-2015 school year, there were 35 total fourth- and fifth-grade teachers in the two participating elementary schools.

It was important to include all teachers in the evaluation process, specifically, those who do not like data, or those who are intimidated by it. These teachers would benefit from the data support but could be missed during the evaluation process. Efforts were made to include them in the evaluation process. Confidentiality was addressed to make sure those teachers' needs were not exposed.

Data Collection Procedures

Focus-group interviews were used to collect data about the four factors that impact teacher data use: (a) Accessibility of and Timeliness to Data, (b) Perception of Validity, (c) Training and Support of Analysis and Interpretation, and (d) Alignment with Initiatives. There was a total of 35 fourth- and fifth-grade general education and special education teachers from the two schools studied. I was invited to faculty meetings in each of the schools to introduce the fourth- and fifth-grade teachers to the evaluation and to recruit subjects for the focus groups. Out of 35 possible participants, 27 fourth- and fifth-

grade teachers from both schools participated in focus groups. In Table 3 is the participant demographic summary.

Table 3

Participant Demographics Summary

(n = 27)	Frequency	Percent
2014-15 Teaching Position		
General Education	20	74
Special Education	7	26
Experience		
Greater than 5 Years	19	70
Less than 5 Years	8	30
Gender		
Female	25	93
Male	2	7

All participants were made aware that their participation in the study posed no risk to them professionally. Participant identities have been kept confidential.

Pseudonyms were used in place of actual names for interview transcriptions. Each participant was assigned a name not currently used by any other teacher at either school involved in the study at the time of data collection.

Focus Groups

The following section provides information about the participants and content for the focus groups. Focus groups are a small-group form of interviewing (Patton, 1990). Within a focus group, information can be gathered from more participants, in a short period of time (Morgan, 1996; Patton, 1990). Conducting focus-group interviews allowed the interviewer to obtain the perspective of multiple teachers throughout multiple grades instead of one or two teachers individually. Within a focus group, participants can view their comments in the context of others in the group (Patton, 1990). Focus-group

interviews took place in February and March of 2015. Focus groups took place during monthly scheduled grade-level meeting times before school to ensure access to all teachers. All focus groups lasted approximately 60 minutes and were audio recorded using the iRecorder application on both an iPad and iPhone. The audio recordings were transcribed to ensure the accuracy of the collected data (Patton, 1990). Interview transcriptions were offered to the respective participants for member-checking. This review allowed participants the opportunity to correct errors, address any mistakes that took place in the transcription process, and make sure that the transcripts were an accurate reflection of their experiences with data use in Monroe Township (Creswell, 2009).

Following the guidelines from Patton (1990) and Creswell (2009), qualitative interviews were used for data collection and analysis. Assumptions of qualitative interviewing start with recognizing that the perspective of others are meaningful and able to be made explicit (Patton, 1990). Through the focus groups, I captured perceptions relating to teacher data use. The focus groups were semi-structured interviews. With this semi-structured format, I was able to explore areas that emerged during the interview. In each focus group, all bulleted questions were asked of all participants. Follow-up questions were prepared to deepen and further explore participant accounts. The follow-up questions were asked in the flow of the discussion or if there was time (see Appendix A). I was in contact with principals for each building in the study throughout the evaluation. Feedback regarding the findings was shared with both principals and the assistant superintendent. The building principals were supportive in allocating time in the

form of grade-level meetings before school during which the teachers participated in the focus groups.

Teachers were sampled from both of the participating upper elementary schools. All teachers who volunteered participated in a focus group. Fourth- and fifth-grade general education teachers and special education teachers were represented in each focus group. Each group was asked a range of questions about the four factors that impact teacher data use.

Document Collection

The following section provides information about the documents accessed for this study. Documents collected are useful in corroborating and augmenting evidence from other sources (Yin, 2008). According to Merriam (1998), “data found in documents can be used in the same manner as data from interviews and observations, are an objective source of data, good sources for qualitative case studies, grounding an investigation in the context of the problem” (p. 126). Documents can also provide additional insight into activities that the researcher could not directly observe (Stake, 1995). Documents such as the New Jersey School Report Card was utilized for context and demographic data. A review of each school’s website can be utilized to determine the vision and mission of each school. The district professional development catalog was analyzed to identify training opportunities for staff. Additionally, grade-level meeting agendas and monthly faculty meeting agendas were reviewed to identify the focus/support on data-driven instruction during faculty meetings. The participants and I discussed how documents could help answer the research questions and illustrate their data use. I asked teachers to volunteer data-tracking sheets that they developed or sample assessments that they have

created. Document collection took place during the focus-group interview process, in addition, to drop-off location within each of the two schools. This location was open and checked weekly during the data collection process.

Data Analysis

This exploratory case study program evaluation collected data that were qualitative in nature. The research questions were analyzed both deductively and inductively (Creswell & Plano-Clark, 2007). There were three layers of analysis. The first layer used a deductive approach, looking at the focus-group data to identify specific examples of the factors that impact teacher data use within the fourth and fifth grades. It helped to clarify the problem of practice in terms of a gap between the district's core belief and actual teacher data use.

The second layer of analysis was an inductive analysis of the focus-group interviews. I looked for general patterns in the responses and relationships between responses and utilized them to develop a theme. The theme that emerged from this analysis is that teachers are frustrated with data.

The third layer of analysis helped to validate the teacher focus-group perspective. This analysis focused on synthesizing data from the focus groups with the artifacts collected from teachers, schools, and the district. The documents gave a perspective on data use in practice and on the support mechanisms already in place relating to teacher data use. Through the synthesis, perspectives from the focus groups were verified. For example, a teacher stated that there was hardly any training on how to use data that was verified through the district professional development catalog.

Validity

Validation was ongoing throughout the study to ensure accuracy. In qualitative research, validity is about the accuracy of the findings (Creswell, 2009). The qualitative focus-group data was validated by the document analysis. Multiple grade-level groups participated in the study, and data from each group were brought together and used to triangulate the findings. Patterns of similarities and differences between groups were highlighted as a focus on internal validity

Member checking assisted me in the data analysis process. Face-to-face meetings and participant review of the transcripts were used to aid in improving the accuracy of the data collected. Six participants met face-to-face and reviewed the transcripts from their focus group. During these meetings, they were able to make sure that my findings were an accurate reflection of their use of data for instruction.

Limitations

The most significant limitation of this study is the absence of one entire school's fourth- and fifth-grade teachers. As a researcher who works in context, the school I work at was excluded from the study. Since this study is a formative assessment, the most relevant findings can be used by district and building leadership to explore and develop targeted supports for teacher data use. Again, as a researcher who works in context, I may have insights or biases that impact my analysis. To address these potential limitations, I used multiple data sources and made efforts to engage all teachers, from ones who use data for instruction to ones who do not.

Chapter 4: Findings

Analysis Framework

The analysis framework used has been modified from Kerr et al., (2006). The framework is used to explain four factors that impact teachers' use of data, accessibility of and timeliness to data, training in and support of analysis and interpretation, alignment with initiatives, and perception of validity. Accessibility and timeliness of data involve the teacher's ability to retrieve and input data in nearly real time. Training and support of analysis and interpretation focus on the teacher's access to training opportunities provided through district professional development on how to filter data, prioritize data, and use student data to plan instruction. Alignment with initiatives involves district- and building-wide initiatives that are or are not focused on teacher data use. Is the data use initiative embedded within other initiatives or is it a standalone outlier that is perceived as just something else to do? The final factor is the perception of validity, which includes what teachers perceive as valid assessments and their impacts on how or if they use that data source. The four factors will first be discussed individually, and then I will explain how they interact with each other. The theme of teacher frustration emerged during the analysis and will be integrated into the findings. When possible, relevant information from the focus groups will be included throughout each section.

Accessibility to and Timeliness of Data

Throughout the focus-group interviews, accessibility to and timeliness of data were the most discussed framework elements. For example, in Table 4 (Code Co-Occurrence of Factors that Influence Teacher Data Use), accessibility of and timeliness to data were coded 71 times throughout the focus-group interviews. Teachers reported that

access to timely data more than any of the other factors— alignment with initiatives, perception of validity, and training and support—is that for which they have the greatest need for support.

During the focus-group interviews, there were numerous examples of teachers describing how they keep paper grade books to track assessment data in place of the web-based student management system, Genesis. For some teachers, this was done out of the convenience of having a paper grade book sitting next to them while they hand-grade assignments; for others, it was done out of frustration with the cumbersome nature of the Genesis platform.

In the following example, Derek, a fifth-grade general education teacher, discusses an experience inputting the required benchmark data into Genesis after being asked if having student assessment data in an easily accessible centralized location would be helpful for lesson planning. Genesis is Monroe Township's student management system.

(1) Derek: Not every teacher also puts their Genesis scores in. They keep a grade book, and they put their scores in when they need them. When inputting the scores, you can't see the child's name when you scroll over to put in the number. Teachers within this focus group all nodded their heads in agreement with the above statement. Several went on to explain how even finding the location within Genesis to input the scores was difficult. There are several drop-down menus with different years identified, so that if the proper year is not selected scores can be input into the wrong year. As Derek stated above, the teachers usually only put scores in Genesis when they need them to be there.

The Genesis student management system used in Monroe Township is a web-based platform utilized to manage student information. Its original purpose was to store and manage parental contact information, student schedules, student discipline, and student attendance. The challenges teachers have come across were evident in their responses during the focus-group interviews. The challenges center on the districts' attempts to transform Genesis into a place to store formative and summative data. In the next passage, Emily, a fourth-grade general education teacher, and Thomas, a fifth-grade general education teacher, discuss creating their spreadsheets as a workaround for the challenges that they have experienced generating spreadsheets from the data in Genesis.

- (1) Emily: I create my own spreadsheet for the benchmarks, just to look at it [is] easier than in Genesis because it's very difficult to use the Genesis spreadsheet because it's so long.
- (2) Thomas: And you can't line up the student name with the scores.
- (3) Emily: Yeah, it just keeps going. That's true.
- (4) Thomas: You can reduce the size and still it doesn't line up.
- (5) Emily: You can't see it.

As Emily and Thomas continued their discussion, other teachers joined them in discussing the formats and types of spreadsheets that they have created. They handed out a blank copy of the spreadsheet that they currently use (Appendix C) to keep track of their students' data. Microsoft Excel spreadsheets and charts embedded in a Microsoft Word document were two specific examples shown to the group by two teachers who brought printed examples with them to the interview.

From the beginning, the district's attempt at transforming Genesis to use for formative and summative data storage was challenged. Data entry was cumbersome. Teachers explained that finding the location to input the data was difficult and manually entered data were lost as they scrolled from student to student. The potential for data loss required them to save after every individual assessment score was entered, resulting in an incredibly time-consuming and inefficient process.

Emily, Derek, and Thomas's comments reflect the frustration expressed by teachers during the focus-group interview. The teachers were so frustrated with data collection and management that they developed alternatives, including their own digital and print spreadsheets. Despite their frustrations and the inefficiencies involved, many complied with the data collection process.

As the teachers discussed the various ways that they input and tracked student benchmarks and summative assessment data, other types of student assessments began to emerge in the discussion. Teachers began to discuss formative assessments that they give and how they track and use these data. The discussion on formative assessment data had a different tone and energy. The teachers as they discussed how they manage the formative data were more comfortable and confident regarding access to and timeliness of data.

In this next passage is an example Nora and Emily, both fifth-grade general education teachers, shared the formative assessments that they utilize, how they manage these data, and what they do with them instructionally.

(1) Nora: I use pretesting in math and spelling. That's the easiest way to know if they already know what I'm about to teach, and then that way I can pull out the kids who already know the majority of the lessons that I'm about to teach.

(2) Emily: I do an entrance test (Do Now), so I see how much they've retained from the night before. I can see if there is a little bit I need to review about the topic and it's something that I can grade quickly and fairly, like, on the spot. That way I can see if I can actually move on or if they just remembered it for that short amount of time, or if they can carry it over.

In this example, Nora and Emily focused on pre-assessing students. Nora discussed pre-assessing for a unit of instruction, specifically, math and spelling. Emily was describing the daily Do Now that is conducted as a quick check before the lesson begins. Both Nora and Emily expressed that they used the assessments for guiding their instructional grouping. As the discussion progressed, the teachers in the focus group shared how implementing a teacher-made formative assessment was helpful because they could pull out the assessment at any time to see which areas needed to be focused on with each student. Many teachers throughout the focus groups stated that the summative data found in Genesis, specifically the NJASK data, is just a number. They stated that the number doesn't mean anything without the details of where to focus.

The teachers discussed the accessibility and timeliness of data with respect to multi-teacher classrooms, coordination with basic-skills teachers, talented and gifted teachers, and the child study team. One general education teacher, Nora shared how she and her co-teacher share information by keeping everything in a file cabinet that they both can access. Emma is a fifth-grade special education teacher who described how she and her co-teacher save files on the desktop of their computers.

(1) Nora: And if it's something important that I want to refer back to, we keep it in a file cabinet for each student you know, each kid has their number, and you file it.

(2) Emma: Well, for us, we share all the information. So, like, for the Development Reading Assessment, we actually save all of the kids to our desktop, so it's easily accessible to us.

The teachers within the focus group explained that when interacting with basic skills teachers, talented and gifted teachers, or the child study team, they are directly involved in pulling the required information from their organizational system. The teachers expressed an interest in key staff members having access to the student data they have, as it would be less intrusive to their routines if, specifically, the basic skills and child study team could pull their data. The teachers discussed how limited and valuable their time is and how frustrating it is to take time away to search for data as they plan and instruct four to five different content areas a day as opposed to middle school and high school teachers who prep for fewer classes.

As cumbersome as the teachers described the input and extraction of information within the Genesis student management system to be, one strength is its accessibility. The Genesis system is web-based, and all staff members already have their appropriate level of access. Each staff member access level allows them to see the students for whom they need data; in the case of the child study team and other support staff, they have access to all students. This access was described by the teachers as helpful in their data sharing workflow only if the data are entered into Genesis. This brings the teachers back to the fact that input and extraction of data from Genesis is frustratingly inefficient. Table 3

shows a list of the assessments for which the teachers in this study gave regarding these data. It is by no means comprehensive, as formative assessment data created by individual teachers is not included. The number of assessments, as well as the frequency and time given to these assessments, provides context for the teachers' comments within this study.

Table 4

Available Data Streams

Data Source	Description	State Mandate	Frequency	Data Accessibility
NJASK	State of NJ assessment given to all students in grades 3-8 in Language Arts and Mathematics. Students in fourth and eighth grade also take Science.	Yes	Yearly (spring)	Fall (following the exam)
CoGAT	A cognitive aptitude test given to all students in Grade 2 in Monroe Township. It is scale-scored based on age. Students not in the district in Grade 2 take it if they are screened for the Talented and Gifted Program at any grade level.	No	2nd Grade (spring)	Summer (following the exam)
District Pre/Post Writing Samples	Monroe Township developed writing prompts given at the beginning and end of each marking period, coordinated with writing skills.	No	Quarterly	2 weeks after administration
Response To Intervention	State-mandated intervention model individualized by each school district. School-based teams coordinate tiers of interventions for students tracking progress and progressing toward special education services. The district determines interventions based on student population and available resources.	Yes	Ongoing data collection	Dependent on assessment (immediate to weekly)
District Math Benchmark	District-developed math assessments given quarterly based on topics taught.	No	Quarterly	2 weeks
District LAL Benchmark	District-developed LAL assessment given quarterly based on topics taught.	No	Quarterly	2 weeks
District Math Pre/Post Assessment	District-developed Math assessment given to students in the beginning and at the end of the school year. The pre- and posttest are the same assessment.	No	Pre- September Post-June	2 weeks
District LAL Pre/Post-Assessment	District-developed LAL assessment given to students in the beginning and at the end of the school year. The pre and posttest are the same assessment.	No	Pre- September Post-June	2 weeks
DRA or DRA2	Developmental Reading Assessment given to students 2-3 times a year. Administered one student at a time to measure reading levels.	No	Fall Winter Spring	Immediately

The next example is of a teacher stressing the efficiency aspect of managing student data. Grace, a fifth-grade general education teacher, expresses specific concerns about the district benchmark assessments that are required to be administered, scored, and input into Genesis.

(1) Grace: We simply do not have the time to sit and grade and then analyze and then make a plan and input how those assessments ... no matter what they are, other than the ones we create, other than the exit passes and the entrance passes that I can do on the cuff.

Grace continued to discuss specific concerns and frustrations regarding the district benchmark assessments. Her concerns and frustrations about the district benchmark are an example of how accessibility to and timeliness of data impact her ability to use data to adjust her instruction.

Training and Support of Analysis and Interpretation

When conducting the focus-group interviews, the teachers often spoke about wanting more professional development in the analysis and interpretation of their students' data. Teachers discussed both the need for learning how to filter the data to a manageable level as well as what to do with the data once they were analyzed. In this example from the focus-group interviews, Derek describes his diverse math class after a mid-unit assessment and the frustration of identifying where to go with some of the students.

(1) Derek: I have two math sections this year, and I see the data ... I'm trying to figure out what to do with these kids when I have to reteach. I have 38 math students, and I have four who can move forward, and I have 34 who can't.

(2) Derek: There's only so much enrichment work that I can come up with before I'm beating myself up about it.

Derek continued to describe his frustrations with connecting the formative data to the available math resources within the district. Derek acknowledged the available resources in the district and discussed not knowing how to prioritize which resource to utilize in which situation.

As the teachers discussed using student data for driving their instruction within the focus-group interviews, they also shared examples that demonstrated a need for training on the assessments themselves. The following example is from Derek, who discusses misunderstanding the data and assessment.

(1) Derek: So while I get instant data, I can get charts, I can get tons of information based on the input, it's still very limited because it's multiple-choice and true/false.

(2) Derek: Open-ended and constructed responses give me more information about my students.

Derek interprets these data based on the premise that multiple-choice and true/false tests provide limited information. The assessment the teacher gives is an adaptive assessment that is intended to identify topics that a student is ready to learn. As Derek described his frustrations, other teachers in the focus group acknowledged their interest in specific training focusing on some of the assessments they give. An example of an assessment that was discussed in the focus groups by the teachers of how they received training that supports the assessment and its implementation is the Developmental Reading Assessment (DRA or DRA2). In the example below, Emma, a fifth-grade teacher, and

Barbara, a fourth-grade teacher, discuss how they utilize the DRA reading levels to guide their grouping within their classrooms.

(1) Emma: For us, we use the DRA to guide everything we do.

(2) Barbara: Same, we use the DRA scores to guide how we're going to level groups in science and in social studies and reading and so forth.

Both Emma and Barbara went on to describe how they level nonfiction reading passages in science and social studies. Emma and Barbara specifically spoke in some cases of challenging students so that they learn to read, while other times in science and social studies they need to read to learn. The teachers in Monroe Township received multiple targeted training sessions at both a district level and building level on logging into and using the DRA application on the iPad, administration of the assessment, and utilizing the reports generated on each student to connect to their instructional strategies in the classroom. In the district professional development catalog, this assessment and its implementation were supported during the first year. Initial professional development training was required for teachers to attend. Follow-up training was voluntary and focused on areas identified by the teachers, specifically, continuing to apply the results to classroom instructional modifications. The follow-up training also included collaboration time between teachers to build upon their toolbox of instructional modifications based on their assessment data.

Through the discussions in the focus groups, a teacher brought up their interest in collaborating with others about their students' data. Some teachers discussed how it would be a less intimidating venue to get help on understanding what to do with the data. In the following example, teachers discuss collaborating with their peers.

(1) Adam: You mentioned collaboration. Can you expand on your experience collaborating on data with your colleagues?

(2) Dawn: Never.

(3) Jackie: No.

(4) Jane: I don't have time for that.

(5) Katie: We don't have the time for collaboration or for that, and I think that would be a very essential piece that we don't have right now.

(6) Christine: I don't have time, but that doesn't mean I don't want to collaborate.

There is just so much on our plates.

The teachers expressed widespread interest in collaborating about student data as a supplement to district- or building-based professional development. They also discussed the amount of work on their plates and how prioritizing data as a professional development choice is not what they have been focusing on. There is a frustration focused on the number of initiatives within the district, specifically with the revision of major curricular areas. The teachers mentioned that their focus professionally has been on a revised English Language Arts curriculum, a transition to a new Math curriculum, and familiarizing themselves as the Next Generation Science Standards are phased in.

Alignment with Initiatives

Monroe Township's core beliefs were developed to guide the district and establish a focus and priorities as a foundation for staff within the district. Core belief #5 focuses on data-driving decisions.

Core belief #5

We are committed to a process for continuous improvement based on

collecting, analyzing, and reflecting on data to guide our decisions.

(<https://www.monroe.k12.nj.us>)

Knowing this is a core belief of the district, the teachers discussed during the focus-group interviews the prioritizing of their professional development to focus on curricular changes. Choosing other professional development in place of choosing data-related professional development displays the teacher's belief that using data is a separate initiative from being embedded in the curricular revision initiatives.

The district professional development course catalog was reviewed as a part of the document analysis. Within the catalog of 24 yearlong courses, there is one yearlong student data-related course with a targeted audience of K-12 teachers. In Monroe Township, teachers have the option for their yearlong professional development to either register for a class from the district professional development catalog, or develop a personalized project with a group of colleagues and work on the project under the guidance of an administrator. Further document analysis revealed that no personalized projects focused on analyzing and interpreting student data to guide instruction in grades four or five. Faculty meeting agendas were also reviewed, and it was noted that student data was an agenda item on 5 of 10 meetings at one school and 7 of 10 at the second school. Teachers were talking about student data at a building level, yet the focus as a priority for use in their daily planning and becoming embedded in their routine was not mentioned in the focus groups.

Teachers within the focus group did discuss their use of data as a part of the early stages of a Response to Intervention initiative. Amelia discussed using data as a part of

the Intervention and Referral Services (I&RS) meeting as a precursor to referring a student to the child study team for testing.

(1) Amelia: If I were going to I&RS with a child, I'd have someone to share my information with, but for the most part, as gen ed teachers, especially in fourth grade, we don't even share among subjects. We don't have much sharing to do...

(2) Amelia: Back to I&RS though, I see how data is needed for them so they can prove a student needs help. We have this new I&RS process and that is why we need the data.

Amelia went on to discuss how the focus was on teaching the curriculum and only engaged in the data part of the students' performance when it comes to grades or if the I&RS team and the child study team need something.

The teacher's discussions within the focus groups had a common thread in that collecting and using student data was a separate initiative from anything else going on in the district. Embedded in the following example are some instances in which teachers conveyed that separation.

(1) Leah: We might try to focus here and there, but we're already moving onto the new unit because that's ... and we finally got an assessment that nobody is looking at.

(2) Olivia: Quite frankly, a waste of time.

(3) Natalie: ...and you raise your hand if you look at those portfolios from last year.

(4) Sophia: It's just like assessment data, all that data being gathered, to say, "Oh, we do that."

(5) Thomas: "We did it." Mm-hmm (affirmative).

The teachers in this example explained that although they are compliant in giving the assessments, they believe that collecting the data is just something that is being done so that it can be reported that it is being done. Throughout the focus groups, there was frustration toward data collection, specifically, the perception that no one is looking at it and certainly not using it to adjust their instruction. As the teachers continued to talk they began to discuss the validity of some assessments they are required to give.

Perception of Validity

During the focus-group interviews, the perception of the validity of the assessments used by the teachers was the second-most-coded factor that impacts teacher data use. Teachers discussed various types of assessments, ranging from quick, scored-on-the-spot, formative assessments to the state assessments administered once a year. The assessments that teachers were most critical of were the state assessment, NJASK, and the district-created benchmark assessments. The assessments that the teachers were more comfortable using and discussing were the teacher-created formative assessments like Do Now's, quick checks, and anecdotal notes recorded during group work.

In the next example, Sophia and Leah discuss the validity issues that they have with the math benchmark. Sophia is a fifth-grade special education teacher, and Leah is a fourth-grade general education teacher. Sophia and Leah refer to the content of the benchmark, the timing of the benchmark, and the scoring of the benchmark as being a concern.

(1) Sophia: The district benchmarks, especially for math, are not helpful. I mean, we give it to kids. We're not using the scores, anyway. It's not a relevant grading

because it's not even scored the same by each teacher. They're testing kids on things that we haven't even taught them but it's on the test, the benchmark test, so how can you hold them accountable? So, you can't even teach based on that.

(2) Leah: If you base your scores based on that, "Oh, my God, look at this, the kids didn't do so well." How can we use that to help us at all?

(3) Sophia: The kids literally have been given this in their head, that benchmarks really don't count, so therefore they don't give it the amount of attention that it needs to be given. So it may show that they don't understand anything, they failed benchmark, so as a teacher you should ... you know, we know that. We can't in any way base our teaching on that benchmark, our day-to-day teaching, exit passes, entrance passes, pretest, posttest. That's what's a good indicator for us to be able to determine, whether it's Language Arts or it is Math.

Sophia and Leah were speaking about their concerns and frustrations regarding the math benchmark, but other teachers were nodding their head in agreement regarding the content covered and the lack of ability to draw any meaningful data from the benchmark. The frustration specific to the benchmarks stems from what is taught versus what is assessed, combined with the perception that the students are not focusing attention on the benchmark. These conditions result in what the teachers perceive as inaccurate data. In line 3, Sophia made specific mention of teacher-created assessments. The reference to teacher-created assessments was her attempt to provide a more positive look at some data that she uses. She commented that teacher-created assessments are a "good indicator" for monitoring student progress. Sophia's feeling is consistent with the overall feeling from

the teachers that the teacher-created assessments are perceived as more valid than the benchmark and state assessments.

In the next example, two teachers, Grace and Derek, described how entering the data on the Math benchmark is demoralizing.

(1) Grace: I think the benchmarks are also a little demoralizing to teachers because you enter all your data in the spreadsheet.

(2) Derek: And Genesis pops up all red.

Derek finished the first teacher's sentence when they talked about Genesis turning red. Within Genesis, the fields are color-coded based on student scores. Red means the scores are low and is meant to draw attention from the teacher to at these data.

Teachers also shared their concerns about the timing and specificity of data received from their NJASK data. Teachers discussed the difference in students based on receiving more instruction than others based on when they take the test and the summer break as factors that cause them to look skeptically at NJASK data. The teachers receive the March/April NJASK data in September. Kendra, a fourth-grade general education teacher, and Emma, a fifth-grade special education teacher, shared specific concerns about NJASK data in the following comments:

(1) Kendra: It might have value for the school for the, you know, big assessments, but I think that's a little unrealistic for the majority of what most of us may be using to guide our instruction.

(2) Emma: NJASK, you have a score, in ELA you get this score, you get the score in Math, but you don't know where to target, so that number is actually very meaningless. It's just a number.

“It is just a number” is something the teachers in the focus groups discussed regarding the NJASK assessment. They are frustrated by the fact that the NJASK assessment is given months prior, by another teacher, in another grade, and the fact that it is generalized, which are concerns from the teachers that cause them to question its validity.

Administrators in Monroe Township utilize the summative assessments, NJASK, and district benchmarks in their development of programs for students. Specifically, the accelerated programs and basic skills programs are initially populated using cut-off scores from those assessments. There is miss-alignment between what the teachers perceive as reliable and valid and what the administrators use to develop the programs.

An assessment that was discussed as something reliable and meaningful is the DRA reading assessment. Several teachers discussed how they use the reading levels determined from the assessment, which is given two to three times a year for grouping students in not only English Language Arts but also other subjects. As mentioned in the training and support section, this assessment was implemented with targeted training at both the district and building level. The teachers were trained to use these DRA data to drive instructional decisions. As shared in the focus groups, some teachers use these data throughout the day for instruction, while others not so much. This assessment is an example communicated through the focus group of the only non-teacher- created, standardized, summative assessment that the teachers perceive as valid and reliable and that many of them regularly utilize to drive instruction.

The Four Factors Interacting

Table 5

Code Co-Occurrence of Factors that Influence Teacher Data Use

	Accessibility to and Timeliness of Data	Alignment with Initiatives	Perception of Validity	Training and Support of Analysis and Interpretation	Totals
Accessibility to and Timeliness of Data		1	15	10	71
Alignment with Initiatives	1		3	3	8
Perception of Validity	15	3		14	40
Training and Support of Analysis and Interpretation	10	3	14		34
Totals	71	8	40	34	

When the teachers discussed the factors that impact how they use data, many of the factors coexisted with each other. Table 4 displays the co-occurrence between the coded factors that impact teacher data use. The factors that have the most coded interactions are accessibility to and timeliness of data, and the perception of validity. This interaction is from the connection between one of the larger assessments, NJASK, and the length of time it takes to get the results. Teachers expressed concerns throughout the focus-group interviews about NJASK as an assessment and the months it takes to receive results.

Another common interaction between factors is that between training and support of analysis and interpretation, and perception of validity. In the next example, Derek speaks about how the professional development and collaboration he was given in a previous district allowed for improved validity in a writing-prompt benchmark.

(1) Derek: I was in another district where we were actually given a day where subs came in and the teachers ... two teachers had to grade every prompt, but we were actually on a professional day, I guess. It wasn't for hours, but it's how we get our prompts scored.

Many teachers expressed how the assessments that are graded by teachers are not graded the same. They spoke about the writing prompts and open-ended or constructed response math questions as being areas of concern. Derek explained how in his experience having the two teachers score the prompts helped the grade level because it added a level of accountability knowing that you would not score your own students' writing. Building on Derek's comments, the teachers in the focus group expressed an interest in collaborating and shared their frustrations about the lack of time during the school day to collaborate.

Conclusion

Teachers were frustrated regarding each of the four factors that impact student data use. Accessibility to and timeliness of data was a concern because not only is the current student management system cumbersome when entering data, but it is also difficult to generate useable reports with it. Finding a way for more staff to access the student data is something the teachers expressed as a need. Hosting data in individual spreadsheets and files in cabinets is less than secure. It also adds a step to the data-

gathering process for the basic skills, child study team, or any other staff member that would need information regarding a student's data profile.

Overwhelmingly, the teachers were interested in more support and training in data analysis and interpretation. The teachers spoke of wanting more time to collaborate and share their data. The teachers who mentioned collaboration also discussed how the time would help them to identify resources and put the data to use. More professional development opportunities can be made available through the district's teacher-driven professional development program.

The data-driven focus within the district's core beliefs is something that has not been effectively communicated as a priority from the district leadership to the teachers. When selecting their professional development, the teachers overwhelmingly choose curriculum-based training and projects. There is a disconnect between the alignment of the data initiative and other curricular initiatives. The data initiative is looked at as something else to do. With the teachers having concerns and frustrations about many of the district and state assessments as being valid, the data initiative takes a back seat to other initiatives.

The strongest reactions during the focus-group interviews were to the topic of perceiving various assessments as valid. The teachers focused on the district Math benchmark and the state assessment, NJASK, as assessments that do not serve many instructional purposes. Their issues focused on the timeliness of receiving the data, specifically, with regard to NJASK and lack of specificity in the NJASK results. This leads to data that does not help their daily instruction. Concerns and frustrations over the validity of the Math benchmark centered around the content covered and the timing of the

assessment. The teachers believed that the most valid assessments they utilized include the teacher-created, quick-scored, and easily accessible assessments. They spoke to how those types of assessments were easiest to use in making differentiated student groupings day in and day out.

Chapter 5: Discussion

The purpose of this study was to define Monroe Township's needs for supporting teacher data use. Through focus-group interviews with fourth- and fifth-grade teachers, I was able to describe the needs of the teachers with regard to each of the four factors: accessibility to and timeliness of data, training and support of analysis and interpretation, alignment with initiatives, and perception of validity. I described the theme of teachers being frustrated at their data-use experiences within the context of the factors that impact their data use. I also embedded the current resources and practices that Monroe Township has in place supporting teacher's data use. In this chapter, I will discuss the findings and implications for changes in Monroe Township.

Accessibility to and Timeliness of Data

A majority of the teachers reported that they have difficulty managing the input and output of student data, which impacts how they use these data for instructional interventions. As the research on accessibility to and timeliness of data has concluded, teachers need to be able to input new data and analyze and extract data and reports efficiently through a districtwide technology database management system (Wayman & Cho, 2008; Wayman, Stringfield, & Yakimowski, 2004). Teachers should be able to access current up-to-date data where and when they need it throughout the ordinary course of their workdays (Schildkamp & Poortman, 2015; Gerzon, 2015). Adding to the research base, this study was able to provide context-related examples of teachers struggling with accessing, inputting, and extracting data. These examples can be used to inform Monroe Township in reviewing their data management system. For example, some teachers needed reports from the current student management system, Genesis, but

when generated the output reports are not user-friendly. The reports have students' names but not in line with their data, making the analysis difficult and cumbersome. Other teachers shared that while entering data many times, the data were lost during entry, resulting in the need to save after each individual data point was entered. This fear of data loss creates a frustrating, laborious, and time-consuming task out of what should be quick, simple, user-friendly data entry.

As districts like Monroe Township grow, the number of teaching staff increases as the student population increases as well. Along with that growth comes more data users (teachers) and data points (students, students' assessment data) to manage. This study has described how teachers access data across many platforms, including the Genesis web-based student management system and keeping handwritten or printed spreadsheet copies of student data in classrooms. Considering the continued growth in the number of data users and data points, Monroe Township is reaching a critical mass in which there is a need to organize data from multiple sources into one warehouse that is accessible through one access point or user login. Consolidating into one data warehouse would not only address the needs of teachers using multiple locations to store and one place to input data, but also open access to all the student data for all staff members who may need access to these data (Lachat & Smith, 2005).

Training and Support of Analysis and Interpretation

What I think this study adds to the research base are important examples of the teachers' need for training and support of data analysis and interpretation. One example is the support of the teacher through collaborative data teams or groups. Teachers provided examples of how they have limited time for collaboration but have an interest in

collaborating as they feel it is a safe environment in which to be supported. Monroe Township could leverage this opportunity to act on the training and support of analysis and interpretation research to develop regularly scheduled data sessions that provide time for teachers to analyze, interpret, and discuss their data to further develop their data literacy (Datnow et al., 2007; Gummer & Mandinach, 2015; Mandinach & Jimerson, 2016; Park & Datnow, 2009; Young, 2006).

Teachers also expressed interest in further training on applying student data to leverage curricular resources within the classroom in an effort to differentiate instruction. In Monroe Township the professional development program is already in place. Using the examples within this study as a starting point to take action on increasing and widening the offerings for teachers on data use and its application to instruction could help to improve how teachers use data in their classrooms.

Alignment with Other Initiatives

Better coordination of initiatives could make the use of teacher data more widespread. Although the core beliefs for Monroe Township state the use of continuous data to guide decisions, data use in the classroom is still functioning as a standalone initiative. Teachers throughout the focus groups described how data use is just something else to do. In Monroe Township, the regular occurrences of updating curricula and adapting new resources for each new initiative presents an opportunity to step back and align the core beliefs, develop a shared vision of data use within initiatives, and begin to develop a culture of data use (Datnow et al., 2007; Earl & Katz, 2006; Feldman & Tung, 2001; Kerr et al., 2006).

This study adds to the research with concrete examples of how teachers describe the need for alignment of initiatives through their lens at a classroom instructional level. The teachers shared how some of the assessments are not even looked at and the sense that these data are being collected for the sake of being collected. One teacher discussed how they are compliant in giving the assessments but think they are a waste of time and just something that has to be done so that the district can report that it is done.

Perception of Validity

Teachers expressed a range of responses regarding their perception of the validity of assessments given to their students. As the research on teachers' perception of the assessments concludes, teachers believe in and take ownership of data that they have collected on their own (Huffman & Kalin, 2003). Adding to the research base, this study was able to provide specific examples showing that Monroe Township is no different in its teachers' perceptions of assessment validity. Teachers overwhelmingly expressed frustration and concern over the validity of the state assessment, NJASK, and the district benchmarks, resulting in a lack of use of these data. The exception to this was the DRA, which some teachers described as a means of how they use this to drive their instruction. The DRA, an interactive tool administered to students one at a time by the classroom teacher, provides specific data on a student's reading comprehension and fluency. As a result, these data are easy to apply and develop groups from for reading instruction, which bridges the gap between a standardized assessment and the personalized nature of the teacher-created formative assessment. The teachers spoke confidently and openly about these assessments, which give them quick snapshots of their students, either pre- or post-lesson, that they then use to create groups or develop lessons.

This study fills a gap in the research by emphasizing the need for more institutionalized studies of the factors that impact teacher data use. The needs of the teachers in this study were validated, and areas for improvement within each of the four factors that impact teacher data use were identified. The conclusion is that Monroe Township has a framework to support teachers, and can now begin to focus that framework on supporting teacher data use.

Implications

The implications of this study call for acquiring a purpose built student assessment data management system, so the teachers have an efficient and user-friendly way to access and input data through one access or log-in point. Also needed is ongoing professional development to support the implementation of data management systems, as well as prioritizing data and applying these data to inform instructional decisions. Monroe Township will need to work to align the initiative of using student data for instructional decision making with current and future initiatives. Monroe Township should review all assessments specifically for their intended purpose, the timing of their administration, and their content. Many of these assessments have validity issues perceived by teachers. Finally, Monroe Township should embrace teachers' voices to support their frustrations and bring them into the process of moving forward with data use.

My suggestions for Monroe Township, based on its core belief of using data to drive decision making, is to develop a multiyear plan to prioritize student data use from district leadership through the classroom teacher (see Appendix B). One goal for each factor that impacts teacher data use sends a strong message that using student data to

inform instruction is a priority within the district that focuses specifically on the needs of the primary user, the classroom teacher.

The following is a sample of a goal for the first year for responding to the needs of teachers within the factor of accessibility to and timeliness of data:

Goal: Stakeholders will work together to acquire a purpose-built student assessment data management system to manage all student data in an efficient and user-friendly way with a single access point.

As the research has shown, teachers need to be able to input new data, and analyze and extract data and reports efficiently through a districtwide technology database management system (Wayman & Cho, 2008; Wayman, Stringfield, & Yakimowski, 2004). For this goal to be achieved, stakeholders—including district administration, building administration, and teachers—would need to collaborate to find an appropriate system to acquire. Funding would need to be identified. Presentations and potential pilot opportunities from available systems could be utilized by administrators and specifically by teachers. The following is a proposed timeline, as illustrated in Figure 2, for facilitating support for teachers' accessibility to and timeliness of data.

Timeline for Acquiring a Student Assessment Data Management System

Example Objective: Stakeholders will work together to acquire a purpose-built student assessment data management system to manage all student data in an efficient and user-friendly way with a single access point.

Rationale: Why is this important? We want to improve teachers' access and ability to input and extract student data. Teachers use time spent with student data focusing on

analyzing and developing interventions and making instructional decisions. We recognize that teachers' time is precious and we want to focus that time on how to help students.

Summer Year 1	<ul style="list-style-type: none"> • Assemble stakeholders <ul style="list-style-type: none"> ○ Assistant superintendent ○ Representatives from district curriculum supervisors ○ Representatives from building administration ○ Representatives from teachers and support staff • Develop needs assessment • Identify funding • Identify student data management system options • Schedule presentations/demonstrations for student data management systems
Fall Year 1	<ul style="list-style-type: none"> • Conduct needs assessment • Assemble stakeholders • Review needs assessment results • View student data management systems presentations • Begin pilot of student data management system in select buildings and classrooms with participating stakeholders
Winter Year 1	<ul style="list-style-type: none"> • Assemble stakeholders • Report on pilots • Continue pilots • Begin to plan rollout professional development
Spring Year 1	<ul style="list-style-type: none"> • Assemble stakeholders • Report on pilots • Decide on student data management system • Continue rollout of professional development planning in collaboration with the district professional development committee in preparation for the following year. • Identify district liaison to student data management system • Begin data coordination process with student data management system
Summer Year 2	<ul style="list-style-type: none"> • Continue data coordination process with student data management system • Finalize data transfer with student data management system • Train administration and teacher trainers
Fall Year 2	<ul style="list-style-type: none"> • Implement preplanned professional development for teachers and support staff • Utilize student data management system within collaborative data teams at the building level
Winter Year 2 and Ongoing	<ul style="list-style-type: none"> • Support users with ongoing training on student management system through district- and building-based professional development

Figure 2. Timeline for Acquiring a Student Assessment Data Management System

Training and support for analysis and interpretation of data require an organizational commitment from the leadership to support the needs of the teachers (Datnow et al., 2007; Park & Datnow, 2009; Wayman, 2005). A sample goal to focus on supporting teachers follows:

Goal: Stakeholders will work together to implement professional development in accessing data, prioritizing data, and applying these data to inform instructional decisions.

Part of this goal will be training teachers on the newly acquired student data management system based on the previous goal. The remaining parts of the goal focus on ongoing support in identifying which data to use and, once identified, how to use these data to inform, adjust instructional decisions within the classroom, and leverage existing curricular resources to support differentiation. Figure 3 shows a proposed timeline for training and support for analysis and interpretation of data. The timeline is based on the existing professional development structures in Monroe Township.

Timeline for Training and Support for Analysis and Interpretation of Data

Example Objective: Stakeholders will work together to implement professional development in accessing data, prioritizing data, and applying these data to inform instructional decisions.

Rationale: Why is this important? We want to train teachers on how to access their students' data on the new student data management system. Being able to run reports, disaggregate data, and apply these data from the new student management system will support teachers in the development of instructional groups and instructional

interventions. Also, we want to train teachers on how to apply student data to available curricular resources and interventions and develop instructional interventions.

Summer Year 1	<ul style="list-style-type: none"> • Assemble district professional development committee <ul style="list-style-type: none"> ○ Assistant superintendent ○ Representatives from district curriculum supervisors ○ Representatives from building administration ○ Representatives from teachers and support staff ○ District staff developers • Develop data-specific needs assessment • Establish liaison with the committee acquiring the new student data management system • Report to/update building professional development committee
Fall Year 1	<ul style="list-style-type: none"> • Conduct needs assessment • Assemble district professional development committee • Review needs assessment results • Review progress on the acquisition of new student data management system in preparation for coordination and integration of professional development • Based on needs-assessment plan, begin implementation of mini-courses and workshops on data use • Update building professional development committee • Building professional development committees meet and plan building specific professional development • Implement building professional development during faculty meetings, data team meetings, grade-level meetings
Winter Year 1	<ul style="list-style-type: none"> • Assemble district professional development committee • Continue coordination with the new student data management system committee • Continue mini-courses and workshops at a district level and building level on data use • Building based data team meet
Spring Year 1	<ul style="list-style-type: none"> • Assemble district professional development committee • Coordinate with the newly acquired student data management system to schedule accompanying professional development • Continue mini-courses and workshops on data use at district and building level • Conduct yearly professional development needs assessment • Review needs assessment • Update building-based professional development committee • Building-based data teams meet
Summer Year 2	<ul style="list-style-type: none"> • Assemble district professional development committee • Plan professional development for the district • Update building-based professional development committee
Fall Year 2 and Ongoing	<ul style="list-style-type: none"> • Implement yearlong professional development plan with data embedded courses, workshops, and mini-courses • Building-based data teams meet

Figure 3. Timeline for Training and Support for Analysis and Interpretation of Data

Developing a coordinated and aligned set of initiatives beginning with Monroe Township's core beliefs is essential to communicate the focus on student data use from the district level through to the classroom teacher. If Monroe Township expects student data to drive instruction, then that initiative could be threaded through all current and future initiatives. As this study has shown, the classroom teacher experiences the student data initiative as a separate initiative. The following sample goal could be used as a way to align student data use with other initiatives currently perceived as a higher priority for the classroom teachers:

Goal: Stakeholders will work together to align the initiative of using student data for instructional decision-making with current and future initiatives.

Stakeholders including district administration, building administration, and classroom teachers would need to meet and identify current and future initiatives, begin with coordinated professional development that flows from the district level to the building level. Stakeholders simultaneously would develop a shared vision and develop a culture of collaboration around data use within which teachers would feel safe and supported (Datnow et al. 2007; Earl and Katz, 2006; Feldman & Tung, 2001; Kerr et al., 2006). The following is a proposed timeline, as shown in Figure 4, for assessing the alignment of initiatives in Monroe Township.

Timeline for Assessing the Alignment of Initiatives

Example Objective: Stakeholders will work together to align the initiative of using student data for instructional decision-making with current and future initiatives.

Rationale: Why is this important? We want to develop a coordinated plan to implement and support the multitude of both mandated and district-developed initiatives. We can support teachers by aligning and integrating elements of the initiatives together. For example, the student data use initiative can be embedded within every current initiative. This is challenging work that requires the expertise of all our stakeholders to work together.

Summer Year 1	<ul style="list-style-type: none"> • Assemble stakeholders <ul style="list-style-type: none"> ○ Assistant superintendent ○ Representatives from district curriculum supervisors ○ Representatives from building administration ○ Representatives from teachers and support staff • Stakeholders identify current initiatives • Stakeholders identify known future initiatives (i.e., curriculum revisions, standards adoptions, technology refresh or expansion, etc.) • Stakeholders collaborate to identify timelines, priorities, and specific staff impacted within each initiative through a gallery-walk-type activity • Stakeholders report progress back to buildings
Fall Year 1	<ul style="list-style-type: none"> • Assemble stakeholders • Stakeholders develop a multiyear implementation map inclusive of all initiatives with their current timelines • Stakeholders adjust timelines where possible on implementation map • Stakeholders collaborate to determine areas of integration within initiatives • Stakeholders collaborate with the district professional development committee to refine and develop integrated professional development inclusive of the initiatives • Stakeholders report progress to the buildings
Winter Year 1	<ul style="list-style-type: none"> • Assemble stakeholders • Stakeholders communicate the initiative implementation timeline to buildings through staff meetings • District professional development committee updates professional development specific to the integration of the initiative coordination • Professional development classes are updated and implemented
Spring Year 1	<ul style="list-style-type: none"> • Assemble stakeholders • Stakeholders meet with building representation to gather feedback on the initiative implementation timeline and updated professional development • Stakeholders report on progress from throughout the district specific to the new initiative implementation plan • Stakeholders update the district professional development committee on the updated professional development feedback
Summer Year 2	<ul style="list-style-type: none"> • Assemble stakeholders • Stakeholders update any new mandated initiatives • Stakeholders update new or proposed district initiatives • Stakeholders collaborate on integrating new initiatives into the initiative implementation timeline • Stakeholders meet yearly to review initiative implementation timeline

Figure 4. Timeline for Assessing the Alignment of Initiatives

Each of the teacher focus groups mentioned concerns about the validity of the larger assessments, specifically, noting NJASK and the district benchmarks. Monroe Township collects various data points on their fourth- and fifth-grade students, as identified in Table 4. These data represent snapshots of a student's progress and an opportunity for teachers to make instructional decisions. Having assessment data that is perceived as not useful for various reasons as stated in the teacher focus groups is a missed opportunity. A sample goal to address this need brought forward by the teachers follows:

Goal: Stakeholders will work together to review all assessments for their purpose, timing, and content, with a focus on the perception of validity.

The district benchmarks were mentioned throughout the focus groups as an area of concern for the teachers. Using a review process and redeveloping the district benchmarks with collaboration between the district administration, building administration, and teachers would be a strong step toward addressing the needs of teachers' validity concerns. Figure 5 presents a proposed timeline for that process.

Timeline for Reviewing Assessments

Example Objective: Stakeholders will work together to review all assessments for their purpose, timing, and content, with a focus on the perception of validity.

Rationale: Why is this important? We want to ensure that each assessment administered is purposeful and provides teachers and students the feedback they need to support their learning. We can support student learning in a targeted way by using formative and summative assessments to guide instructional planning.

Summer Year 1	<ul style="list-style-type: none"> • Assemble stakeholders <ul style="list-style-type: none"> ○ Assistant superintendent ○ Representatives from district curriculum supervisors ○ Representatives from building administration ○ Representatives from teachers and support staff • Stakeholders identify summative assessments administered to students • Stakeholders identify examples of formative assessments given to students • Stakeholders collaborate to develop a timeline of the assessments and when they are administered • Stakeholders collaborate to define the purpose of each assessment • Stakeholders identify the length of time each assessment takes to administer • Stakeholders work collaboratively to identify overlapping assessments in both administration time as well as the content of the assessment • Stakeholders begin to work collaboratively to streamline the summative assessment process by consolidating • Stakeholders report progress to the building level
Fall Year 1	<ul style="list-style-type: none"> • Assemble stakeholders • Stakeholders share feedback from buildings • Stakeholders develop an assessment timeline • Stakeholders determine which assessments need revision or replacement • Stakeholders research types of replacement assessments (benchmark, reading level, etc.) • Stakeholders schedule presentations by benchmark assessment and student-progress-monitoring-assessment companies • Stakeholders report progress to the building level
Winter Year 1	<ul style="list-style-type: none"> • Assemble stakeholders • Stakeholders share feedback from buildings • Stakeholders view presentations from benchmark assessment and student-progress-monitoring-assessment companies • Stakeholders determine to either revise district-developed assessments or move to a digital benchmark/progress monitoring assessment • Stakeholders establish a pilot for digital benchmark/progress monitoring assessment for stakeholders • Stakeholders establish liaison with the student data management committee and district professional development committee to ensure that any digital benchmark integrated into a new student data management system and that professional development will be developed • Stakeholders report progress to the building level
Spring Year 1	<ul style="list-style-type: none"> • Assemble stakeholders • Stakeholders report feedback from the buildings • Stakeholders report on pilots • Stakeholders decide on a digital benchmark/progress monitoring assessment

	<ul style="list-style-type: none"> • Stakeholders collaborate with the professional development committee to plan professional development for the following year • Stakeholders begin coordination process between student benchmark/progress monitoring assessment • Stakeholders share revised/streamlined assessment calendar with staff through faculty meetings
Summer Year 2	<ul style="list-style-type: none"> • Train administration and teacher trainers on new benchmarking or student progress monitoring assessment
Fall Year 2	<ul style="list-style-type: none"> • Implement preplanned professional development for teachers and support staff on new benchmarking or student progress monitoring assessment at a district and building level • Ensure that building-level administration monitor implementation of assessment calendars
Winter Year 2 and Ongoing	<ul style="list-style-type: none"> • Support users with ongoing training on new benchmarking or student progress monitoring assessment through district- and building-based professional development

Figure 5. Timeline for Reviewing Assessments

Future Research

This study fills gaps in the research by identifying examples of the four factors that impact teacher data use within the context of fourth- and fifth-grade teachers in Monroe Township. However, the factor of leadership encompassing each of the four factors that impact teacher data use is yet to be examined. For example, how does the building leadership influence the way that teachers use data? How does the building leadership address each factor that impacts teacher data use? Can district leadership prioritize student data use and integrate it into other initiatives? Future research could help identify how leaders within the district and schools can support data use by teachers for instruction.

Limitations

The most significant limitation of this study is the absence of one entire school's fourth- and fifth-grade teachers. As I am a researcher who works in that context, the school I work at was excluded from the study. Since this study is a formative assessment, the most relevant findings can be used by district and building leadership to explore and develop targeted supports for teacher use. Again, as a researcher who works in context, I may have insights or biases that impacted my analysis. To address these potential limitations, I used multiple data sources and made efforts to engage all teachers—those who use data for instruction and those who do not. Despite the limitations, teachers could benefit from these basic findings in regard to (a) accessibility to timely data using a purpose-built student data management system, (b) training on both accessing and prioritizing data and how to use it to drive instruction, (c) prioritizing student data and aligning initiatives or embedding student data in new and current initiatives, and (d) reviewing assessments for purpose, timing, and content to address validity issues.

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Appendix A

Focus-Group Interview Protocol * (Modified from Kerr et al., 2006)

Project Description:

I am interested in learning about how you use data to guide and improve instruction. Ultimately making recommendations to improve data use to guide and improve instruction. Knowing data is understood in different ways, for the purpose of this interview when we refer to data I mean student achievement data, but also I mean other types of information, such as systematically collecting and examining student work, teacher lesson plans and then using that information to make decisions.

Accessibility and Timeliness

- Can you tell me what types of data you have access to in order to guide and improve your instruction?
 - District, State, Classroom examples
- How do you access these data?
 - When do you access these data?
 - Is there information you would like access to that you could use to guide and improve instruction?
 - When do you receive access to these data?

Perception of Validity

- Is there any type of data you find more useful than other?
 - Describe.
 - Does that impact if you use the data or what you use it for?
- Can you give an example of the process you take when using data to inform your instruction?
 - What types of data to you find useful in guiding your instruction?
 - When do you use the data from the assessment?

- How does the data impact your instructional strategies, materials, resources, planning?

Alignment

- How are the Math and Language Arts benchmark assessments working this year?
 - Are they useful?
 - What is the impact of these assessments on your practice?
- How do the benchmark data support your classroom and/or state testing data?

Support

- How is the data tracking in Genesis working?
 - Is there benefits to this program?
- What are some challenges in using data to guide your instruction?
- What training, guidance, or feedback did you receive with regard to data to guide and improve instruction?
 - How to analyze? Interpret? Develop intervention strategies?

Appendix B

Support of Factors that Impact Teacher Data Use Multi-Year Timeline

	Accessibility to Timeliness of Data	Training and Support of Analysis and Interpretation	Alignment with Initiatives	Perception of Validity
Sample Goals from implications of study	Stakeholders will work together to acquire a purpose-built student assessment data management system to manage all student data in an efficient and user-friendly way with a single access point.	Stakeholders will work together to acquire a purpose-built student assessment data management system to manage all student data in an efficient and user-friendly way with a single access point.	Stakeholders will work together to align the initiative of using student data for instructional decision-making with current and future initiatives.	Stakeholders will work together to review all assessments for their purpose, timing, and content with a focus on perception of validity.
Summer Year 1	<ul style="list-style-type: none"> • Assemble stakeholders <ul style="list-style-type: none"> ○ Assistant Superintendent ○ Representatives from District Curriculum Supervisors ○ Representatives from Building Administration ○ Representatives from Teachers and Support Staff • Develop needs assessment • Identify funding • Identify student data management system options • Schedule presentations/demonstrations 	<ul style="list-style-type: none"> • Assemble district professional development committee <ul style="list-style-type: none"> ○ Assistant Superintendent ○ Representatives from District Curriculum Supervisors ○ Representatives from Building Administration ○ Representatives from 	<ul style="list-style-type: none"> • Assemble stakeholders <ul style="list-style-type: none"> ○ Assistant Superintendent ○ Representatives from District Curriculum Supervisors ○ Representatives from Building Administration ○ Representatives from Teachers and Support Staff • Stakeholders identify current initiatives 	<ul style="list-style-type: none"> • Assemble stakeholders <ul style="list-style-type: none"> ○ Assistant Superintendent ○ Representatives from District Curriculum Supervisors ○ Representatives from Building Administration ○ Representatives from Teachers and Support Staff • Stakeholders identify summative

	ns for student data management systems	<p>Teachers and Support Staff</p> <ul style="list-style-type: none"> ○ District Staff Developers • Develop data-specific needs assessment • Establish liaison with the committee acquiring the new student data management system • Report to/update building professional development committee 	<ul style="list-style-type: none"> • Stakeholders identify known future initiatives (i.e. curriculum revisions, standards adoptions, technology refresh or expansion, etc.) • Stakeholders collaborate to identify timelines, priorities, and staff impacted specific within each initiative through a gallery-walk-type activity • Stakeholders report progress back to buildings 	<p>assessments administered to students</p> <ul style="list-style-type: none"> • Stakeholders identify examples of formative assessments given to students • Stakeholders collaborate to develop a timeline of the assessments and when they are administered • Stakeholders collaborate to define the purpose of each assessment • Stakeholders identify the length of time each assessment takes to administer • Stakeholders work collaboratively to identify overlapping assessments in administration time as well in the content of the assessment • Stakeholders begin to work collaboratively to streamline the summative assessment process by consolidating • Stakeholders report progress to the building level
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Fall Year 1	<ul style="list-style-type: none"> • Conduct needs assessment • Assemble stakeholders • Review needs assessment results • View student data management systems presentations • Begin pilot of student data management system in select buildings and classrooms with participating stakeholders 	<ul style="list-style-type: none"> • Conduct needs assessment • Assemble district professional development committee • Review needs assessment results • Review progress on acquisition of new student data management system in preparation for coordination and integration of professional development • Based on needs assessment plan, begin implementation of mini-courses and workshops on data use • Update building professional development committee • Build professional development committees to meet and plan building specific to professional development • Implement building professional development during faculty meetings, data 	<ul style="list-style-type: none"> • Assemble stakeholders • Stakeholders develop a multi-year implementation map inclusive of all initiatives with their current timelines • Stakeholders adjust timelines where possible on implementation map • Stakeholders collaborate to determine areas of integration within initiatives • Stakeholders collaborate with district professional development committee to refine and develop integrated professional development inclusive of the initiatives • Stakeholders report progress to the buildings 	<ul style="list-style-type: none"> • Assemble stakeholders • Stakeholders share feedback from buildings • Stakeholders develop an assessment timeline • Stakeholders determine which assessments need revision or replacement • Stakeholders research types of replacement assessments (benchmark, reading level, etc.) • Stakeholders schedule presentations by benchmark assessment and student progress monitoring assessment companies • Stakeholders report progress to the building level
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		team meetings, grade level meetings		
Winter Year 1	<ul style="list-style-type: none"> • Assemble stakeholders • Report on pilots • Continue pilots • Begin to plan rollout of professional development 	<ul style="list-style-type: none"> • Assemble district professional development committee • Continue coordination with new student data management system committee • Continue mini-courses and workshops at a district level and building level on data use • Convene meeting of building-based data team 	<ul style="list-style-type: none"> • Assemble stakeholders • Stakeholders communicate the initiative implementation timeline to buildings through staff meetings • District professional development committee updates professional development specific to the integration of the initiative coordination • Updated professional development classes are implemented 	<ul style="list-style-type: none"> • Assemble stakeholders • Stakeholders share feedback from buildings • Stakeholders view presentations from benchmark assessment and student progress monitoring assessment companies • Stakeholders determine to either revise district developed assessments or move to a digital benchmark/progress monitoring assessment • Establish pilot for digital benchmark/progress monitoring assessment for stakeholders • Establish liaison with the student data management committee and district professional development committee to ensure that any digital benchmark is able to be integrated into a new student data management system and professional

				development will be developed <ul style="list-style-type: none"> Stakeholders report progress to the building level
Spring Year 1	<ul style="list-style-type: none"> Assemble stakeholders Report on pilots Decide on student data management system Continue rollout of professional development planning in collaboration with the district professional development committee in preparation for the following year Identify district liaison to student data management system Begin data coordination process with student data management system 	<ul style="list-style-type: none"> Assemble district professional development committee Coordinate with the newly acquired student data management system to schedule accompanying professional development Continue mini-courses and workshops on data use at district and building level Conduct yearly professional development needs assessment Review needs assessment Update building based professional development committee Convene meeting of building-based data teams 	<ul style="list-style-type: none"> Stakeholders meet with building representation to gather feedback on the initiative implementation timeline and updated professional development Assemble Stakeholders Stakeholders report on progress from throughout the district specific to the new initiative implementation plan Stakeholders update the district professional development committee on the updated professional development feedback 	<ul style="list-style-type: none"> Assemble stakeholders Stakeholders report out feedback from the buildings Report on pilots Decide on a digital benchmark/progress monitoring assessment Collaborate with the professional development committee in planning professional development for the following year Begin coordination process between student benchmark/progress monitoring assessment Stakeholders share revised/streamlined assessment calendar with staff through faculty meetings
Summer Year 2	<ul style="list-style-type: none"> Continue data coordination process with student data management system 	<ul style="list-style-type: none"> Assemble district professional 	<ul style="list-style-type: none"> Assemble stakeholders 	<ul style="list-style-type: none"> Train administration and teacher trainers on new benchmarking or

	<ul style="list-style-type: none"> Finalize data transfer with student data management system Train administration and teacher trainers 	<p>development committee</p> <ul style="list-style-type: none"> Plan professional development for district Update building-based professional development committee 	<ul style="list-style-type: none"> Stakeholders update on any new mandated initiatives Stakeholders update on new or proposed district initiatives Stakeholders collaborate on integrating new initiatives into the initiative implementation timeline <p>Stakeholders meet yearly to review initiative implementation timeline</p>	<p>student progress monitoring assessment</p>
Fall Year 2	<ul style="list-style-type: none"> Implement pre-planned professional development for teachers and support staff <p>Utilize student data management system within collaborative data teams at the building level</p>	<ul style="list-style-type: none"> Implement yearlong professional development plan with data embedded courses, workshops, and mini-courses <p>Building based data teams meet</p>		<ul style="list-style-type: none"> Implement pre-planned professional development for teachers and support staff on new benchmarking or student progress monitoring assessment at a district and building level <p>Building level administration monitor the assessment calendars implementation</p>
Winter Year 2	<p>Support users with ongoing training on student management system through district and building-based professional development</p>			<p>Support users with ongoing training on new benchmarking or student progress monitoring assessment through district and building-based professional development</p>

Sample Teacher-Created Student Data Tracking Sheets

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