WHAT MATTERS IN DATA USE: EXAMINING EQUITY AND DATA DRIVEN DECISION MAKING IN DIVERSE ELEMENTARY SCHOOLS

BY

HOPE L. CRENSHAW

DISSEPTION

Submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Educational Policy Studies with a minor in African American Studies in the Graduate College of the University of Illinois at Urbana-Champaign, 2016

Urbana, Illinois

Doctoral Committee:

Professor William Trent, Co-Chair
Professor Thomas Schwandt, Co-Chair
Professor Jennifer Greene, Director of Research
Assistant Professor Anjale Welton
Associate Professor Adrienne Dixson
ABSTRACT

Although political leaders tout contemporary reform strategies such as data driven decision making (DDDM) as being essential for eliminating the achievement gap between black and white student populations, little scholarly attention has focused on the ways DDDM for instructional decision making has been used to address issues of inequality within schools. This thesis explores the ways in which DDDM for instructional decision making (for teaching and learning) can promote or inhibit equitable arrangements for diverse student populations. What has been needed is an organizing framework for school leaders to provide equity focused questions within schools. In the first paper, I explore the utility of the Hodges Persell (1979) framework in creating appropriate equity-focused questions that promote or inhibit equity within diverse elementary schools. In the second paper, I explore features of DDDM processes within two teacher teams to examine whether the teams are responsive to issues of equity. In the third paper, I explore how leaders took up district mandates declaring schools be more equity-focused and more data driven. Collectively, these papers show the importance of understanding how data use and equity shape the educational experience across three elementary schools.
ACKNOWLEDGEMENTS

Throughout the course of my educational journey, I have received much support and guidance along the way. I first begin with sincere thanks and gratitude to Drs. William Trent and RoSusan Bartee. Their wisdom and words of inspiration have been a constant reminder that the road of life is paved with good mentors and advisors to help one stay on the right path. To Drs. Jennifer Greene and Thomas Schwandt, thank you so much for allowing me to be a part of the Spencer Project and for coaching me, serving as my mentors, and supporting my ideas. To Drs. Adrienne Dixson and Anjale Welton, thank you for your guidance and for helping me find my place in academia.

To my academic family, thanks for all of your support. First to my Spencerite family (Nora, Maggie, Priya, and Rebecca), thanks for the great conversations about life, data driven decision making, and what great teachers do. To my LAS family (Ruth, MJ, Dan, and Jamil), thanks so much for the words of encouragement, the opportunity to learn about higher education practices, and the hours of conversations and laughter. To Chanee and the SPI family, it’s been a pleasure traversing the road to the PhD with all of you. These are experiences that I will treasure for a lifetime.

Finally, to my actual family and fictive kin, thanks for enduring my many years of education. To my parents, thanks for your constant tough love and for instilling in me a “can do” attitude. To my siblings, Nikki and Greg, thanks for being great role models and mentors. Patricia and Lisa (KT), thanks for refusing to give up on our friendship, despite the many missed calls. Pastor Keith, thanks for making sure I was spiritually nurtured while in Champaign. Finally, to Timothy, thanks for all of your support, laughter, and memories.
# TABLE OF CONTENTS

INTRODUCTION ........................................................................................................................................... 1

REFERENCES .................................................................................................................................................. 7

PAPER 1: A FORENSIC APPROACH TO EXAMINING THE RELATIONSHIP BETWEEN DATA USE AND EQUITY ......................................................................................................................... 10

REFERENCES .................................................................................................................................................. 42

PAPER 2: MANUFACTURING EQUITY: CHARACTERISTICS OF EQUITABLE DATA USE PROCESSES .................................................................................................................................................. 45

REFERENCES .................................................................................................................................................. 76

PAPER 3: “BLACK STUDENTS MATTER”: LEADERSHIP RESPONSIVENESS TO EQUITY AND DATA USE ........................................................................................................................................... 79

REFERENCES .................................................................................................................................................. 105

CONCLUSION ................................................................................................................................................... 107

REFERENCES .................................................................................................................................................. 109

APPENDIX A: TEACHER TEAM GROUP OBSERVATION PROTOCOL ............................................................... 110

APPENDIX B: INTERVIEW PROTOCOL FOR SCHOOL LEADERS ................................................................. 113
INTRODUCTION

Systemic reform policies of the 1990s (Wasser, 1998; Wronkovich, 2000) were thought to be a fix to issues of inequity by promoting equality of opportunity (O’Day & Smith, 1993) and economic competitiveness for American schools (Bull, 1996). These reform policies prompted a new vision of excellence for schools. The superintendent of Corvallis (Oregon School District) states that systemic reform imagines schools as being “…reconceptualized from the ground up, beginning with the nature of learning, the nature of teaching, educational relationships, and school-community relationships” (Thompson, 1993, pg. 7). Smith and O’Day (1991 as cited by Fuhrman, 1993) theorized that there are three major components of systemic reform: challenging standards for students, the alignment of policy components of educational governance, and school flexibility to develop the strategies that are suited to the needs of their students.

In more recent times, systemic reform has been used to support standards-based reform policies, standards-based accountability policies, the rise in charter schools (Wronkovich, 2000; Suppovtiz & Taylor, 2005). The latest reform strategy suggests the data use phenomenon and data driven decision making (DDDM) have the ability to create systemic changes within schools by allowing school leaders to make better decisions regarding school improvement as well as enhancing student achievement (Wayman, 2005; Knapp, Swinnerton, Copeland, & Monpas-Huber, 2006). Arne Duncan, in his remarks to the STATS DC 2010 conference, states:

Good data promotes transparency and accountability. It shows the public the value that they're getting in their investment in education. It gives teachers information they need to change their practices to improve student achievement. It shows us when students are making progress and when they're not (US Department of Education, 2010).
Duncan is not alone in his belief about the power of data. Scholars have also touted data use as a solution to issues of educational access and achievement. Wayman (2007) says data management systems are user friendly computer systems that allow data to be delivered to teachers and administrators in a rapid manner. These management systems take various forms of data to create decisions and practices designed to impact the organization of the school as well as student learning (Ikemoto & Marsh, 2007). Scholars have also argued data management systems have helped schools maintain a culture of inquiry for continuous growth and improvement (Boudett, City, & Murnane, 2003; Earl & Katz, 2006; Bernhardt, 2009; Goldring & Berends, 2009).

The vision of data use as a roadmap to reform is both promising and problematic, in that while the vision should be praised for being progress centered, teaching and learning focused, and locally controlled, the vision fails to highlight the importance of using data for addressing inequity within schools. A focus on data use for equity is especially important, given that demographers predict that by the year 2020, the student population will be largely comprised of minority students (U.S. Census Bureau, 2015), and despite these demographic shifts, white students still surpass Black, Latino, and select Asian student population scores on standardized tests by a substantial margin (NAEP, 2014).

To date, the literature on data use for the purpose of improving instruction has generally focused on the role of leadership, uses of teams and micro-processes of data, data warehouse and data management systems, and cycles of data for continuous inquiry. However, the literature has largely been silent on how issues of equity are dealt with in models of data use or in organizational responses to data use. For example, scholars who have sought to address the various in-school organizational factors that affect the ways teachers and administrators come to
understand and view data (Kallemeyn, 2014) have largely left equity out of the conversation regarding how teachers make decisions and how both out-of-school and in-school factors shape teachers’ attitudes and beliefs about students, institutional change, and data. This omission is problematic in that data systems designed to create equity and to improve student outcomes may, in fact, perpetuate and maintain inequality within schools. Furthermore, this omission is problematic in that it leaves out the experiences of the students (i.e. at risk, low income students of color) that policy makers say data are designed to support.

This thesis seeks to explore the conditions under which data use promotes or inhibits improved student learning outcomes and equity within schools serving diverse student populations, and subsequently, how data use challenges, reinforces, shapes, or creates teachers’ collective understanding of students’ abilities. This thesis is a sub-study of a larger Spencer Foundation-funded project regarding data use, teacher team dynamics, and student characteristics in three elementary schools (Stacy, Brook, and Warren Elementary), all of which are located in East School District in a small-urban community in the Midwest. The study also draws on data gathered by members of the research team via interviews with teachers, administrators, specialists, and principals, observations of teacher team meetings and classrooms, document analysis, and collected artifacts, supplemented with additional interviews with administrators.

Overview of Three Papers

This thesis explores the relationship between issues of equity and data use by examining the ways school-level data use responses may either perpetuate or challenge inequity within schools. In the first paper, I present a comprehensive framework for examining equitable data use practices. Using the Hodges Persell (1979) framework, I argue teacher teams are influenced
by societal level factors, institutional factors, interpersonal factors, and intrapersonal factors, specifically when examining data and making decisions regarding diverse student populations. In doing so, I explore macro and micro level factors that shape how teacher teams and school leaders view data as well as data for equity within three elementary schools in East School District. Furthermore, I present this model as a comprehensive framework that allows school leaders to ask equity focused questions and to interrogate their own practices using data.

In the second paper, I explore the data driven processes employed by teacher teams in two of the three aforementioned schools. I discuss several features as a guide to examining whether or not such processes promote or inhibit equitable arrangements within schools.

In the third paper, I focus on how school level leaders addressed the topic of equity and data use within their schools, specifically given a host of new district level mandates. I also discuss how school leaders’ approaches impacted the teacher teams’ dynamics and the teams’ response to equity and data use.

For this thesis, I use the Hodges Persell (1979) framework for understanding the relationship between organizational routines of data use and equity. Hodges Persell (1979) suggests there are four interrelated levels that can be used to explain how inequality is maintained within the educational system (which I will discuss in detail in an upcoming section). With these papers, I hope to bring equity into the center of the data use conversation, specifically by underscoring how teachers’ conceptualization of “data as evidence” is ultimately filtered through many overarching layers of influence.
Significance

The literature regarding the relationship between equity and data use practices is limited. Scholars have historically focused on aspects of data use/misuse, particularly in schools populated with low-income, minority students. Still much work has yet to be done on this topic in order to make a substantial impact in filling this gap in the literature. For example, scholars (e.g. Johnson, 2002; Skrla, McKenzie, & Scheurich, 2009; Lasalle & Johnson, 2010; Park, Daly, & Guerra, 2012; Bensimon & Malcom, 2013) all focus on ways schools and school leaders can take a proactive stance in using data to address equity within schools. They argue data use provides a mechanism by which schools can more effectively reach students by, foremost, focusing on identifying, defining, and reframing educational problems. Several other scholars (e.g. Diamond & Cooper, 2007; Honig, 2012; Khalifa, Jennings, Briscoe, Oleszweski, & Abdi, 2013) have focused on data misuse within schools serving diverse student populations, particularly attempts to use class based ideology to maintain systems of inequity, to justify inequitable arrangements with objective test data, and to “game the testing system” in communities with a high population of African American students. Such ideations regarding data use and equity show equity must be considered if we are to close the achievement gap and confront the institutional biases present within educational systems.

This thesis is significant because it contributes to the limited scholarship on equity and data use. Article one is significant in that it uses Hodges Persell’s work as a comprehensive framework for examining data use and equity within diverse school settings. Article two is significant for bringing organizational responsiveness and organizational processes into the forefront, focusing specifically on how data use processes can perpetuate or inhibit equitable arrangements for students. Finally, article three is important for showing how leaders’ views of
equity and data use serves as both affordances and constraints to how teachers and schools support student achievement.

Because federal mandates such as *No Child Left Behind* (NCLB) have increased the reporting practices around data and student test scores and have given local schools more control over aspects of their school day, it is vital that we understand what practices are being implemented at the local level in response to the rising state and federal policies. Also, it is important that we come to understand how local systems view educational policies and whether local systems can produce the climate necessary to promote equity and student achievement (Tharp, 1994) or whether data use will merely become a new way of perpetuating inequity within schools. This thesis seeks to answer such questions by exploring the role of data use in effecting change within diverse elementary schools.
References


A FORENSIC APPROACH TO EXAMINING THE RELATIONSHIP BETWEEN DATA USE AND EQUITY

Many local, state, and federal educational agencies and leaders profess a belief in the power of data use practices to improve student learning and to promote accountability within America’s schools. Data driven decision making (DDDM) has become a staple within schools as a result of efforts to ensure that all educational practitioners use data and evidence to inform policies and practices at the local level (Mandinach, 2012). Murnane and Duncan (2011) explain that data use promotes student learning by helping teachers ask the right types of questions. Scholars also suggest that DDDM shapes leaders’ focus and places it on student learning, professional development of staff, classroom practices, and continuous school improvement (Knapp, Copland, & Swinnerton, 2007; Coburn, Talbert, Stringfield, Wayman, & August, 2011).

Although there is significant literature examining the myriad uses of data, research has failed to fully examine the factors that shape the ways teachers interpret data. Ikemoto and Marsh (2007) suggest that DDDM is not a linear process and that data have various meanings depending on a variety of contextual factors. Knapp, Swinnerton, Copeland, and Monpas-Huber (2006) state data become evidence when users bring theories and interpretive frames to make sense of their data.

Scholars suggest that data use and data interpretation by teachers are influenced by several factors including the role of organizational and political context (Coburn, 2001; Ikemoto & Marsh, 2007), organizational routines within schools (Kallemeyn, 2014), teachers’ collective and individual sensemaking regarding students and policies (Weick, 1995; Coburn, 2001; Spillane, Reimer, & Reimer, 2002), socio-cultural-historical factors, as well as teacher and administrator beliefs and attitudes regarding students and their abilities (Ullucci, 2007). Yet, at
the present time, no comprehensive framework exists for understanding macro-level and micro-level factors that influence equitable data use within schools. Equitable data use (or equity-driven decision making) is the use of a wide variety data that allows school leaders to discover inequitable processes within their schools. Few scholars discuss the role of equity when examining how factors shape teachers beliefs and interpretations of data. Yet, when examining data use practices that aim to improve student performance it is only reasonable to ask to what extent those practices foster equity or actually perpetuate inequality within schools.

**Purpose of the study**

The purpose of this paper is to examine the utility of the Hodges Persell (1979) framework for understanding how issues of equity appear in data use practices. I will use this framework as a “forensic” tool for exploring the types of discussions schools should have, the types of questions we should formulate, and ways of interrogating data that are beneficial when addressing inequality within schools. The “crime” that warrants such a forensic approach to data use is inequitable uses of data to “game the system” (Diamond & Cooper, 2007) and uses of data for labeling students through a deficit-based lens as opposed to using data as one basis for determining appropriate services for students (Johnson and Lasalle, 2010). In considering the Hodges Persell framework as a “forensic tool”, I begin with the assumption that inequitable practices are a part of the data use context in many schools serving diverse student populations. The Hodges Persell framework provides tools necessary to create questions and to interrogate school policies and practices to determine whether they have a negative impact on student performance.
The Need for an Equity Driven Framework for Data Use

According to the Wisconsin Equity Model (2014), educational equity means using educational policies, practices, and programs to eliminate educational barriers to historically marginalized populations and to provide equal educational opportunities based on strategies that are planned, systemic, and focused on teaching and learning. This definition acknowledges the historical roots of the inequity within schools and at present suggests a comprehensive institutional approach to removing educational barriers to achievement. Bensimon and Malcom (2013) place the problem of student achievement on the shoulders of schools themselves. They suggest that dysfunction within schools (e.g. low student performance) is characteristic of institutional structures, policies, and practices, and as such requires an institutional fix to correct the problem. These scholars show the need for schools to take a proactive stance when addressing educational inequities.

Few scholars have sought to understand the role of data use in interrogating policies and practices in ways that promote equitable arrangements for students and even fewer scholars have attempted to address just what an equitable data use system would entail, particularly a system serving diverse student populations (Johnson & Lasalle, 2010; Welton & Lalonde, 2013; Datnow & Park, 2014). In the next section, I will discuss literature and the value Hodges Persell brings to such studies.

Data Use and African American Students

Scholarship has focused on how teachers see issues of equity and data use within their schools. Park, Daly, and Guerra (2012) argue that schools that are most responsive to urban students use a process of deliberate framing to promote equity and data use for continuous improvement. Several other scholars have focused on the importance of equity audits within
schools as well as using data for service rather than labels (Skrla, McKenzie, & Scheurich, 2009; Lasalle & Johnson, 2010). Thus, data use provides a means by which schools can more effectively reach students by, foremost, focusing on identifying, defining, and reframing educational problems. However, other scholars (Diamond & Cooper, 2007; Honig, 2012; Khalifa, Jennings, Briscoe, Oleszweski, & Abdi, 2013) have focused on data misuse within schools serving diverse student populations, particularly attempts to use class based ideology to maintain systems of inequity and to justify inequitable arrangements with objective test data. Such ideations regarding data use and equity show equity must be considered if we are to close the achievement gap and confront the institutional biases that are present within educational systems.

The Hodges Persell framework is useful in allowing us to dissect the many factors that may impact a school-level approach to data use and equity, and as such, provides new avenues of research as well that helps create more equitable outcomes.

**The Hodges Persell Framework**

The Hodges Persell framework speaks to issues of equity and stratification and how macro-level dynamics influence micro-level processes within the school day. Her framework involves four interrelated levels of analysis—the societal, institutional, interpersonal, and intrapsychic. Although the model is highly theoretical, it provides practical implications when examining policies and practices using an equity-driven approach to data. Finally, this framework is beneficial in allowing us to ask the types of questions that provide a forensic interrogation of school and district level policies and practices through the use of data to ascertain whether such policies promote equitable outcomes.
Foremost, Hodges Persell (1979) argues that the societal level emphasizes the role of larger ideologies, beliefs, and hegemonic structures, based on a hierarchical arrangement that gives some groups more power and privilege in society than other groups (i.e. structure of dominance). She argues that the structure of dominance in society is based on race, class, gender, and occupation, and that this structure maintains, reproduces, and legitimizes inequality within our society (see Apple, 1979). Such beliefs may be grounded in the social, historical, cultural, and moral fabric of the school, district, state, and nation, and thus has implications in terms of the types of ideologies and belief systems that underlie school policies and teachers’ explanations regarding student data.

Second, Hodges Persell argues the institutional level is important in addressing the various types of educational systems and educational experiences of students based on the structure of dominance within society, such as variations in the types of schools, resources, economic support, governance, interactions, curriculum, and authority relations. Thus, the schooling experiences of students are based on the larger ideas and hegemonic structures in society placing some students at a distinct advantage over others, particularly in the type of resources they receive. These experiences impact the types of data use pressures, routines, and policies at the federal, state, and local level, and determines whether such routines promote or inhibit equitable outcomes for students.

Third, Hodges Persell suggests the interpersonal level emphasizes the interactions shaping the collective behavior of teachers toward students. Hodges Persell argues teachers collectively behave toward children depending on the children’s different social attributes and the meanings teachers attribute to these characteristics. These types of interactions and relationships are based on one’s position in the hierarchy of dominance (race, class, and gender)
and how these characteristics influence teachers’ attitudes and beliefs regarding student groups. These may include teacher team dynamics, interpersonal relationships between teachers and parents, teachers’ interactions with students, and the factors that shape collective sensemaking regarding students and student data (see Coburn, 2001; Bryk & Schneider, 2002). This level has implications for how teachers collectively view societal expectations and institutional perspectives regarding data, how teachers see their work as professionals, and their beliefs about students’ abilities in regards to student performance data.

According to Hodges Persell, the intrapsychic level is important for understanding both the cognitive (e.g. standardized tests) and noncognitive effects (e.g. motivation) educational environments have on student motivation, student outcomes, and student beliefs about him/herself. For the purpose of this paper, however, I am focusing on teacher teams and their beliefs of students and student data as the educational outcome. Thus, I define the intrapsychic level as ways in which teachers come to internalize perceptions and expectations of students and ultimately become influenced by them in ways that impact student learning, achievement, and teachers’ interpretation of data. These factors include: teacher efficacy as well as inward and external facing notions of implementation (Coburn, 2001), and personal beliefs regarding students and students’ performance data.

**Site and Circumstances of the Empirical Study**

In this study, I use the Hodges Persell framework to interrogate school policies and practices related to data use in three elementary schools within East District in the Midwestern U.S. These data use practices had been the object of a Spencer Foundation funded study examining the role of student characteristics in teacher data use practices, in which I participated.
as a researcher.\textsuperscript{1} Data for the larger study were gathered through teacher team interactions and interviews with teachers and administrators.

Despite all three schools being part of the same school district, there was considerable variation in school context (e.g. leadership styles, organizational routines, beliefs and attitudes of school personnel, and demographics) and data use. These factors make the school sites chosen especially intriguing points of comparison when examining how issues of equity appear in data use practices.

East District has 16 schools and serves a student population consisting of 40\% White students, 34\% Black students, 10\% Hispanic students, and 10\% Asian students. 57\% of the student population is low income, 7\% of the student population is English Language Learners, and 13\% has disabilities (State Report Card, 2014). Despite the diversity of East District’ student population, the teacher population at East District is 82.9\% White, 8.7\% Black, 4\% Hispanic, and 4\% Asian (State Report Card, 2014).

East District is “…committed to diversity, and believes diverse schools offer the finest education to all students” (District Website, 2015) and regards use of data as pivotal for instructional improvement and for improving student achievement of all students, with a specific focus on African Americans and special education students. From 2002 to 2009, East District operated under a court mandated consent decree because of its distribution of unequal resources and unequal access to quality education for African American students within the district. Since then, the district has a stated commitment to increasing achievement levels and access to opportunities for all students through a number of initiatives such as a committee for examining

\textsuperscript{1}The research reported here was part of a Spencer Foundation-funded study of data use. The study was directed by Professor Jennifer Greene at the University of Illinois Urbana-Champaign. The views expressed in this article do not reflect the views of the Spencer Foundation.
educational equity, a committee for examining social justice concerns, a school choice plan, and through the diversification of its faculty and staff (District Website, 2015).

Beginning in October, 2014, the district-wide focus on African American student achievement became more explicit, with a memo from district administrators asking school level leaders “What evidence do you have that your African American students are achieving? What evidence do you have that the achievement gap is decreasing? Are you tracking students for interventions? Are you having a courageous conversation about classroom climate?” (Fieldnote 10/29/2014). This call for “evidence” stood in addition to the district’s concurrent initiatives including Smart Goals (goals for African American and special education students for each school based on performance data and a key component of their principal evaluation system), a new teacher evaluation system, district-mandated biweekly teacher team meetings for teachers to discuss data use and instruction, the implementation of Response to Intervention (RtI) tier interventions to focus on students considered “at risk”, and the district’s data fidelity plan to ensure schools are presenting interventions and collecting data frequently. These goals and mandates are supported by formative, summative, and benchmark assessments such as Aimsweb®, Measures of Academic Progress (MAP) data, Diagnostic Reading Assessment (DRA), progress monitoring, a new curriculum called Wonders (which has its own weekly assessments), and teacher generated assessments. These assessments are widely used to support and assess literacy within the schools, as the chief focus within the district is improving the literacy skills of all students.
Methods

This study was a comprehensive field study of teacher teams from three elementary schools in one small-urban school district (9,948 students enrolled) in the Midwest. The overarching aim of the study was to examine the phenomenon of data driven decision making within schools from a teacher team perspective. We chose these sites based on their willingness to participate and their diversity with respect to race, ethnicity, socioeconomic status, and ability. We also chose to focus on these sites using qualitative methods because little research has been conducted on the micro-processes of data use within schools (that is, what teachers actually do in workplace and professional development contexts) (Little, 2012). Participation within this study was voluntary. This study focuses solely on the interactions within each teacher team and does not seek to make generalizations regarding the entire school.

For this paper, I focused on all three schools and six teacher teams: Warren Grades 3 and 5, Brook Grades 2 and 5, and Stacy Grades Level 3 and 4 (pseudonyms). Also, for this article, teams at each school are reported in aggregate form because there were limited variations across teams within the same school. This article is informed primarily by data collected from observations of 78 grade-level team meetings, 16 at Warren, 19 at Stacy, and 43 at Brook. On average, a grade level meeting lasted 34 minutes. Warren teams spent approximately 27.5% of its overall time on data; Stacy 23.5% of its time on data, and Brook approximately 21.9% of its overall time on data.

Additionally, I focused on individual and group interviews with teacher team members within each school. This included 6 interviews with teacher team members at Stacy, 5 interviews with teachers at Warren, and 5 interviews with instructors at Brook. Individual
interviews lasted approximately 1 hour each and were transcribed verbatim. Group interviews lasted approximately 2 hours each and were summarized based on key themes.

Participants

Team compositions varied across elementary schools. At Stacy Grade 3 and 4, team members consisted of the principal and three instructors per teacher team (with occasional input from the Magnet School Coordinator). These team members met twice a month for the purpose of being data driven as a part of their organizational routine (Spillane, 2012). Within Brook Grades 3 and 5, team members consisted of the instructional coach and teachers (in grade 3, there were three instructors; in grade 5, there were only two instructors). These team members met once a week for the purpose of being data driven as part of their organizational routine. Finally, within Warren Grades 4 and 5, team members consisted of the instructional coach, principal, and the three instructors per grade level. These team members met twice a month for the purpose of being data driven as a part of their organizational routines.

Data Collection and Analysis

Data collection began during the Fall, 2013 school year and ended in the Spring, 2015 school year (two academic school years). Observations were planned to observe teacher teams in the throes of using data for instructional decision making which included regularly scheduled district mandated data meetings and special days called “data days”. We used a fieldnote guide created by our research team to discuss features of the teacher teams, including but not limited to: data discussed, character and tenor of the data talk conversation, participant relationship and engagement, character and quality of the data use conversation, how student characteristics and district politics appeared in data use, and how concerns were addressed (See Appendix A for Teacher Team Group Observation Protocol). In individual and group interviews, we focused on
how teacher teams saw themselves in light of the teacher team context and the data use context in which they served. Observations helped to shape some of our interview questions. For example, when we noticed common ways teachers attributed students’ test scores to behavior, we asked about this practice within individual and group interviews to ascertain their thought processes behind the actions. Data collection and analysis occurred simultaneously throughout the study year (Miles & Huberman, 1994).

Fieldnotes were written for each observation session and coded descriptively for two reasons: 1) to identify the types and ways teacher teams used data and the discussions had around the topic of data use and 2) to identify emerging themes. Data analysis addressed examples in each school (within team meetings, document content, and overall context of the district) of the absence and presence of characteristics at each level of the Hodges Persell framework. I focused specifically on the social, historical, and political context of the district and its effect on data use at each school, what data use processes were employed at each school, how teachers collectively responded to data use and equity, and teachers’ individual responses to student characteristics and data. I used Hodges Persell framework as descriptive and analytic codes based on her four levels of analysis (mentioned above) to examine the fieldnotes and the interviews (both group and individual). These codes were entered into a qualitative data base using DeDoose (www.dedoose.com). I defined data as the results of specific, physical assessments administered to students, including commercialized diagnostic and interim assessments such as Aimsweb®, MAP®, and DRA®, district-created assessments in science and textbook assessments in math, and teacher generated assessments. Throughout the process, I focused on emerging themes and identifying disconfirming viewpoints and evidence (Miles & Huberman, 1994). The names of the schools, district, and the instructors have been replaced with pseudonyms.
Findings

Each level in the framework raises important considerations for matters such as the purposes served by data systems (or the uses of those systems), data interpretations, and data used across schools. In general, the framework was very helpful for understanding how leaders use data to promote or inhibit equitable practices within schools.

Societal Level

The Hodges Persell model begins with a discussion of the structure of dominance within society and how it maintains, reproduces, and legitimizes inequality within society. Teachers and school leaders are not immune to societal beliefs, since teachers are members of the larger society which creates and maintains the structure of dominance (see Apple, 1979). These larger ideologies and hegemonic structures shape how school leaders and teachers think about students. The structure of dominance also affects how teachers see students and subsequently how teachers see student data. Other factors that may affect student data include belief in the infallibility of data and/or beliefs about teachers and public schools (see Watkins, 2010).

Questioning how ideologies and deficit centered beliefs that are largely taken for granted in society enter schools and serve to disadvantage minority students can be done through an equity conscious interrogation of data practices. Thus, an equity driven school leader may seek to address questions such as the following when examining the types of data tools (e.g. formative, summative, and benchmark data systems) needed and the types of societal level factors that shape the beliefs of teachers regarding students and student data:

- What backgrounds, beliefs, experiences, and assumptions do school members bring to the table about children of color when discussing data? Do they mimic the structure of dominance?
• What historical-cultural-social events shape the data use and equity processes within schools/district? How do those events shape beliefs about students and student achievement?
• What beliefs exist about data and data systems and how do these beliefs shape which tools are considered most beneficial and which are considered least beneficial?
• Do tools disaggregate data by race, class, and gender, instead of simply by performance level?
• Are explanations of student performance for African American students grounded in deficit beliefs normalized within the school culture? Are students and the community seen from a deficit lens or an asset lens?
• Are the tools asking the right questions and providing diagnostic, benchmarking, perception, and summary data? Are schools relying on multiple data points in order to diagnose student needs?

These questions address the ideologies and hegemonic structures that are commonplace within our society and which oftentimes enter into the data discussion in ways that impact teachers’ views of students and subsequently their interpretations of student data. School leaders who employ a forensic approach to understanding inequality may find it useful to examine the societal level to discover how implicit assumptions create inequitable outcomes for students even before students ever enter the classroom.

The cultural, historical, and social context of East District has shaped data use policies along racial, ethnic, and socioeconomic lines.

A Spotlight on Societal Level Factors at East District:

A court ordered consent decree for East District placed an undesirable spotlight on the district as a result of its unequal treatment of African American students. As a result, district level personnel wanted an explicit focus on African American student achievement, particularly increased student performance. While each school was affected by the district mandate, schools with a high percentage of African American students were under intense pressure to show evidence that students were learning and also under pressure to diversify their student population
so as to make sure the student population would be similar to the district’s overall racial population (or, as the district terms them, “nonracially identifiable” schools). The notion of racially non-identifiable schools affected how each school saw their student population and subsequently how they regarded student data. Stacy and Brook are two such schools trying to cope with the “racially non-identifiable” school mandate.

Stacy Elementary, a school located in a low-income, predominately African American neighborhood, serves a population of 53% African American students, 81% low income students, 17% ESL population, and 11% disabled population (State Report Card, 2014). Retaining teachers at Stacy has been a challenge, as Stacy has only an 81.6% teacher retention rate (below the state’s average 85.7% retention rate for students). Furthermore, the school’s reputation among teachers has not been considered especially high, with 71% of teachers saying they would not recommend this school to a friend seeking to place a child (School Climate Survey, 2014). Stacy spent district mandated time dedicated to data use (e.g. twice a month collaboration meetings for 30 minutes) to discuss how to make the school appeal to a new white clientele. Such discussions hinged on changing the magnet program theme from a career and technical program to a fine arts program to attract more middle class white students to the school, and thus, improve the overall test scores of the school.

Brook Elementary, another school located in a low-income, predominately African American neighborhood, serves a population of 49% African American students, 51% low income students, 6% ESL population, and 10% disabled population (State Report Card, 2014). Retaining quality teachers within Brook has been a challenge, as the school only has a 70% teacher retention rate (below the state’s average retention rate for students 85.7%). Despite being on the state’s watch list for a low student performance, Brook is considered to be a school that is
making great strides toward school improvement and toward student success. Teachers have more positive feelings about the school and the direction of the school, with 63% of the teachers stating they would recommend this school to friend seeking to place a child (School Climate Survey, 2014). Although Brook is under a similar mandate to diversify its student population, school leaders effectively shield teachers from discussions of how to make the school appeal to white middle class clientele. This ensures that teachers have time to focus on current student population data trends and ways to improve instruction for the students that are currently enrolled in their school.

Warren Elementary stands in stark contrast to Stacy and Brook. With a population of 42% white students, 23% black students, and 54% low income, 20% English language learners, and 17% disability (State Report Card, 2014), Warren teachers have not been feeling as much pressure to show evidence of student growth. Warren has widely been heralded as one of the district’s more successful schools in terms of its data use and parental involvement, and has not been under any district mandates to make its school any less racially identifiable (due to its comparatively low enrollment of African American students). Furthermore, the school has a reputation of being a high resourced, very nice community, and parent supported school—with 93% of teachers saying they would recommend this school to a friend seeking to place a child and an 87.8% retention rate for teachers (School Climate Survey 2014). Warren has been under some pressure to show an increase in test scores that serve as evidence that African American students are doing better than in previous years. Yet, the lack of having a district imposed mandate to change the population of the school, ensures that school leaders can focus solely on the teaching and learning process within their school.
The cultural, historical, and social context of the district associated with the consent decree has shaped the data use policies along racial, ethnic, and socioeconomic lines within East District. While the consent decree in itself is not a societal level factor, its presence points to larger societal level issues and concerns. These concerns are both exacerbated and lessened by data use in East District. For example, measures taken by the district after the consent decree (e.g. the school choice plan and the criteria for the gifted program) shaped the perceptions of schools and students to not only district personnel, but also to teachers. Furthermore, the societal level also shaped the types of demands that are placed on schools and the types of expectations and beliefs teachers have about students. Because Stacy and Brook are schools with a high percentage of African American students, teachers were under intense pressure to show evidence that these students were learning, but also under pressure to diversify their student population to increase student test scores and to make their student populations nonracially identifiable. Ingrained in these beliefs are ideas about students as being deserving and undeserving, desirable and undesirable. These added factors served as stressors to schools who essentially saw their populations as “undesirable” as compared to Warren’s population, and thus spent time that was dedicated to data use to focus on making their schools more desirable to middle-class white populations. The spotlight on East District shows that societal level assumptions often enter into the discourse about student data in ways that negatively impact African American students and low-income students.

**Institutional Level**

Hodges Persell suggests that the structure of dominance in society (based on race, class, and gender) shapes variations in types of educational experiences students received. The
institutional level can be used to underscore the types of data systems, data emphasized, and data routines employed within each educational system. It draws attention to variations in institutional policies and practices about student placement and interventions, opportunities to learn for both the teacher and students, and the availability of resources and access to data. School leaders attempting to take a forensic approach to understanding equity from the institutional level may interrogate school level policies and practices by asking the following types of questions:

- What types of data use routines are in place and how do these routines advantage/disadvantage select student populations? What types of data are collected but typically not discussed?
- Is there a shared vision of equity among school leaders? How do schools define equity (e.g. fixing student deficit, fixing teacher beliefs, or systemic approach to addressing equity)? What is the school’s strategy for addressing equity (both stated and unstated)?
- Are district data fidelity plans designed to promote increased student performance or simply for more managerial/compliance level processes? (e.g. Do district data fidelity plans test quality as well as quantity of interventions or simply focus on quantity of interventions?)
- Are school choice models making schools racially identifiable? Do housing patterns shape the schooling experiences and subsequently who goes to school with whom, and as a result the racial identifiableness of schools (and the unequal experience of students across schools)?
- Is there due process for students in response to disciplinary infractions? Rules have appropriate consequences?
- Do gifted programs/models/assessments/policies promote in-school re-segregation within schools?
- Is there an equitable distribution of human resources based on the number of students who need assistance within schools? Are per pupil spending and school spending based equitably in terms of the number of students who need special assistance and the types of resources needed to support students?
- Are diverse students given an equal time for face-to-face interventions with interventionists or instructors rather than simply prepackaged computerized strategies? (e.g. Are students corralled in prepackaged interventions without assessing instructional knowledge? Are these interventions ever assessed based on quality of interventions from teachers’ perspectives?)
- Are research-based interventions working as designed with the student population? Are research-based interventions ever critiqued in any systematic way by school leaders?
• Do institutional policies regarding RtI predispose African American students to being placed into special education as compared to the rest of the population?
• Are weekly or biweekly data used for triage or for changing instructional practices, monitoring student engagement, and cognitive understanding of skills?

This line of questioning suggests that the framework is useful for helping school leaders think critically about institutional practices that shape the experiences of students of color. The examples from the field serve as an illustration of how institutional factors and school level beliefs regarding equity shape data use practices.

A Spotlight on Institutional Factors: A Comparison of Brook, Warren, and Stacy

The principal at Stacy Elementary was almost always present when teachers met to discuss Aimsweb® data and, in fact, provided the teachers with the data to be discussed. The Aimsweb® RCBM (a nationally normed fluency screener) data was the school’s only measure of student progress that was discussed within the teacher team meetings. Only the principal, the three teachers, and the Magnet coordinator were present at most meetings. The team met twice a month, per the district mandate, but discussed data only 21.9% of the overall meeting time. This Aimsweb® performance data suggested that if students are above the 21st percentile, they had an 80% chance of passing a state assessment. The data were simplified and students were assigned a color based on their test score (red, yellow, or green).

• Red- a color utilized within the Aimsweb® Data System to indicate that students are struggling academically
• Yellow- a color utilized within the Aimsweb® Data System to indicate that students are not having major academic struggles but they are also not on grade level
• Green- a color utilized within the Aimsweb® Data System to indicate that students are on grade level

The process of sorting students at Stacy was based on the institutional level understanding of the Response to Intervention (RtI) model. RtI is an approach to academic and behavior interventions
based on a three tier model (tier one: core instruction; tier two: targeted small group interventions; and tier three: intensive individual interventions) that provides early, systematic, and appropriately intensive assistance to children who are considered at risk or who have a school identified deficiency in a particular skill (RtI Action Network, 2015).

In Stacy’s implementation of RtI policies and practices, teachers did not discuss either student performance data for instructional practices or instructional practices that shaped performance data of students. Rather, they used the data to divide students into preassigned tier two interventions, based on the Aimsweb® color-scheme. If a student was identified as being in the “red” category, he received intervention A (a tier 2 computer based intervention). If a student was yellow, he was in intervention B. If a student was green, he went to enrichment. Special education students were not discussed. ESL students were sent to ESL instructors and gifted students were not discussed. Teachers commented that the process felt like a sports draft or an auctioneer speaking on an auction day (Fieldnote: 2/04/2014). If a student was given three interventions and he was still labeled as red, the student was referred for special education. With this routine in mind, the teachers began a rapid placement of students into predetermined interventions, with no discussion of what skills, instructional strategies, or resources were needed for each student.

Brook Elementary stood in contrast to Stacy Elementary. Instead of the principal providing the data for teachers, teachers discussed the science, spelling, and math assessment data, Aimsweb® data, DRA, running records, and other assessments that were available to them, all of which they individually collected and analyzed. This teacher team met weekly to discuss data, despite the district only requiring twice monthly meetings. The teacher team was led by the teachers and the instructional coach, who established the agenda each week. The teachers
discussed why students missed questions on the pretest compared to the post test as well as the exact wording of the assessment items. They also compared students across the classrooms, and analyzed how teachers presented information. In these meetings, the teachers discussed both tier 1 and tier 2 strategies concurrently, since these teachers were responsible for core instruction as well as small group instruction (whereas at Stacy, teachers sent students to tier 2 interventionists). The instructional coach provided suggestions for instructional techniques and ways teachers could reassess students. Although the principal was largely absent from meetings, the principal was recognized among teachers for sheltering teachers from district mandates that did not focus on improved teaching and learning and for making sure that the data talk time was not interrupted by outside factors. Also, the principal held building level meetings called vertical team meetings where data were used to examine specific concerns about the African American student population, such as “Why is there an overrepresentation of black students being referred for disciplinary infractions?”

Although the district largely wanted teachers to focus solely on literacy assessments, teachers at Brook spent a great deal of time discussing a variety of assessments, as they felt these were also important in a STEM academy. In this context, teachers spent approximately 35.8% of their allotted time discussing student data.

Finally at Warren, data were used for two distinct purposes: interventions and instruction. Foremost, teacher teams saw larger data systems such as Aimsweb® and MAPS® as useful for placing students in intervention groups based on skills needed. In such cases, teachers discussed students’ scores on select assessments, anecdotal evidence about the students’ behavior, skill level, and interventions that best meet the needs of individual students. This typically occurred three times a year in an event called data days that were discussions held with teachers,
interventionists, special education instructors, the instructional coach, and the principal. Warren teachers also used Wonders data for bimonthly discussions on instructional practices with teachers. These meetings largely consisted of the principal, instructional coach, and the teachers. Teachers brought the data printouts that were most useful for them. For example, one teacher brought Class Proficiency Data, another the Class Grade Book Data, and yet another the Class Progress Report across several weeks to identify trends in student performance.

The teachers were asked to focus on data trends for their respective classes and patterns of achievement. When teachers stated outside factors such as student motivation and home life, the principal and the instructional coach shifted the tone of the discussion by having teachers focus on whether teachers differentiated teaching strategies and differentiated tests, whether more time was needed for reteaching, or whether a different curriculum or an adjustment to the curriculum was needed. This approach by the principal and instructional coach was facilitative and allowed teachers to openly talk about challenges within the classroom as well as strategies needed to promote overall student improvement. The principal did this by asking very poignant questions about how training, materials/curriculum, instruction, and student behavior affected students’ scores. The instructional coach also challenged teachers’ preexisting thoughts and beliefs about students by asking questions such as “What evidence would help you create better instructional decisions? What needs to be done in order to give more time for writing? How can we better support our students’ with low motivation?”

Although African American students only made up 23% of the overall population, the principal and the instructional coach made a concerted effort to have teachers discuss the performance level of African American students in their class. Given the overrepresentation of African American students who were lower performing, the principal and instructional coach
used various initiatives regarding data that included, but were not limited to, having teachers look at their own performance data and brainstorm ways they could help African American students improve performance, hosting a variety of speakers to help teachers develop cultural responsiveness, and using a “we” approach to help teachers develop appropriate strategies.

**Comparing Three Schools**

The institutional patterns varied across schools. Although Brook and Stacy were under similar mandates to make their schools less racially identifiable (as they both had a large African American population), Stacy only used data to sort students into pre-assigned intervention groups, whereas Brook took the opportunity to question instructional practices and the assessments themselves. The variations can be attributed in part to the leadership styles of building principals, routines for data use, and the types of data used.

Furthermore, the ways in which data were interrogated shaped teacher team definitions of the problem of student performance. For Stacy, the institution attributed the problem of low student performance to students themselves, and hence teachers did not question their own instructional practices. For Brook, the institution defined the problem of low student performance as a teacher problem, thus teachers were instructed to interrogate their own practices at the classroom level. The presence of the instructional coach helped to solidify these beliefs by continuously prompting teachers not to blame problems on deficit thinking, but to respond to the needs of students. Warren leaders defined the problem as systemic, focusing on student needs, teachers’ instructional strategies, as well as institutional changes (e.g. changing time in the school day to allow more time for reteaching and developing more opportunities for teachers to learn).
A forensic look at Stacy, Brooke, and Warren shows that institutional framing of the problem is important in shaping how teachers respond to students and student data. Furthermore, these framings are important for defining what teachers see as important data, ideas, and processes in interpreting data.

**Interpersonal Level**

By using level three of Hodges Persell model we can investigate how teachers’ expectations of students vary depending on the social attributes children have and the meaning these social attributes have for teachers. These ideas can be brought to bear on examining practices of data use in schools by considering the types of narratives used to describe students and student abilities, the types of narratives that were silenced, and whether alternative explanations about students and students’ data were brought to the forefront. School leaders interested in interrogating data from the interpersonal level may ask:

- Are parent involvement policies welcoming of all parents? (e.g. What opportunities are there for parents to interact with teachers and within the schools? How do teachers interact with parents? Are these interactions guided by perceptions teachers have of types of students or homelife?)
- How much time is spent in data discussions examining teachers’ instructional strategies?
- Is educator stability/teacher retention a problem within schools? What factors contribute to this?
- Are special education and ESL students given access to quality curriculum and instructional time? (Are ESL students assessed or provided resources for skills other than their English speaking skills?)
- Are teachers trained to interrogate data and examine internal factors instead of external factors? Do teachers have a shared belief in deficit models as explanatory factors shaping student performance?
- Do tracking programs prevent low-achieving students from interacting with higher achieving students? Interacting with a higher/more engaging curriculum? Are ways of sorting students by data simply becoming new forms of tracking?
- Do conversations around data use simply focus on students’ needs and not on student capabilities? As such, do conversations recognize student abilities or is there a strong implicit bias regarding the race of a student?
• Do hiring policies actively seek out African American administrators/teachers? Is there an equal representation of African American instructors as compared to the student population? Do retention policies and practices encourage them to stay?
• Are teachers’ views challenged by equitable leadership and others regarding inequitable views of student learning and student progress?
• Are the norms and culture of teacher team meetings conducive to problem-solving, collaborative culture, and equitable consciousness?
• Do school leaders across schools meet frequently to discuss the lowest percentile of students and what can be done to help them succeed? Use of root cause analysis? Do school leaders across schools meet frequently to discuss the highest percentile of students and what can be done to help them succeed?
• What types of infractions occur most often and what time of day?
• Does the seniority policy within schools leave students without access to quality teachers?

Questions such as the ones mentioned above provide an opportunity to interrogate interpersonal aspects which may influence teachers’ explanations of student performance data. This forensic approach to the interpersonal level proves important for understanding why collective patterns of data use and other behaviors appear as they do within schools.

_A Spotlight on Interpersonal Factors at Stacy, Brooke, and Warren_

Within teacher team meetings, Stacy teachers rarely explained data with reference to instructional practices or factors over which teachers had control (i.e. inward factors) (Coburn, 2001); rather, teacher team members associated student data with the student having an undiagnosed cognitive disability or there being a mismatch between students and the assessment (see Table 1). This is particularly important in that data use routines at Stacy supported an RtI model for placing students in special education once they received three interventions. Thus, the dominant discussion around explanations of student factors consisted of a discussion of factors over which teachers had no control (i.e. external factors) leading to student placement in special education. The role of data was simply seen as “evidence” to move students from one placement to an ultimate special education placement. Table 1 provides a description and numeric
tabulation of Stacy teachers’ explanations of student performance data during their teacher team meetings.

Table 1. Stacy Teacher Attribution of Student Characteristics to Data

<table>
<thead>
<tr>
<th></th>
<th>Explanations of performance</th>
<th>Characteristics of Child (Smart, talented, gifted, behavior)</th>
<th>Equipment Problems</th>
<th>Homelife</th>
<th>Instruction</th>
<th>Mismatch between student and assessment</th>
<th>Students underlying conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stacy</td>
<td>26</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>15</td>
</tr>
</tbody>
</table>

Although members of the teacher team at Stacy (including the principal, instructional coach, and the Magnet Coordinator) were present in data meetings, rarely were the instructional coach, ESL teachers, and school psychologist present during meetings. This is problematic in that alternative explanations regarding student performance rarely entered the discussion. This also reduced the chances that teachers would focus on inward factors such as instruction to examine student performance. Furthermore, the structure of collaboration and the data use routines did not provide an opportunity for teachers to see each other as resources. Therefore, the conversation never extended beyond surface level discussions of student placement nor allowed teachers to fully discuss their instructional practices in a way that would be meaningful.

Brook teachers more often varied in their responses to students than those at Stacy. Teachers typically saw student performance as being part and parcel of the characteristics of the child, such as the child missing knowledge in some discrete skill (see Table 2). While these characteristics affected teachers’ beliefs in outside factors affecting student performance, teachers also saw their own instructional practices as a contributing factor to student performance. In addition, teachers also saw the mismatch between students and the assessment as being factors that contributed to low student performance. This shows that teachers’ collective narrative regarding students was based on both inward and external factors. This dichotomy may
be reflective of not only societal level beliefs, but also the institutional routines that shaped the types of explanations among teachers.

The principal at Brook stated it was important that teachers got along for the sake of students, and thus encouraged teachers to build a foundation of mutual respect and camaraderie. These factors shaped how teachers saw each other and how they discussed student data. For example, Brook teachers initially saw gifted students’ problems as less of a concern than the problems of struggling students (Fieldnote: 5/29/14). Thus, they disregarded the gifted teachers’ concerns about her struggling students by minimizing and suggesting gifted problems were not “real problems”. This caused the gifted teacher to disengage from the teacher team discussions. However, with assistance from the instructional coach and the principal, the teachers found a way to resolve their differences (through open dialogue and an off-campus retreat) and focus on the topic of improved instructional outcomes for all students, simply by improving the levels of trust as well as the quality of the data use routine. Table 2 provides a description and numeric tabulation of Brook teachers’ explanations of student performance data during their teacher team meetings.

Table 2: Brook Teacher Attribution of Student Characteristics to Data

<table>
<thead>
<tr>
<th>Explanations of Performance</th>
<th>Characteristic of Child</th>
<th>Equipments Problems</th>
<th>Home-life</th>
<th>Instruction</th>
<th>Mismatch between student and assessment</th>
<th>Students underlying conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brook</td>
<td>59</td>
<td>23</td>
<td>1</td>
<td>8</td>
<td>15</td>
<td>12</td>
</tr>
</tbody>
</table>

Warren team members often discussed a variety of factors that may affect student performance (see Table 3). Because there seemed to be a high degree of communication and trust within the group and between members, teachers oftentimes supported each other as well as
provided assistance to help troubleshoot problems occurring in classrooms. Although teachers looked at factors such as the characteristics of the child (e.g. a student’s motivation or whether the student is smart), the principal and the instructional coach were able to turn the conversation to factors that could be remedied by the instructors. This included a focus on ways to engage students more in class, ways to better align the assessment with the student through the use of differentiated testing strategies, and ways to ensure that teachers have tried a variety of instructional strategies. Because of the openness in lines of communication between the teachers, the principal, and the instructional coach, the teachers engaged in thoughtful and reflective dialogue regarding ways to improve student achievement. Table 3 provides a description and numeric tabulation of Warren teachers’ explanations of student performance data during their teacher team meetings.

Table 3: Warren Teacher Attribution of Student Characteristics to Data

<table>
<thead>
<tr>
<th>Explanations of Performance</th>
<th>Characteristics of Child</th>
<th>Equipment Problems</th>
<th>Home-life</th>
<th>Instruction</th>
<th>Mismatch between student and assessment</th>
<th>Students underlying conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warren</td>
<td>26</td>
<td>12</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>5</td>
</tr>
</tbody>
</table>

Interpersonal factors are important because they determine the types of conversations considered acceptable and unacceptable within teacher teams. This is especially important in understanding how societal level and institutional level factors shape teachers’ discussions and explanations of student data within teacher team meetings. Last, the interpersonal level determines the types of narratives that are given legitimacy, the types of people who are given entrée and access to make decisions, and the specific skills each person is allowed to exercise within the group.
Intrapsychic Levels

The final level of the Hodges Persell model focuses on educational outcomes for students (both cognitive and non-cognitive). This includes feelings regarding student motivation, student performance data, and students’ feelings of themselves in relation to others. Yet, for this analysis, I discuss teachers’ beliefs and teacher efficacy and how it impacts educational outcomes for students. These ideas can be brought to bear on examining practices of data use in schools by considering teachers’ individual beliefs about themselves as educators, their level of efficacy in the classroom, and their beliefs about student achievement as a result of interacting with diverse students and student data. Schools seeking to address the intrapsychic levels may ask the following questions:

- Which instructional practices produce higher student outcomes, fewer behavioral problems, and cause students to engage more in learning? Are teachers taught to engage students using culturally responsive differentiating strategies and teaching techniques?
- Do teachers feel they are provided with enough resources and opportunities to see success within their schools?
- What do teachers really feel is the problem of student performance levels, particularly among African American students? How does that shape the ways they approach teaching and instructional practices for those students?
- Do teachers feel they are able to reach “those types of students”?
- Do students feel supported by their instructors, guidance counselors, and community members within schools? Are individualized supports provided to students (e.g. tutors, peer assistance, and individualized support) to help them achieve mastery over skills on a continual basis?
- Are students more apt to drop out or disengage as a result of a disconnect between teachers and students?
- Have routinized instructional practices caused disengagement within students?
- Are there opportunities for students to develop positive relationships with adults (e.g. mentorship programs, counseling programs, etc.) that encourage student engagement?

These ways of interrogating practices place teachers’ personal beliefs about students’ cognitive and non-cognitive outcomes at the forefront and show how such beliefs may impact teachers’ interpretations of data as well as the students’ outcomes regarding data.
Although there were variations in the types of institutional and interpersonal practices at each school, teachers across all three schools had very similar responses in their personal beliefs regarding African American student performance.

When teachers were asked about the problems associated with low student performance within Stacy Elementary, they openly admitted that the school lacked the resources to provide interventions with all of its in-need students, instructional support for teachers was lacking, students were not getting what they needed in their core instruction or in tier 2 interventions, and teachers rarely accessed data on their own to analyze student scores. Teachers also stated other factors such as the changing of the Magnet theme, the lack of control over discipline, the lack of professional development to help teachers learn how to read and interpret data, and the need for teachers to focus on understanding student struggles were dire to student improvement. Despite the beliefs that institutional factors were inhibitors of student success, teachers articulated in private their belief that for African American students, outside factors such as the students’ home lives, cognitive disabilities, and student motivation were the reasons students did not perform well. Furthermore, teachers suggested that because the factors were external to themselves, they do not change their instructional practices (Fieldnote: 5/8/14). Only the gifted instructor, a veteran instructor, suggested the problem was because of a history of racism and because African American students oftentimes got the worst teachers. However, when in a group of peers, this same view was not expressed.

In interviews with Brook instructors, teachers likewise stated that the low performance data was a byproduct of the “bad home life” of students. Yet, teachers were challenged by their instructional coach to “do something” about the scores at the institutional level. These beliefs
suggest teachers are participating in a routinized practice of saying they will change the practice because they are mandated to do so by the instructional coach, but do not make a very significant effort to change the practice because they believe the problem of low test scores is out of their hands as instructors and that low performance data are really an outside problem caused by poor homelife of students. Although this was the dominant narrative among teachers, one African American teacher felt as though it was the teachers who lacked patience and care when teaching African American and low income students. Yet, she did not openly voice this narrative, as it countered the dominant group narrative of students coming from bad home-lives.

At Warren, although teachers largely suggested low scores were a byproduct of testing glitches and a lack of time to reteach skills, teachers also mentioned that some students lacked motivation within class. When pressed on these ideas in private interviews, teachers suggested many lower performing students had troubled home lives or unsupportive parents, and that the problem was largely a societal level problem, particularly among African Americans. These beliefs suggest that although teachers were much more willing to look at internal factors in teacher team meetings and to not blame the students in the open, they were much more likely to harbor student deficit perspectives internally. This may affect how teachers respond to African American students who need more assistance within the classroom.

It is important to understand teachers’ deficit perspectives associated with student performance, as these factors may largely affect teachers’ responses to the students in the classroom. Across all three cases, teachers had an overwhelming belief that the problems were associated with factors outside of their control. By taking such a stance, teachers missed opportunities to promote equitable outcomes for such students, as they saw students as being inherently broken as a result of their backgrounds.
The intrapsychic level is much more elusive than the other levels, yet is important in understanding the beliefs and practices guiding teachers’ decision making processes. These thoughts and ideas provide much needed insight into teachers’ own beliefs and dispositions that guide their thoughts about student performance. Whether teachers change instructional practices or whether teachers focus on inward/external notions ultimately determines their regard for students and their belief in whether the student achievement gap is because there is an issue with the institutional approach to students or whether they simply see students as the problem.

**Discussion and Conclusion**

A theoretical framework for addressing how schools can embrace more equitable outcomes has largely been absent from teacher and principal training programs within the U.S. Scholars have focused on schools as learning environments, places of inequitable resources, and have also focused on the relationship between teachers and students. Despite these varied approaches, we have failed to operate within a theoretical framework that lets us create an integrated set of questions that recognizes the various factors affecting equity outcomes from multiple levels. Hodges Persell (1979) offers us a way of integrating factors at the societal, institutional, interpersonal, and intrapsychic levels, and shapes our understanding of how these factors contribute to the nature of fairness in the teaching and learning context of schools.

Various scholars have begun to examine equity within K-20 settings. For example, Skrla, Mckenzie, and Scheurich (2009) discuss teacher quality and programmatic equity as the impetus for academic excellence at the K-12 level. Likewise, Bensimon and Malcom (2013) have done similar work at the higher education level. However, these works, despite their success, do not invite an explicit examination of the relationship between the varying levels of analysis. If we
are to prepare school leaders and teachers to manage schools in an equitable way, we must craft a framework that helps us develop the appropriate questions explicitly telling us the types of data we should seek, where school assets are, and where school assets need to be redistributed in order to provide a just education for all children.

If the ultimate goal is to make schools more just places for all students, we must begin to address the disparities in race, gender, poverty, graduation, and overall achievement differently. We could continue to address the problems iteratively to assess the absence of fairness or the absence of justice in each situation, but perhaps a better approach is to look at these disparities as one complex entity. Such a framework should help to ensure that resources are allocated in a fair and just way across communities of people and that practices and policies are interrogated in a way that shows which practices create or enable disparities. It should also seek to inform a principal or team of educators where the overall organization is not working at optimal capacity. The Hodges Persell framework does just that by helping us to create an equitable environment irrespective of who comes through the door at a public school. Such a framework tells us how to build a work environment for teachers and students by equipping school leaders with a different set of questions about schools in order to make them just places of learning.
References


MANUFACTURING EQUITY: CHARACTERISTICS OF EQUITABLE DATA USE PROCESSES

In recent years, much has been written about the role of data driven decision making (DDDM) in guiding school reform policies, for identifying students who struggle, and for supporting student achievement as well as school improvement. Mandinach (2012) sees data driven decision making as the federal government’s attempt to ensure that all educational practitioners are using data and evidence to inform policies and practices as well as impact the teaching and learning process in schools. Research largely supports the idea that data for instructional decision making can lead to improved student performance (Wayman, 2005; Wayman, Cho, & Johnston, 2007; Wohlstetter, Datnow, & Park, 2008), but also suggests that improved student outcomes are not simply a byproduct of a school’s declaration that it is “data-driven.” Rather, scholars suggest improvements based on the use of data must be accompanied by a school culture and climate that promotes educational excellence for all students, particularly through school-based initiatives such as professional learning communities (Bourdett, City, & Murnane, 2005; Kanold, Toncheff, & Douglas, 2008; Chenoeth & Theokas, 2013).

Despite an emphasis on the organizational structure needed to support improved student outcomes, the literature on data use has been largely silent on the process of teacher team meetings or professional learning communities that support or hinder equitable data use, particularly teacher team characteristics that shape their decision making processes (Datnow & Park, 2014). Datnow & Park (2015) suggest that there are five principles that support equity within data use: 1) articulate purpose and commitment to equity; 2) don’t rush or hastily make decisions about instructional strategies based on data; 3) use caution when using data for purpose beyond their intended purposes; 4) focus on student engagement; 5) and use professional
judgment. Likewise, Johnson (2002) suggest that there are five stages to using data to offer help and hope in schools: 1) building the leadership and data teams; 2) killing the myth/building dissatisfaction (that low income students aren’t able to succeed); 3) creating a culture of inquiry; 4) creating a vision or a plan for the school; and 5) monitoring progress. While these scholars are taking a step in the right direction in terms of discussing principles that are important for guiding equitable data use, they fail to discuss how these principles translate into actual processes and practices within teacher teams.

_Equitable data use_ (or equity driven decision making) is the use of a wide variety data that allows school leaders to discover inequitable processes within their schools. This approach to data use is warranted, given the growing diversification of America’s school system. Demographers predict by the year 2020, the student population will be largely comprised of minority students (U.S. Census Bureau, 2015). Yet, white students’ scores on national performance measures still surpass scores of Black, Latino, and select Asian student populations on standardized tests by a substantial margin (NAEP, 2014). Thus, it is important to underscore data driven processes that are responsive to the unique challenges and opportunities of a diverse student population.

**The Purpose of this Study**

This study examines practices of data use within two teacher teams in two diverse school settings and whether their data use for instructional decision making promotes or inhibits equitable practices within those schools. The processes discussed in this study are not meant to serve as “the” key processes of data use that attend to issues of equity (as there may be many factors that promote equity within schools), rather is meant to examine _some_ processes that may address equity within teacher team data use.
There are six processes a teacher team may engage in order to address issues of equity, which include, but are not limited to, maintaining a culture of collaboration and trust; disaggregating data by race, class, and gender; challenging beliefs and assumptions; creating opportunities to learn about data; explaining data; and establishing a code of ethic for data use. These processes emphasize that the work of equity within teacher teams occurs before, during, and after data discussions, and can be seen as a set of interlocking steps or actions that shapes how teacher teams “do” the work of equitable data use. These processes emphasizes the conditions under which equitable data use occurs (or does not occur), when it occurs, how it occurs, and how students are viewed as a result of the process. This approach varies tremendously from processes and practices simply seeking to use data for triage (Booher-Jennings, 2005) or simply using data for accountability measures.

**Maintaining a Culture of Collaboration and Trust**

Several scholars suggest an organization must provide the conditions necessary to create positive change within it. Gamoran, Guneter, and Williams (2005) state professional learning communities provide the technical atmosphere and shared values that support change within schools, such as providing teachers with colleagues who can provide feedback, collaborate on solutions, and reinforce norms about teaching (Hedges & Schneider, 2005: 115). Teachers experiencing a culture of collaboration and trust are able to openly discuss data and instructional practices with their colleagues in a judgement free zone. Jensen (2011) states teachers of diverse learners need opportunities to see and hear success stories from teachers who are able to excel with students who teachers may feel are difficult to teach. An open, collaborative, and trusting teacher team meeting gives teachers the space to problemsolve and to provide each other feedback regarding best practices and culturally responsive solutions for diverse students. Such
an atmosphere reinforces a spirit of collegiality, instead of simply an atmosphere of distrust and isolation.

**Disaggregate Data by Race, Class, and Gender**

Federal policies mandate schools take a critical look at data and equity in a response to increasing accountability policies. *No Child Left Behind* and *Race to the Top* demand the use of disaggregated data to examine whether schools are responding to issues of equity in ways that promote improved student outcomes for subpopulations by race, SES, limited English proficiencies, and disabilities. Teacher teams may use these data to address inequities within their schools, specifically when examining how various subgroups and diverse student populations perform on assessment data. These data can be the catalyst to create targeted programming, instructional strategies, and other approaches to reaching diverse student groups.

**Challenging Beliefs and Assumptions**

When examining equity within schools, teacher teams must be willing to challenge existing beliefs and negative assumptions about student populations. Skrla, Mackenzie, and Scheurich (2009) argue that narratives focusing on deficit thinking may impede teachers’ willingness to examine data for equity related purposes. In order to promote equity within data use practices, Bensimon and Malcom (2013) suggest there should be an expert that understands group stereotypes persisting within schools and must be willing to help teachers use data to reshape their beliefs about students and their abilities. The expert must be willing to present arguments countering deficit thinking as well as willing to correct false assumptions about student motivation and family dynamics, thus helping teachers focus on instructional practices for improving student outcomes. Similarly, teacher teams must develop questions and pursue data promoting answers to the types of questions that will create new policies and practices
within schools designed to reach all student populations (Jensen, 2011). This includes bringing voices that do not reflect the dominant view, but reflects views of those who may be labeled as “others,” thus giving teacher teams the opportunity to see data and the process of teaching and learning from a myriad of perspectives.

**Creating Opportunities to Learn About Data and Equity**

Opportunities to learn about data and equity addresses whether teachers are given the professional resources necessary to learn what data mean; how to read data; how to adapt teaching practices for improved student outcomes; and how to discuss inequity in schools within teacher team meetings (Rosenholtz, 1991; Darling Hammond, 1996; Jensen, 2011; Murnane & Duncan, 2011). When placed in learning impoverished settings, teachers blame students for their lackluster performance (Diamond, Randolph, & Spillane, 2004); blame parents for student problems (Delpit, 1995); and believe that students are naturally deprived and thus will not be able to succeed (Delpit, 1995). In order to exact equitable change, teacher teams need opportunities to grow.

**Explaining Data**

Coburn (2001) claims teachers’ interpretations of instructional policies are deeply framed by their own worldviews. She argues that when teachers see a connection between instructional policies and their own classroom practices, they are more likely to focus on their own classroom practices and ways they can support initiatives (inward facing dialogue). However, when teacher team members do not see a connection between instructional policies and their own classroom experiences, their conversations center on superficial dialogue that does not focus on their classroom practices (outward facing dialogue). Likewise, Bertrand and Marsh (2015) argue that how teachers attribute outcomes of data influences their motivation to take action in response to
data. I chose to extend these authors’ viewpoints by adding that teachers’ views of equity as well as teachers’ sense of efficacy regarding student achievement (particularly for diverse student populations) strongly impacts the ways in which teachers attribute outcomes of student data or the actions they take regarding student data.

In extending Coburn’s notion to teacher teams’ use of data, I argue there are four types of factors shaping teachers’ belief regarding data: inward changeable factors, outward changeable factors, inward non-changeable factors, and outward non-changeable factors. They are defined as follows:

- **Outward Changeable**—factors that are outside of the school context, but which teachers feel they have the power to change or to control (e.g. teacher feels student does not have support at home so they provide child with additional classroom support),
- **Outward Non-changeable**—factors outside of the school context which teachers feel they have no power to change or control (e.g. parental involvement; student disability; language barriers; developmental delay/audio/visual delay),
- **Inward Changeable**—factors inside the school context that teachers feel they can change or control (e.g. teachers lack of understanding of how to read data; teaching students test taking skills; assigning students to intervention groupings)
- **Inward Non-changeable**—factors inside the school context that teachers feel they cannot change or control (e.g. trick questions on district assessments; lack of materials to assess students).

These beliefs may be shaped by factors such as teacher team members’ perceptions of students and policies surrounding data use, teacher team members’ collective view of their work environment, or teacher team members’ levels of efficacy.

**Establishing a Code of Ethic for Data Use**

While data use is important for understanding student groupings and school improvement, teacher teams must see students as people with thoughts, feelings, and opinions. Begley (2009) suggests when we make data driven decisions, we should make them based on the ethic of justice, ethic of critique, and the ethic of care. Ethic of justice refers to using rules,
policies, and procedures objectively and unilaterally to support actions or decisions. According to Shapiro and Stefkovich (2010, p. 13), the ethic of justice focuses on the good of the majority and considers questions such as “If there is a law, right, or policy that relates to a particular case? If there is a law, right, or policy, should it be enforced? And if there is not a law, right, or policy, should there be one?”

In contrast, the ethic of critique suggests teachers cannot simply view students in light of what school policies and practices dictate; rather, teacher teams must understand laws and policies through the lens of oppression, power, privilege, authority, voice, language, and empowerment. According to Shapiro and Stefkovich (2010, p. 15), the ethic of critique focuses on questions such as “Who makes the laws? Who benefits from the law, rule, or policy? Who has the power? Who are the silenced voices?”

Finally, the ethic of care is juxtaposed to the ethic of justice and the ethic of critique, as it values multiple understandings, compassion, and trust, and places student learning at the heart of the discussion. Shapiro and Stefkovich (2010, p. 18) state the ethic of care focuses on questions such as “Who will benefit from what I decide? Who will be hurt by my actions? What are the long-term effects of a decision I make today? And, if I am helped by someone now, what should I do in the future about giving back to this individual or to society in general?” Begley (2009) suggests educators making decisions should employ value driven, socially, and culturally sensitive ways to make decisions.

A teacher team that seeks to respond to the needs of a diverse student population may seek to employ a combination of all of these values as part of their process for equitable data use, in that they may seek to constantly critique and alter policies, personnel, and practices that may promote inequity, while also affirming those attributes that promote the ethic of care and the
ethic of critique in establishing more equitable policies. Such a combination shows that teacher
teams are aware of the complexities of using data for equitable purposes and thus seek to use a
variety of methods that promote student success.

This discussion of these six processes of equitable data use shows which factors should be taken into account within examining data. This is not meant to be a definitive listing of processes nor is it meant to be a call for action. Rather, the absence or presence of these factors in the following discussion shows how such features can shape the data use conversations within two different schools.

Site and Circumstances of the Study

This is a study of two teacher teams in two elementary schools (Stacy Elementary Grade Level 4 and Warren Elementary Grade Level 3) within one small-urban school district (East School District) in the Midwest and how some features of data use processes that attend to issues of equity appear within such settings. I chose these two teams because their school organizational styles, leadership styles, and team dynamics were very different, despite being teacher teams within the same district. Data for this study were gathered through observations of teacher team interactions and dialogue within their grade level meetings.

District Context

According to the State Report Card (2014), East District has 16 schools and serves 40% white students, 34% black students, 10% Hispanic students, and 4% Asian students. 57% of the student population is low income, 7% of the student population is English Language Learners, and 13% has disabilities. Despite the diversity of East District student population, the teacher population at East District is 82.9% White, 8.7% Black, 4% Hispanic, and 4% Asian.
East District sees data use as pivotal for instructional improvement and for improving student achievement of all students, with a specific focus on African American and special education students. East District is “…committed to diversity, and believes diverse schools offer the finest education to all students” (District Website, 2015). From 2002 to 2009, East District operated under a court mandated consent decree because of the distribution of unequal resources and unequal access to education for African American students within the district. Since then, the district has renewed its commitment to increasing achievement levels and access to opportunities for all students through a number of initiatives and programs such as a committee for educational equity, a social justice committee, a school choice plan, and diversification of its faculty and staff (District Website, 2015).

Beginning in October, 2014, the focus on African American students’ achievement seemed more explicit in response to the post consent decree mandates, with a memo from district administrators asking school level leaders “How do you know your African American children are learning? What evidence do you have to support this?” This call for evidence stood in addition to the district’s concurrent initiatives such as establishing Smart Goals (goals for African American and special education students for each school based on performance data and used as a key component in the principal evaluation system), a new teacher evaluation system based on the Charlotte Danielson Framework, district mandates for biweekly teacher team meetings for teachers to discuss data, the implementation of a Response to Intervention (RtI) framework focusing on students considered “at risk”; and the district’s data fidelity plan to ensure schools are collecting data frequently and correctly. These goals and mandates are supported by making use of data from formative, summative, and benchmark assessments such as Aimsweb®, Measures for Academic Progress (MAP) data, Diagnostic Reading Assessment
(DRA), progress monitoring, a new curriculum called Wonders (which has its own weekly assessments), and teacher generated assessments. These assessments are widely used to support and assess literacy within the schools, as the chief focus within the district is improving the literacy skills of all students.

**Stacy Elementary Grade 4 Team**

Stacy Elementary School is located in a low-income, predominately African American neighborhood. The school’s reputation within the community is not particularly high, with 71% of teachers saying they would not recommend this school to a friend seeking to place a child (School Climate Survey, 2014). Because of the large African American student population (53% African American students, 81% low income students, 17% ESL population, 11% disabled population) and district mandates after the consent decree to show that African American students are learning (State Report Card, 2014), Stacy has been under increasing pressure to show data that reflects an increase in student scores on a variety of assessments. Stacy has been on the state Watch List for low state test scores for several years, has a large achievement gap between its white students and black students (54 point difference in Reading and a 30 point difference in Math in 2014) (State Report Card, 2014), and as a result has been under district mandate to make the school racially non-identifiable by changing its curriculum to attract more middle class white students to the school.

The Stacy Elementary School 4th Grade Teacher Team meets twice a month for data discussions, although the actual amount of time devoted to discussions of data is minimal. The team is composed of an all-white instructional staff, one white female instructor who serves as the gifted instructor, two white male instructors, and a white female principal. Stacy Grade 4 staff members examine student data through a benchmarking data monitoring system tool called
Aimsweb®, a universal fluency screener designed to identify and monitor at risk student populations by comparing students to other students in the United States on a nationally normed assessments.

**Warren Elementary School Team 3**

Warren Elementary School is located in a middle class, white neighborhood within a small urban community. The school has a reputation of being a highly resourced school, a very nice community school, and a parent supported school—with 93% of teachers saying they would recommend this school to a friend seeking to place a child. With a population of 42% white students, 23% black students, and 54% low income, 20% English language learners, and 17% of students with disabilities (State Report Card, 2014), Warren teachers have not been feeling the effects of district mandates to show evidence that African American are learning as much as Stacy, although there is an achievement gap between its black and white student population. Warren has widely been herald as one of the district’s more successful school in terms of its practices for data use and parental involvement.

Warren teachers meet twice a month to discuss data, with the first meeting used to discuss core instruction and the second meeting to discuss tier 2 interventions (students who need specific interventions). The teachers at Warren consist of an all-white instructional staff: three white teachers (although students are not separated into a gifted class), white instructional coach, and a white principal. Warren teachers focus data discussions on weekly data from a new curriculum called Wonders Curriculum, but also discuss Aimsweb® and MAP data (which are used as benchmark assessment data for students three times a year).
Data Collection and Analysis

This project uses data from a larger Spencer Funded study regarding data use in elementary schools, where I served as a researcher. This study was a comprehensive field study of teacher teams from three elementary schools in one small-urban school district (9,948 students enrolled) in the Midwest. The overarching aim of the study was to examine the phenomenon of data driven decision making within schools from a teacher team perspective. We chose these sites based on their willingness to participate and their diversity with respect to race, ethnicity, socioeconomic status, and ability. We also chose to focus on these sites using qualitative methods because little research has been conducted on the micro-processes of data use within schools (that is, what teachers actually do in workplace and professional development contexts) (Little, 2012). Participation within this study was voluntary. This study focuses solely on the interactions within each teacher team and thus, does not make generalizations regarding the entire school, as this study was only focused on teacher team interactions.

For this paper, I focused solely on two teacher teams within two schools (Stacy Elementary Grade 4 and Warren Elementary Grade 3). These sites were chosen because they widely differed in their approach to equity and data use and provide a great point of comparison between the various ways the subject of equity can be addressed using data. This study is informed by data collected from observations of 16 grade-level team meetings, 7 at Warren Grade 3, and 9 at Stacy Grade 4 using a teacher team data use field note guide created by our research team. Stacy Grade 4 spent approximately 26% of its time on data and Warren Grade 3 spent approximately 36% of its time on data.

---

2 The research reported here was part of a Spencer Foundation-funded study of data use. The study was directed by Professor Jennifer Greene at the University of Illinois Urbana-Champaign. The views expressed in this article do not reflect the views of the Spencer Foundation.
Participants

Team compositions varied across elementary schools. In Stacy Grade 4, team members consisted of the principal and three instructors (with occasional input from the Magnet Coordinator). These team members met twice a month for the purpose of being data driven as a part of their school-level and district-mandated organizational routine (Spillane, 2012). Team members varied in their years of experience with K-12 education, in that team members ranged from 2 years’ experience as educators to approximately 15 years of experience. At Warren Grades 3, team members consisted of the instructional coach, principal, and three instructors. These team members met twice a month for the purpose of being data driven as part of their school level and district-mandated organizational routines (Spillane, 2012). Team members varied in their years of experience with K-12 education, in that team members ranged from 1 year experience as an educator to 25 years’ experience as an educator.

Data Collection and Analysis

Data collection began during the Fall, 2013 school year and ended in the Spring, 2015 school year (two academic school years). Data collection was planned in order to observe teacher teams in the throes of using data for instructional decision making. These included teachers meeting for regularly scheduled data discussions and also special days called “data days.” We used a fieldnote guide created by our Spencer Research team to discuss features of the teacher team data use, including but not limited to: data discussed, character and tenor of the data talk conversation, participant relationship and engagement, character and quality of the data use conversation, how student characteristics and district politics appeared in data use, and how concerns were addressed (See Appendix A for Teacher Team Group Observation Protocol).
Data collection and analysis occurred simultaneously throughout the study year (Miles & Huberman, 1994).

Fieldnotes were written for each observation session and coded descriptively for two reasons: 1) to identify the types and ways teacher teams used data and the discussions had around the topic of data use and 2) to identify emerging themes. Likewise, I coded the fieldnotes using the processes mentioned previously. I divided the processes into codes and sub codes based on various definitions garnered throughout the literature. Using the data from grade-level team observations, I worked to understand the nature of the data talk process by understanding the context in which teachers discussed student data, the ways in which teachers discussed from diverse populations, teachers’ explanations of student data outcomes, how long teachers focused on data discussions for these populations, what value and principles guided the data decision making processes, how the organizational context impacted their use of data for equity, and the role of leadership in shaping these processes and beliefs. I used a constant comparative analysis to examine how conversations between the two teams varied in nature. I then applied the codes and sub-codes using deductive and inductive reasoning and an online qualitative software called Dedoose.

I defined data as the results of specific, physical assessments administered to students, including commercialized diagnostic and interim assessments such as Aimsweb®, MAP ®, and DRA®, district-created assessments in science and textbook assessments in math, and teacher generated assessments. Throughout the process, I focused on emerging themes and identifying disconfirming viewpoints and evidence (Miles & Huberman, 1998). The names of the schools, district, and the instructors have been replaced with pseudonyms.
Findings

Stacy and Warren varied significantly in their approach to using data for the purpose of achieving equity. Overall, I identified more processes of equitable data use in Warren than in Stacy. The following section shows the variations within the two schools.

Maintaining a Culture of Collaboration and Trust

In this analysis, I began by assessing whether there was a culture of collaboration and trust among participants, and focused on two ideas: 1) openness of ideas and 2) existence of relational trust among teacher team members. Bryk and Schenider (2003) suggest relationships within schools are central to schools functioning well and are a strong predictor of student outcomes (i.e. relational trust). (Relational trust stands in contrast to other types of trust such as calculative-based trust that is not based on relationships, but based on mutual obligation that benefits both parties; see Scully and Preuss, 1996). At Stacy and Warren, there were fairly significant differences in the collaborative culture and the relational trust among team members. Stacy team members focused on data use routines used to place students in reading based intervention groups, and paid limited attention to developing relational trust among its team members. Warren placed strong emphasis on providing an open environment when discussing data and on developing relational trust among teacher team members.

Stacy: At Stacy, time allotted for data discussions was spent assigning students to research based interventions based on the results of testing displayed via the Aimsweb® color scheme. If a student was identified as being in the “red” category, he/she received intervention A (a tier 2 computer based intervention); if a student was yellow, he/she received intervention B; if
a student was green, he/she went to enrichment; special education students were not discussed; ESL students were sent to ESL instructors; gifted students were not discussed; and students still labeled “red” after three interventions were referred for special education. Little discussion took place among team members regarding instructional strategies or student growth, and using data as an indicator for examining in-class instruction was a rare occurrence. Teachers at Stacy regarded the process of data use as routinized and commented that it felt like a sports draft or an auctioneer speaking on an auction day (Fieldnote 2/04/2014) as illustrated in the following excerpt from one teacher data use meeting (Fieldnote: 9/17/2013):

Mrs. Johnson “So student 1 is ESL?”
Principal: “Right”
Mrs Johnson: “Student 2”
Principal: Sped [special education]
Mrs. Johnson “student 3, student 4, student 5” is all ESL
Mrs. Johnson: “Is student 6 ESL?”
Mr. Taylor: “No”
Mrs Johnson: “Student 7?”
Principal: Sped

In addition to the fact that this routine did not provide teachers with an opportunity to discuss student growth or their own instructional practices, it also did not give teachers an opportunity to collaborate in a way that produced a trusting working relationship or encouraged team members to see each other or the principal as resources for resolving problems within the classroom. Teachers who attempted to ask questions regarding best classroom practices were labeled as weak by other teachers. Furthermore, teachers considered administrative inquiry into their classroom practices as a form of punishment directed toward teachers with “red” or “yellow” students. For example, in a rare instance when the principal asked two teachers about their instructional practices and students’ scores, the two teachers felt they were being targeted
because of their students’ low performance and were reluctant to share classroom problems/concerns with the group as revealed in the following fieldnote (1/27/2014):

   Principal: Mr. Smith and Mr. Taylor, you two have quite a few students in red and yellow…what are you doing with those students when you have them?
   Mr. Smith: Ok, fluency work.
   Principal: What does that look like when you say fluency work?
   Mr. Smith: Uh, chunking.
   Principal: So you have small groups?
   Mr. Smith: (uncomfortably) Yeah.
   (Principal turns to the other teacher)
   Principal: What are you doing with the students in yellow?
   Mr. Taylor: Uh, fluency.
   Principal: Did you look at the goals for the winter benchmarks and have your kids start to chart those goals? Has Mrs. Jones talked to you about goal setting?
   Mr. Taylor: (silence)
   Principal: Alright, concerns for the rest of you?

   This exchange is problematic, in that teachers do not experience a level of relational trust that allows them to learn from and with each other. Teachers often cited the leadership style at Stacy as being a barrier to collaborative learning. The leader was largely seen as dominant, authoritative, and the final authority on all matters.

   Warren: In Warren Grade 3, the level of collaboration and trust among members was high. The instructional coach and principal saw team collaboration time as an opportunity to engage in discussions about classroom practices and the overall patterns teachers saw in students based on performance data. Teachers, having developed a rapport with each other, felt open to talk about patterns of achievement within their classes, struggling students, and how they were responding to the needs of students. The nature of the process of data use at Warren can best be described as collaborative, welcoming of all ideas, RTI-driven, and focused on multiple data points.

   For example, in one meeting, the teacher team at Warren deliberated next steps for a student who appeared to be dyslexic and was struggling on literacy assessments. After
identifying the student’s low performance on several assessments, the teacher team collectively diagnosed the student’s problem and discussed ways each teacher could help promote the student’s learning (Fieldnote 10/28/2014). In this exchange, the teachers showed their willingness to engage in collective problem solving for the sake of the student and were willing to work closely with the principal to discuss next steps. This type of exchange is significantly different from the closed exchange at Stacy. Warren Grade 3 meetings were characterized by leadership that actively facilitated dialogue and supported teachers.

Furthermore, because the culture, climate, and administration of Warren were largely supportive of teachers, teachers did not regard discussion of their teaching as atypical or intrusive. This practice ensured teachers were receiving the support they needed to foster a positive classroom environment and, subsequently, to give students the resources they needed to be successful. Another discussion at Warren shows the openness of exchange between principal and teachers, as teachers voiced their displeasure with the constant focus on testing (Fieldnote, 12/9/2014):

The principal feels the meeting has gotten off track and refocuses the discussion by asking Ms. Thompson if she has differentiated testing for her students. …Ms. Thompson states that students overall do a poor job on the writing prompt because they cannot compare the two stories. This, she attributes, to the vast amount of time spent on testing and the time spent not re-teaching the skills. “We need a break from all of this weekly testing so we can reteach.” The teachers all nod in agreement. Ms. Davis shares her sentiment and states that they definitely needed more time for re-teaching, hence the reason she shortened her weekly assessments. The principal summarizes the ideas of the group and asks the teachers how they would modify the time to include the assessment and lesson to get in more time for writing and reading. The teachers all share their ideas.

Such an open and trusting environment is important when dealing with diverse student populations, as teachers need an opportunity to openly voice challenges that impede the teaching and learning process. Furthermore, the communication style of the principal at Warren set the
stage for welcoming multiple ideas into the circle. This created a milieu for teachers to not only create a positive working environment, but also to help teachers develop successful strategies to promote student success for all students.

**Disaggregating Data Based on Race**

At Stacy, the principal disaggregated student performance data by race, while at Warren, the teachers disaggregated student performance data by race. Neither school, however, attempted to address or discuss the root cause(s) of why African American students were underperforming within their schools.

*Stacy:* In Stacy Grade Level 4, data were mostly disaggregated by student performance levels, not by race. However, the principal, on occasion, mentioned the importance of monitoring African American and special education student population data as a part of her own principal-evaluation goals. She stated:

> As part of my evaluation, I had to write Smart Goals…attending to my African American and sped students. So, for fourth grade, currently one out of seven students made our target for reading and only three out of our twenty five African American students hit the goal, so my goal is to increase that by at least ten percent by the winter. In math, only two of our seven sped students made our goal and only two of our twenty-four African American students (Fieldnote: 10/18/2013).

These goals show the huge disparities in performance of African American students to the rest of the student population within the school, especially given that 53% of the overall student population at Stacy is African American. However, the principal seemed to show her own determination to single-handedly improve students’ scores without a broader discussion of how teachers’ instructional practices shaped the academic achievement levels of students.

*Warren:* In Warren Grade 3, the principal asked each teacher to identify how many students in their lowest reading group were African American. In each class, the teachers
identified an overrepresentation of African American students in the lowest tier reading group, despite there being only 23% African Americans in the entire student population at Warren. I noted:

The principal looked at the time and asked that in the five minutes remaining, teachers think about their students and their student achievement by race, with a specific focus on African American students in the lowest percentile of students. Ms. Thompson stated that 5 of her students were black students (5/6) (83%), Ms. Davis stated that (3/6) (50%) of hers were in the lowest percent, and Ms. Gleason stated that 3/5 (60%) were in the lowest percentile. The principal stated that these were not good and that “we” should keep intentionality there since they have not largely examined racially disaggregated data. He charged teachers to focus on the ways to meet students’ needs, particularly students who need over a years’ worth of growth through guided reading, differentiating whole group, and reteaching (Fieldnote, 12/9/2014, emphasis added).

Although a very brief exchange, the principal at Warren considered raising student achievement to be a team effort (through the use of the word “we”) that required the assistance of teachers and administrators. Furthermore, having teachers look at their own student performance showed them the problem of low student performance for African American students existed within their classroom and could be remedied through their own increased effort to support students. This shows that leaders at Warren see teachers playing a critical role in the support of African American students at Warren.

When disaggregated by race, the teams at both Stacy and Warren were able to see the disparity in African American performance as compared to the rest of the student population. Despite both Stacy and Warren’s attempts to disaggregate data based on race, neither team addressed the root causes of why these students were failing to perform. Furthermore, neither team focused on additional practices or policy changes (e.g. institutional, classroom level, or district) that could promote or inhibit student success for this population.
Challenging Beliefs and Assumptions

Stacy teachers made assumptions about students that largely went unchallenged by administrators. However, when teachers at Warren voiced similar deficit beliefs about students, the administrators refocused the conversation on ways teachers can support students.

Stacy: At Stacy, explanations regarding why students did not perform well largely centered on teacher-created assumptions about students having an underlying condition (e.g. undiagnosed learning disability such as dyslexia, auditory or visual sensory delay that the student needed to be placed in special education, or that all ESL students who scored low was said to be scoring low because of their status as English Language Learners). These assumptions went largely untested, unconfirmed, and unchallenged within teacher team meetings. Because of these unchallenged beliefs and assumptions about outside factors that affected students’ abilities to learn, teachers never critically analyzed their own instructional practices within the teacher team meetings nor did administrators address teachers’ deficit views of students and how these views negatively impacted teachers’ beliefs in the abilities of students. Furthermore, because of these beliefs about the inabilities of students to perform well, the research based interventions the school implemented as part of the RtI strategy were never critically assessed on quality to determine whether they were meeting the needs of the student population.

Warren: Warren Grade 3 teachers saw student characteristics such as student motivation, students being bright or lazy, or students’ lack of investment in their own learning as primary factors that affected student performance. Yet, teachers also discussed their own instructional practices as well as students’ underlying conditions (e.g. illnesses, medical conditions, and English Language Learner status or students’ special education status) as reasons students did
not perform well on assessments. When teacher beliefs about student performance data centered on topics outside of the instructional practices within the classroom, the principal calmly, but firmly used a series of questions that challenged teachers’ beliefs in the inevitability of students’ low performance by causing teachers to focus on ways they could improve their instructional quality to ensure all students had an opportunity to learn (Fieldnote 12/9/2014).

The principal asks that teachers focus on quantitative data and pull out areas of concern. The teachers look at the data they brought with them. Ms. Thompson states that the students do better on vocabulary than main ideas and details. She states that students don’t have to know how to read to do vocabulary. The group comes up with varying ideas of what exactly is the problem that students are facing. The principal asks the teachers if this is a big component of close reading and if so, one strategy would be to teach students how to preview questions. The instructional coach chimes in and states that students must have stamina in order to go back and read and maybe their stamina is not there. Mrs. Davis states that the kids with stamina take forever to read, but do extremely with informational text (Fieldnote: 12/9/2014).

The principal’s job as an instructional leader here is important in focusing teachers on ways they can help students improve by shifting the conversation from student failures to teachers’ ability to support.

The variation in leadership styles and teachers’ responses to data use at Warren shows there is a richer discussion taking place about student performance data than at Stacy. Furthermore, there is a system in place at Warren that challenges teachers’ deficit beliefs about students. Because there is a lack of a system that challenges teachers’ deficit belief at Stacy, unchecked assumptions lead teachers to believe they are doing the best they can for diverse students, despite the level of effort teachers actually may be placing in the development of students. These beliefs may ultimately lead to other challenges, particularly lower teacher morale in the classroom and a divestment in students within the classroom.
Explaining Data

Stacy teachers attributed student performance to “non-changeable outside factors” (or factors beyond their control). Warren teachers, however, attributed student performance to “changeable inside factors” (or factors within their control). These views shaped how teachers saw the purpose of data and their own efficacy within their class.

Stacy: As aforementioned, Stacy Grade 4 teachers saw low student achievement as being based on students’ underlying conditions. These underlying conditions were oftentimes undiagnosed conditions that teachers merely attributed to students based on teachers’ personal beliefs, and were explanations that I would call “non-changeable outside factors”, in that teachers do not see the data as reflective or characteristic of things they could control within the school day. Such ideations by teachers may lead to feelings of apathy and decreased work performance in helping students succeed, as teachers feel that something is intrinsically wrong with the student population and that nothing is wrong with their approach to teaching and learning. In an interview with three fourth grade teachers from Stacy, several teachers stated they do not change their “instructional style” because the problem does not lie within themselves; rather, it lay with the student population (hence the teachers’ refusal to “dumb down” the knowledge process) (Fieldnote: 5/8/2014).

Warren: In Warren Grade 3 regular team meetings, teachers saw student characteristics such as student low motivation as being the reason students failed to meet objectives. Despite teachers’ sense that it was student characteristics that impeded student growth, the principal suggested that teachers focus on four domains to examine student growth or regression: curriculum/materials, technology, training, and student behaviors/classroom management. These
four domains were especially important in that they forced teachers to focus on “inward changeable factors” that teachers can ultimately control. Furthermore, leadership focus on these four domains limited the amount of time teachers spent talking about “outward nonchangeable factors” as explanations of student performance data. These four domains were considered “changeable inside factors”, factors teachers felt could be altered because of the dynamics and the flexibility teachers were given within the organization to adapt, change, or alter organizational and classroom level responses to address the needs of students. Here is an excerpt of a data discussion focusing on the four domains mentioned above (Fieldnote, 1/21/2015):

The principal asked teachers to describe what has inspired the positive growth in students (85% are reading at or above grade level). Teachers were given four ways to describe the growth: curriculum/materials; technology; training; student behaviors/classroom management. The teachers suggested that the new curriculum Wonders is exposing students to harder materials and the students are reading more. In guided reading, Mrs. Thompson noted that struggling students were doing shared reading, fluency passages, and vocabulary. In terms of training and support, the teachers attributed their success to the Wonders Training and the Sunday Cummings workshops. Last, for behaviors teachers attributed their growth to students now being about to read.

These factors are important in addressing teacher efficacy and whether teachers feel they can respond to the rising needs and demands of the school day, as well as whether teachers feel they have control over addressing workplace conditions.

**Creating Opportunities to Learn about Data and Equity**

At Stacy, teachers had limited opportunities to learn about data and best instructional practices. However, at Warren, the principal, instructional coach, and the school psychologist worked together to ensure teachers had many opportunities to learn about data use and best practices.
Stacy: At Stacy, there were very few opportunities for teachers to learn about data, their own instructional practices, and about the successes of other instructors. In our observations, the principal provided formal instruction to teachers only once with regard to how to read an Aimsweb® RCBM data printout. Yet, this knowledge of data was not knowledge for the sake of knowledge; the principal wanted teachers to be knowledgeable of data for the upcoming parent-teacher conference, as parents would be coming to the school to learn more about their child’s progress (Fieldnote 10/22/2013). No other opportunities existed within the meeting to discuss teachers’ understanding of data and what information data provided about each child. Likewise, teachers reported they had no official district training in how to understand or use data. This lack of knowledge and training is problematic in that teachers may be working from multiple understandings of how to read and interpret data, and furthermore, may be making uninformed decisions regarding students’ progress as a result of their limited knowledge, assumptions, and misguided beliefs about student populations. By simply relying on color-coded systems that identify students as red, yellow, and green, teachers miss a valuable opportunity to respond to the unique challenges of each student in a meaningful way.

Warren: The principal, instructional coach, and psychologist at Warren all taught teachers how to read data scoring sheets and how to focus on data school leaders felt mattered the most during data meetings. School administrators taught teachers about standard deviations, RIT scores, and how to read several charts and graphs during data discussions before having teachers make decisions about students and students’ progress with data (Fieldnote 1/21/2015). During one session, the principal explained the difference between Aimsweb® cutoff scores (the assessment used in previous years to measure student growth) and MAP® cutoff scores (the new assessment used to measure student growth) and the school psychologist offered to hold a
data training session for teachers to help them read and access data reports. These opportunities to learn are very important in that they allow teachers to make informed decisions within the teacher team meetings based on data and ensured teachers had an opportunity to not only learn about data and data processes, but also an opportunity to use them to make more robust decisions about students. Thus, the decisions were data driven and not assumption driven (that is, based on what teachers assumed students were capable of mastering).

**Establishing a Code of Ethic for Data Use**

At Stacy, the theoretical premise of the data system was based on the “ethic of justice” model, although implementation of such a program often lacked this ethical principle. At Warren, data were discussed in the context of the “ethic of justice”, “the ethic of care”, and the “ethic of critique”.

*Stacy:* In Stacy Grade Level 4, data were used mostly in terms of the “ethic of justice”. Because Stacy had an overwhelming number of students who were low performing African American students and because of the schools limited resources, the school responded by creating a RtI based-system that allowed students to receive an intervention based on student performance on the Aimsweb assessment. This system was designed to ensure that low-performing students would be given opportunities to improve their performance through a series of research-based interventions.

Because of the high need for interventions, Stacy’s leadership considered such a system as “fair” in ensuring that all students received access to the resources needed to be successful. Stacy’s belief that such a system was in the best interest of the vast majority of students meant that Stacy rarely critiqued its own practices with any regularity. While the interventions were designed to meet the needs of the majority of students, the interventions were never critiqued or
assessed to determine whether it was meeting the needs of the individual learner. And, although teachers considered the data use system to be useless in terms of helping students and ensuring students the opportunity to be fully supported, teachers did not openly voice their concerns about the unfairness of the process. As a result Stacy’s policy which was designed to support low performing students of color actually placed a disproportionate number of African American students in special education.

On the surface, this teacher team followed the ethic of justice by creating a program they felt was in the best interest of all learners. The school leadership saw their data use practice as equitable, thus giving students the interventions needed to be successful, particularly for students of color. The teacher team, however, seemingly failed to carry this value throughout the implementation of their program, particularly in ensuring their interventions were not placing students at risk of failure, in standing up and confronting this inequitable data use practice (despite being aware of the institutional inequity), and in examining their own instructional practices to ensure teachers were meeting the needs of all students.

Warren: In Warren, however, the principal used the “ethic of critique”, “ethic of care”, and the “ethic of justice” to support students. While Warren had a process for dividing students into intervention groups much like Stacy, the principal used various ethical models to support students who may not have been properly supported by the traditional intervention groups, specifically minority students. This began first and foremost by discussing students not simply based on a color-scheme model of data; rather, Warren teacher teams discussed students based on their individual needs. From there, the principal challenged placements that limited students’ ability to succeed. For example, when the enrichment teacher suggested an ESL student be moved from enrichment to a lower group because of her writing scores (despite high scores in
math and reading), the principal suggested that the teacher use additional methods to support the student where she was, thus giving the student the opportunity to get the support she needed without penalizing her and removing her from the enrichment group (Fieldnote, 1/21/2015). The principal and the enrichment teacher brainstormed multiple ways to support the student and to secure the student’s placement in enrichment. In the same meeting, when teachers explained a student’s scores were low because she was “just like her older brother”, the principal cautioned teachers to put their biases aside and focus on ways the teachers can support the student. This principal’s suggestion immediately challenged the discourse and made the teachers focus on ways to help the individual student.

Warren’s teacher team provides an example of the ethic of critique, care, and justice being used to support student growth. Because of the principals’ influence, teacher team members challenged their viewpoints of students (critique and justice), sought solutions that were in the best interest of the student (care), and worked to provide a more equitable environment for students (justice). This shows that when teacher teams practice the ethic of critique, care, and justice, students get an opportunity to succeed in avenues that have previously been off-limits to them.

Because schools are complex places, finding examples of each ethic in its singular form proves particularly difficult. However, the difficulties in capturing examples does not negate the importance of such values and modes of interaction in school-level equity driven decision making. These values shape the decisions teacher teams make and what they consider to be in the best interest of their students.

Discussion
Policymakers and scholars have widely acknowledged the role of data use in promoting equity within schools. Scholars (e.g. Boudett, City, & Murnane, 2005; Earl & Katz, 2006; Bernhardt, 2009) have created models of data use that focus on identifying the problem, finding appropriate data to address the problem, and developing a solution to the problem using data, particularly for diverse student populations. Likewise, Gerzon (2015) created a framework for data use that focuses on five key components: clarifying expectations for data use; making meaning from data; ensuring access to data; building knowledge and skills to use data; and leading a culture of data use.

While these models are important for helping schools think about the goals of data use, they largely leave equity out of the discussion. This is problematic, as the six processes I mentioned above, can shape the ways in which teachers perceive data, interact with students, and use data in support of equitable arrangements. Furthermore, they largely have implications for how teacher teams implement the models of data use as espoused by the scholars mentioned previously (Boudett, City, & Murnane, 2005; Earl & Katz, 2006; Bernhard, 2009; Gerzon, 2015). Because various factors such as the ways teachers think about students and students abilities, organizational responses to data and equity, and teacher team dynamics (the types of environment data use occurs within) shape teacher teams approaches to equity and data use, it is important that scholars take such factors into consideration when creating models of data use for teacher teams. Such considerations within schools show equity does not just happen simply as a result of data use; rather, equitable data use requires intentionality on the part of teachers and administrators.

The type of culture and climate necessary to promote equity within the use of data has been grossly neglected within the literature, particularly at the microlevel. Datnow and Park
(2015) bring the discussion to a microlevel and argue that school leaders should focus on five key points when examining data use and equity. Similarly, Park, Daly, and Guerra (2012) focus on how urban schools that are responsive to the needs of their students view data and equity through a process called deliberate framing. This paper extends these conversations by focusing on ways teacher teams can promote equitable data use practices at the microlevel, using both organizational policies and routines (e.g. disaggregating data by race, use of collaborative teams, and opportunities for teachers to learn) and an overall ethos (e.g. compassion, trust, care, culturally responsiveness, integrity, openness, and critique) of equitable data use.

Conclusion

What is needed in a data use system that is truly responsive to the needs of diverse student populations? Although there are many practices that may attend to issues of equity within teacher teams, I chose these six processes because they have implications for how teachers understand issues of equity within data use practices and also have implications for how teachers interpret data. The ways organizations respond to equity and data use practices may not only affect policies and practices, but may also affect how teachers interact with other team members, parents, and students, as well as the ways in which teacher team members personally come to internalize feelings and beliefs about students and student data. These factors show data use does not exist within a vacuum nor does the use of data for the sake of having data equate to improved student outcomes, particularly for diverse student populations. Rather, these factors show that addressing data using equity-centered processes is important if teacher teams are to use data effectively.

Furthermore, this paper brings to the forefront a discussion of which organizational factors are important for addressing issues of equity within data use practices for diverse student
populations. The aforementioned characteristics for equitable data use can be subdivided into two key concepts: equitable data use organizational policies and routines and the overall ethos of equitable data use. Equitable data use organizational policies and routines such as the purpose of data, disaggregating data based on race, collaborative teams, and opportunities to learn are objective actions one can take to improve equitable arrangements. These factors set the initial stage for allowing discussions about equity and data use to take place, particularly by allowing teacher teams to see educational disparities, giving teachers the skillset to interpret data, and providing the space and opportunities for teachers to have a discussion about equity. However, these organizational practices alone do not necessarily equate to equitable arrangements; rather, they must be undergirded by an ethos of compassion, trust, care, culturally responsiveness, integrity, openness, and critique (among other factors).

Both of these characteristics are mutually interdependent, in that data use organizational policies without an ethos of supportiveness becomes another mandate that is done simply for the sake of fulfilling a requirement. This paper shows that equitable data use routines are complex, but also achievable. Furthermore, this paper cautions school leaders working in schools who serve diverse student populations to make special efforts to challenge the culture and climate in which data are presented, to help teachers shape productive conversations around data, and to be especially cognizant of deficit conversations that may derail discussions regarding data for equity.
References


Beginning in 2004, East School District, a small-urban school district in a Midwestern city, mandated that its elementary schools use data to achieve more educational equitable outcomes for its diverse student populations. According to the district’s website (2014), East District is “…committed to diversity, and believes diverse schools offer the finest education to all students” and regards use of data as pivotal for instructional improvement and for improving student achievement of all students, with a specific focus on African American students. In the fall of 2014, district administrators sent a memo to each school leader asking, “What evidence do you have that your African American students are achieving? What evidence do you have that the achievement gap is decreasing? Are you tracking students for interventions? Are you having a courageous conversation about classroom climate?” (Fieldnote 10/29/2014).

This call for evidence stood in addition to the district’s concurrent initiatives including Smart Goals (goals for African American and special education students for each school based on performance data and a key component of their principal evaluation system), a new teacher evaluation system, district-mandated biweekly teacher team meetings to discuss data use and instruction, the implementation of Response to Intervention (RtI) to focus on students considered at risk, and the district’s data fidelity plan to ensure schools were collecting data frequently.

Data were gathered through formative, summative, and benchmark assessments including Aimsweb®, Measures of Academic Progress (MAP) data, Diagnostic Reading Assessments (DRA), progress monitoring, a new curriculum called Wonders (which has its own weekly assessments), and teacher generated assessments. These assessments were used to support and
assess students’ literacy schools, as the chief focus within the district was improving the literacy skills of all students.

School leaders were faced with the difficult task of balancing these various district mandates within their specific school contexts. At the heart of these mandates was the requirement that school leaders enact *equitable data practices* for their respective local school settings. Equitable data use (or equity driven decision making) is the use of a wide variety data that allows school leaders to discover inequitable processes within their schools.

Just how school leaders would address the equity and data use discussion with their teachers largely depended on factors in their respective school contexts as well as on school leaders’ personal values and dispositions; their perceptions regarding the problem of low African American student performance; their perceptions of teachers within their schools; and their understandings of the role that data ought to play in shaping a solution to the achievement gap. This paper seeks to examine how six school leaders across three diverse elementary schools in East School District took up the mandate to address disparities in the achievement of under-represented minorities within their respective schools. Using a series of interviews with participants and supplemental data from observations at their schools, I explore how these school leaders understood the role of equity and data use and examine how these factors shaped the data use practices of team members within these schools.

**District Context**

East District has 16 schools and serves a student population consisting of 40% white students, 34% black students, 10% Hispanic students, and 10% Asian students. 57% of the student population is low income, 7% of the student population is English Language Learners, and 13% have disabilities (State Report Card, 2014). Despite the diversity of East District
student population, the teacher population at East District is 82.9% White, 8.7% Black, 4% Hispanic, and 4% Asian (State Report Card, 2014).

In addition to balancing multiple data driven mandates mentioned above, East School District operated under a court mandated consent decree from 2002 to 2009 because of its unequal distribution of resources and unequal access to quality education for African American students within the district. Since then, the district has a stated commitment to increasing achievement levels and access to opportunities for all students through a number of initiatives such as a committee for examining educational equity, a committee for examining social justice concerns, a school choice plan, and through the diversification of its faculty and staff (District Website, 2015). This consent decree has undoubtedly shaped the way East District responded to issues of equity and data use (through the mandating of various equity driven and data driven practices) within the last few years.

This project uses data from a larger Spencer funded study examining data use in elementary schools, where I served as a researcher\(^3\). This study was a comprehensive field study of teacher teams from three elementary schools in one small-urban school district (9,948 students enrolled) in the Midwest. The overarching aim of the study was to examine the phenomenon of data driven decision making within schools from a teacher team perspective. We chose these school sites based on their willingness to participate and their diversity with respect to race, ethnicity, socioeconomic status, and ability. During our time in the field, we observed teacher team meetings; interviewed teachers, specialists, building administrators, and district administrators; and we collected publically available documents and secondary survey data on

\(^3\) The research reported here was part of a Spencer Foundation-funded study of data use. The study was directed by Professor Jennifer Greene at the University of Illinois Urbana-Champaign. The views expressed in this article do not reflect the views of the Spencer Foundation.
school conditions, culture, and climate at three schools, Brook, Warren, and Stacy, in East District (pseudonyms). We chose to focus on these sites using qualitative methods because little research has been conducted on the micro-processes of data use within schools (that is, what teachers actually do in workplace and professional development contexts) (Little, 2012).

In observing the teacher teams meetings and teacher team interactions, I noticed the impact school leaders’ beliefs about data and equity had on the organizational and relational dynamics within the team. The variation in leadership approaches piqued my interest, and thus became the focus of this paper. The data informing this analysis consisted primarily of semi-structured interviews with six school leaders, specifically focusing on school leaders’ thoughts and beliefs about equity and data use, given the unique circumstances of the district (see Appendix B for Interview Protocol for School Leaders). Each interview lasted between 45-60 minutes and interviews were transcribed verbatim. These interview data were supplemented with observations of teacher team meetings at these schools as well as teacher team member interviews conducted as part of the larger study.

**Participants**

I interviewed six school leaders in three elementary schools (Stacy, Brooke, and Warren) within one small-urban school district (East School District) in the Midwest. The participants interviewed varied in experiences and backgrounds, but were chosen because of their knowledge of equity and data driven decision making within their schools as well as their ability to enact change within their schools. Of the interviewees chosen, three of them were principals; two were instructional coaches; and one an assistant principal. Participation within this study was voluntary. Table 4 provides a list of interviewees.
<table>
<thead>
<tr>
<th>Participants (pseudonyms)</th>
<th>Description</th>
<th>Position/Years Exp.</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patricia</td>
<td>White female in her early 50s</td>
<td>Principal: 10 years experience</td>
<td>Stacy Elementary</td>
</tr>
<tr>
<td>Sarah</td>
<td>Black female in mid to early 30s</td>
<td>Principal: 10 years experience</td>
<td>Brook Elementary</td>
</tr>
<tr>
<td>Brian</td>
<td>White male in early 40s</td>
<td>Principal: 10 years experience</td>
<td>Warren Elementary</td>
</tr>
<tr>
<td>Leah</td>
<td>Black female in her early 30s</td>
<td>Vice Principal: 3 years experience</td>
<td>Brook Elementary</td>
</tr>
<tr>
<td>Amanda</td>
<td>White female in her early 30s</td>
<td>Instructional Coach: 3 years experience</td>
<td>Brook Elementary</td>
</tr>
<tr>
<td>Susan</td>
<td>White female in her early sixties</td>
<td>Instructional Coach: 30 years experience</td>
<td>Warren Elementary</td>
</tr>
</tbody>
</table>

Table 4. Interviews from Stacy, Brook, and Warren.

**Data Collection and Analysis**

Data collection began during the Fall, 2013 school year and ended in the Spring, 2015 school year (two academic school years). Data collection and analysis occurred simultaneously throughout the study year (Miles & Huberman, 1994).

In analyzing the data, I specifically looked for leadership views of equity and diverse student populations and how these views shaped leaders thoughts and opinions of data and their positions as school leaders. Using the semi-structured interview data, I sought to examine how leaders position themselves in the equity and data use conversation within their school; how data talk shapes the instructional practices and data talk; what avenues of support are school leaders given; and how their understanding of the district’s overall vision of equity and data use shapes the ways in which they address equitable data use within their schools. I used inductive and deductive reasoning and a qualitative database called Dedoose to identify text segments. I defined data as the results of specific, physical assessments administered to students, including commercialized diagnostic and interim assessments such as Aimsweb® and Developmental Reading Assessment®, district-created assessments in science and textbook assessments in math,
and teacher generated assessments. I also extended the definition of data to include institutional level data such as enrollment data, survey data, demographic data, and disciplinary data (Datnow & Park, 2014), as these data shaped how school leaders approached equity and data use within their school. The names of the schools, district, and the school leaders have been replaced with pseudonyms.

Limitations of the Study

Conversations regarding the topic of equity within East District were particularly difficult. The political climate post a consent decree has created a tense situation, in which school leaders are very careful how they broach the topic of equity and data use of out of fear of being reprimanded by district administrators. Furthermore, within the district, there are varying beliefs about whether a consent decree could be considered a positive measure within the district and, thus, questions had to be carefully constructed so as to allow for school leaders to be able to vocalize negative beliefs. As a consequence, I approached the topic of race and equity with extreme caution. This lead to approximately six rounds of redrafting interview questions in order to create questions that were inviting enough to answer and that did not label me as an individual to distrust or fear. Furthermore, in some cases, I also had to “read between the lines” and use other data sources to un-code the very coded language regarding race and education.

My status as an African American woman conducting research on the topic of race and equity in this district served as both a blessing and a curse. In some instances, teachers and leaders were very forthcoming about their deficit-based views of African American students because they considered me “different” from the African American students they serve. In other cases, teachers and leaders have tried to present the best picture of the district in terms of racialized equality. During situations such as the latter, I relied heavily on observations and my
encounters within the school settings to balance leaders’ depictions of a harmonious school climate that appeared counter to the realities of the actualized school context.

Findings

Stacy, Brook, and Warren leaders varied significantly in how they envisioned the role of data in the service of achieving equitable outcomes for all students. Stacy leaders regarded data simply as means for identifying the right resources for struggling students. Brook leaders shared a similar view but also regarded data as a means for challenging institutional inequities and challenging teachers to do more to help students. Finally, Warren leaders saw data use as being engrained in every aspect of their school day. The following sections show the variations within the ways school leaders envisioned the role of data for achieving equitable outcomes.

Stacy Elementary: “Giving Students What They Need”

Stacy Elementary, a school located in a low-income, predominately African American neighborhood, served a population of 53% African American students, 81% low income students, 17% ESL population, and 11% disabled population (State Report Card, 2014). Retaining teachers at Stacy has been a challenge. Stacy had only an 81.6% teacher retention rate below the state’s average retention rate for students 85.7%. Furthermore, the school’s reputation among teachers was not considered especially high, with 71% of teachers saying they would not recommend this school to a friend seeking to place a child (School Climate Survey, 2014).

Stacy Elementary School’s teacher team meetings could be best described as algorithmic and programmed. The Stacy Elementary School Teacher Team members met twice a month for data discussions (per the district mandate), although conversations typically centered on topics unrelated to data use, such as how to make the school more attractive to a white clientele. Stacy
staff members examined student data through a benchmarking data monitoring system tool called Aimsweb®, a universal fluency screener designed to identify and monitor at risk student populations by comparing Stacy’s students to other students in the United States on a nationally normed assessment. Students were divided into research based interventions based on the Aimsweb® color scheme. If a student was identified as being in the “red”, he or she received intervention A (a tier 2 computer based intervention); if a student was “yellow”, he or she received intervention B; if a student was “green or blue”, he or she went to enrichment; special education students were not discussed; ESL students were sent to ESL instructors; gifted students were not discussed; and students still labeled “red” after three interventions were referred for special education. Little discussion occurred among the team members regarding instructional strategies or student growth because data for in-class instruction was not considered a key function of the data use process. Because the process at Stacy was so routinized, teachers commented that it felt like a sports draft or an auctioneer speaking on an auction day (Fieldnote 2/04/2014). The meetings were principal-led (i.e., she provided the data to be analyzed and conducted the meeting) and the teachers were passive and non-participative, since teachers largely believed that “things wouldn’t change.”

School Leadership and Equitable Data Use at Stacy

The data use environment at Stacy Elementary was largely a by-product of the principal’s autocratic approach to ensuring her school was in compliance with district mandated data use requirements. Patricia, the principal at the school, saw data as important for identifying key RtI strategies and resources to provide students with “what they need” to be successful. She stated, “Equity to me means equal access. Equity to me is not necessarily giving everyone the same thing, but giving students what they need.” Patricia strongly believed African American students
within her school “needed” access to a host of research-based literacy intervention groups. Patricia acknowledged that prior to the consent decree, her students did not receive access to quality curriculum and resources (e.g. intervention groups) to promote student achievement. The consent decree shaped her belief in the importance of resources for African American students in order to ensure their success.

Patricia largely saw the use of data to achieve equitable outcomes as a matter of executing district accountability mandates. Achievement data were used to divide students into intervention groups (e.g. Reading Recovery, Running Records, Lexia, and Guided Reading Groups) based on a single indicator: Aimsweb® assessment data. Because this process of data use was so programmed and algorithmic, it left little room for teachers to discuss instructional decision making with other team members.

Patricia’s preference for such a data system may have been guided by her own beliefs that her teachers had biases against African American students that impacted their interactions with their students and subsequently impacted how they viewed student data. She stated,

We look at data for a second grade student, and we break it down by ethnicity and gender, last year. ...So when I’m trying to recruit students into my building because we are schools of choice, how do I begin to tell a black parent that this is what the data is saying to you, that a black student enters into kindergarten, 50% of your students is below grade level. Is it the differentiation strategies or the curriculum? What is causing it? Is it the voices they hear when they are at my school? What’s different for these students?

She continued,

I will just be frank…it’s not the kids but it’s the adults. How they perceive students? And how they speak to students? And how they support students? It’s tricky when you put the ownership on the adult…that they need to change. It’s not the student that needs to change. It’s practices that need to change.

Patricia believed factors within the instructors’ control largely impacted African American student performance (e.g. the instructional strategies, choice of curriculum, and teachers’
attitudes and dispositions of students). Yet, Patricia preference for a data use system that eliminated teachers’ input and decision making power from the data use conversation was shaped by her lack of confidence in her instructors to meaningfully respond to the needs of students. Patricia stated, “They are good teachers; they have just never been taught what needs to change.” Yet, Patricia did not see the data use conversations as an opportunity to teach instructors or to encourage change within teachers.

Patricia considered her efforts to support students in equitable data driven ways a one-woman’s effort to raise achievement levels in her school.

I have to be the sage on the stage leader. I’m going to have to always keep it in the front of what we do. As soon as I stop making it a priority it will no longer be a priority for my staff. I’m not confident in my staff to keep it as their number one objective if it’s not always my number one objective.

Thus, in teacher team meetings, Patricia provided the Aimsweb® data for teacher team members to discuss. She also personally analyzed the data in order to determine students’ academic growth goals as well as which students needed to be monitored further. Teachers, however, saw Patricia’s quest to single-handedly be the “sage on the stage” as dictatorial, because teachers were only allowed to execute the pre-existing data use routines established by the principal and the district. This left teachers feeling as though they were not active members of the teacher team nor were they active participants in the data use process.

Furthermore, Patricia saw parents at Stacy as being unable to help their children become successful. She did not consider parents as allies in the fight for equity, but rather forces to be acted upon. She stated,

We can’t meet them [parents] by just reaching to the child. We need the resources that bring our parents into this. A lot of our parents don’t want to come to school. [They say] Don’t make me come to school. So, how do we change that so that they say ‘I can really use someone to help. How do I get WIC [Women Infant and Children Program]? How do I get housing or an apt? How do I get access to some of those things?’ We need to be the place where they come.
Her belief that parents needed support from the school, as opposed to seeing parents as allies capable of helping students achieve success, further promoted a closed system of equitable data use, as Patricia saw these research-based intervention strategies as the only mechanism capable of reaching and supporting her students. Hence, at parent-teacher conferences, Patricia encouraged teachers to use Aimsweb data with parents in order to justify intervention placements given to students (Fieldnote 10/22/13). In this regard, the data produced by Aimsweb superseded any beliefs, powers, and inputs from Stacy’s teachers and parents.

Stacy instructors stated that the principal’s control over the teacher team meetings kept them from engaging with the data use discussion and kept them feeling as though “things will not change.” While Stacy’s approach to data may have met the requirements set by the district in showing “evidence” of support for African American students, the process was one dimensional and did not take into account multiple data sources, important stakeholders, or multiple factors that impact student achievement. As a result, Stacy Elementary principal’s lack of trust in her stakeholders to use data in effective ways as well as her unwavering trust in Aimsweb® meant data were only used to sort students into pre-existing intervention groups, and not to challenge inequitable instructional practices.

**Brook Elementary School: “Creating Access to Outcomes”**

Brook Elementary, another school located in a low-income, predominately African American neighborhood, served a population of 49% African American students, 51% low income students, 6% ESL population, and 10% disabled population (State Report Card, 2014). Retaining quality teachers within Brook was been a challenge, as the school only had a 70% teacher retention rate; below the state’s average retention rate for students 85.7%. Despite being
on the state’s watch list for low student performance, Brook was considered to be a school that was making great strides toward school improvement and toward student success. Teachers had more positive feelings about the school and the direction of the school, with 63% of the teachers stating they would recommend this school to a friend seeking to place a child (School Climate Survey, 2014).

The data use process at Brook Elementary could best be described as disorganized, but reflective. The Brook teacher teams met once a week for data discussions. Although the discussions were disorganized with respect to understanding which data to use and how to find data, when they were focused, discussions tended to be reflective and involved discussions about understanding and interpreting assessment scores. The teacher team was led by the teachers, the instructional coach, and occasionally the vice principal who established the agenda each week. Teachers discussed the science, spelling, and math assessment data, Aimsweb® data, DRA®, running records, and other assessments that were available to them, all of which they individually collected and analyzed. The teachers discussed why students missed questions on the pretest compared to the post test, the exact wording of the assessment items, compared students across the classrooms, and analyzed how teachers present information. In such meetings, the teachers discussed both tier 1 and tier 2 strategies concurrently, since these teachers were responsible for core instruction as well as small group instruction (whereas in Stacy, teachers sent students to tier 2 interventionists). Although the principal was largely absent from meetings, the principal was recognized among teachers for sheltering them from district mandates that did not focus on improved teaching and learning and for making sure the data talk time was not interrupted by outside factors. Also, the principal held building level meetings called vertical team meetings where data were used to examine specific concerns about the
African American student population, such as “Why is there an overrepresentation of black students being referred for disciplinary infractions?”

School Leadership and Equitable Data Use at Brook

School leaders at Brook used data to address equity concerns at the school level, classroom level, and individual student level. While the principal at Stacy saw the use of data as a means of fulfilling a district mandate to show “evidence” of equitable resources for African American students, Brook’s principal Sarah saw data as a means of determining whether African American students had the same “access to outcomes” as their white counterparts, such as access to resources, were achieving at the same level as other populations, and were not being discriminated against when it came to having access to the best teachers and the best practices. For Sarah, her experiences prior to and after the consent decree shaped her approach to equity. She stated,

After the consent decree, which was the lawsuit that basically said we are discriminating against our African American children, which we were and it is still happening to a degree I would say. My role when I think about should I say that openly, but my role is to advocate for children no matter what circumstance we are in. I don’t care if I’m [location withheld], but there are things that still going on and I’m like no, who is speaking or talking for the kids.

Sarah’s view of equity in light of the consent decree shaped how her school approached issues of equitable data use. For example, both she and vice principal Leah used the enrollment data of the Gifted and Talented Program to challenge institutional inequities such as why African American students were being excluded from a higher curriculum and access to quality instructors. As a result, Brook leaders used enrollment data as a catalyst to counter white parents, administrators, and teachers desires to maintain the status quo within their school, specifically by providing black parents with the knowledge to get their children in more advanced courses. In this case,
the leadership at Brook saw their African American parents as allies in the battle to improve student achievement. This was very different than the approach at Stacy where parents and teachers were seen as forces to be acted upon and not forces to be worked with in support of equity.

Second, to illustrate the connection between discipline data and its effect on student performance data, Brook leaders openly challenged teachers’ disciplinary practices by providing monthly data on the number of disciplinary referrals per grade level and teacher, helping teachers to adopt a more equitable classroom management plan, and having candid discussions with teachers regarding student discipline and assessment data. Sarah and Leah stated that it was important that school leaders were willing to have such candid, courageous conversations with their staff in order to challenge the behaviors that negatively impacted students within schools. Sarah stated,

The first data we started with was discipline data. We had to start there. We had to start with action. What is happening as a result of, right. Kids aren’t doing their work in class. They are being sent out of class. Discipline was manifesting itself as the outcome of academics. We had to address that, right, like ‘oh wait, because someone is asleep, you wrote him up. Because he didn’t do his homework, you wrote him up, what?’”

Sarah also stated that she had a moral obligation to speak out for students who were marginalized, and was largely recognized among teachers within her school for such a role. In this regard, she saw discipline data use as a catalyst for allowing her to have those conversations.

Lastly, at the teacher-team level, school leaders saw data not simply as a measure of students’ knowledge, skills, and abilities, but also as a means for facilitating teacher discussions of classroom challenges and successes in ways that impacted their instructional practices. Thus, school leaders encouraged the use of student performance data such as science, spelling, and math assessment data, Aimsweb® data, DRA ®, running records, and other assessments that
were available to them, all which teachers individually collected and analyzed. Brook’s approach
to data use was largely supported by school leaders beliefs that they could help change teachers’
beliefs about students from deficit thinking (e.g. a student’s homelife is poor so the student is
destined to fail) into more strength-based approaches by asking teachers “What are you [i.e.
teachers] going to do to improve student scores?” Amanda, the instructional coach, stated,

There are things you can control [instruction] and there is [are] things you can’t
[student homelife]. We are not going to waste time on things that we can’t
control. We’re going to talk about it so we know they are there, but maybe there
are things … what are we going to do about it. Like that’s a problem, well let’s try
to solve it. We can sit here and complain but it’s not going to get us anywhere.
Maybe we can’t control that, but we have this student in here for seven hours
everyday. What can we do here?

Sarah and Leah confirmed this belief by adding that the discussion of data use must be
accompanied with discussions about instructional practices, teacher efficacy, and ways to engage
African American students. Leah stated,

A lot of people they know how to teach, but they don’t know how to teach. You
know, it’s like, I had to learn how to teach reading. When you have a child that is
stuck, a lot of times your go-to is the child. It’s the child’s fault. The child doesn’t
know this. The child doesn’t know that. The child needs to read more. But no, as
the teacher, there instructional strategies that you can do for all of the different
parts of a child not knowing how to read. Yes, you still get stuck, but you never
get stuck to the point of you … oh man what do I do. Do I try this? Try this?

Sarah added:

Well, you think when you have these discussions about equity you would hope
they would shape how they would reframe how teachers make or amplify issues
of equity when teachers are teaching. So we can have a conversation about equity
and discuss it and draw out how many kids are truly engaged in the conversation,
just to go there, and you have already identified because we’ve had this
conversation around your data use that five of your African American boys are in
the back [are failing]. You would hope that their awareness and your instruction...

Thus, for Brook administrators, it was important that data discussions were supported with
practical measures to show teachers how to be more equitable in the classroom and how to
continue trying a variety of instructional practices to improve the teaching and learning atmosphere within their schools.

While the onus was placed on teachers to use a variety of assessment data (e.g. exit slips, running records, Aimsweb data, and a host of teacher generated assessments) in ways that promoted equitable arrangements with students, the onus was also placed on administrators to help teachers see why African American students were underperforming and what they could do to correct this within their classrooms. This included using enrollment data and disciplinary data to point out institutional inequities that keep students from achieving success. Yet, Amanda admitted that even with a teacher-centered approach to creating more equitable data use practices within the school, factors including the failure by district personnel to pass down information such as Cultural Responsive Pedagogical strategies, teachers’ deficit beliefs about parents, and limited books within parents homes posed substantial barriers to making students succeed. As a result, school leaders must work with individual teachers to ensure the conversations around data use are productive and meaningful for all involved.

In conclusion, Brook leaders’ approach to fulfilling the district mandate of “showing evidence” and creating equitable data use practices required a critical inspection of not only classroom instructional practices and institutional practices, but of the utility of various types of data beyond traditional assessment data. Because of the actions of the principal, vice principal, and the instructional coach, data were a catalyst to support equity from the policy level, the building level, and even the individual classroom level. The variety of data used such as disciplinary data, student enrollment data, and various types of assessment data, allowed teachers and school leaders to address more equity related concerns than Stacy. Also, the type of relationship fostered between administrators, teachers, and parents helped to support equity and
data use in a more robust way than at Stacy. While this type of data only scratches the surface of what types of problems can be addressed with data, it shows by using a wider variety of data, Brook is able to address equity concerns in a greater capacity. Likewise, the proactive, facilitative, and inclusive approach by school leaders at Brook encourages teachers to feel more in control of their children’s scores than their counterparts at Stacy.

**Warren Elementary: “A Culturally Appropriate Way”**

Warren Elementary stood in stark contrast to Stacy and Brook. With a population of 42% white students, 23% black students, 54% low income, 20% English language learners, and 17% disability (State Report Card, 2014), Warren teachers had not been feeling as much pressure to show evidence of student growth. Warren had widely been heralded as one of the district’s more successful schools in terms of its data use practices and parental involvement, and had not been under any district mandates to make its school any less racially identifiable (due to its comparatively low enrollment of African American students). Furthermore, the school had a reputation of being a high resourced, very nice community, and parent supported school—with 93% of teachers saying they would recommend this school to a friend seeking to place a child and an 87.8% retention rate for teachers (School Climate Survey 2014). Yet, the achievement gap between black and white students at Warren was noticeable, and black students were disproportionately congregated in the lower-reading level groups as compared to their white counterparts.

Warren teacher team meetings could best be described as principal-led, participatory and routinized, but candid. Warren teachers met twice a month to discuss data, with the first meeting used to discuss core instruction and the second meeting being used to discuss tier 2 interventions
(students who need specific interventions). Warren teachers focused data discussions on weekly data from a curriculum called Wonders Curriculum, but also used Aimsweb® and MAP® data (which are used as benchmark assessment data for students three times a year). The discussions were largely principal and instructional coach led, but also participatory (as all grade level members worked together to solve problems). Teachers, having developed a rapport with each other, felt open to talk about patterns of achievement within their classes, struggling students, and how they were responding to the needs of students. Furthermore, Warren teachers did not see discussion of their teaching practices as atypical or intrusive, as the culture, climate, and administration was largely supportive of teachers. Despite the openness of communication, teachers felt such meetings were not useful to improving students’ outcomes.

School Leadership and Equitable Data Use at Warren

School leaders at Warren saw equity and cultural responsiveness as being engrained in everything they do. When asked about his view of equity, Brian, the principal, stated, “We have 425 children who come to us and we need to give them the most meaningful and appropriate education for them as individuals. And that includes reaching them in a culturally appropriate way.” Susan, the instructional coach, also stated:

One of the principal’s [goals]…well, he’s been working on this year, is really trying to get to talk about diversity in the school …and the need for us to be able to talk about the ethnic diversity in our school. And, because of that, we can look now at and talk very openly about our data and specifically our African American students without people getting either getting defensive or feel [sic] uncomfortable.

Brian saw the openness of the conversation of data and equity within his school as being based on his feelings regarding the consent decree. He stated,

I entered the district in the last year of the consent decree so it’s been a long journey and I remember filling out reports on discipline as it was a requirement. We filled out reports because it was legal… I think the issue now though is not as
much a legal issue but it’s an issue of shifting hearts and minds for staff members and it’s also thinking creatively and collaboratively because there is no package solution.

To begin to shift hearts and minds at Warren, school leaders addressed equitable data use by developing professional development conversations around the topic of equity with their instructional staff. Brian used these professional development trainings as a precursor to talking about student performance data with his staff. Brian stated, “…it was important for my teachers to look at African American achievement differently than they have previously.” Brian shared that previously, his teachers spoke of African Americans student performance in “whispered tones” and sought to use a color-blind approach to reaching students or talking about data for these students. Susan also added,

I mean because really a few years ago, it would have made people uncomfortable to say “Let’s just talk about African Americans or let’s just talk about”…to be honest…it’s sad to say, I find it sad anyway. Now you can look, we can say we’re going to talk about just this and everybody understands this. And we have to talk about it because this is our need. …We can talk about specific groups of students in our school and so I don’t think it’s just data. I think many things around the school that we have done that makes it easier to talk about data.

Today, Warren has developed monthly professional development sessions on topics such as Cultural Responsive Education for African American students and how colorblindness inhibits rather than promotes equity. The school has had panels of African American parents, students, and educators discuss equity concerns within schools and used professors from the local university to help plan professional development strategies around cultural awareness. This, Brian felt, was important for helping his all white staff feel a little more comfortable when analyzing African American student assessment data and broaching the topic of African American student achievement.
Within teacher team meetings, Warren leaders believed that it was important to have teachers converse candidly about how to support African American students in the classroom. Teacher team meetings commonly began by reviewing students’ assessment data on weekly assessments that teachers brought and felt were most useful in determining whether or not students were meeting growth objectives. (Susan stated data management systems were very important in helping teachers have such conversations, as Aimsweb®, MAP®, and Wonders data management systems could divide students into subgroups and explore whether particular populations were achieving.) Then, teacher team members brainstormed ways to address the needs, with a specific emphasis on instructional strategies (Fieldnote 12/9/14). Such meetings often included Brian and the instructional coach Amanda not simply asking teachers “What are you going to do about student achievement”, as was commonly asked at Brook, but co-constructing ways to identify problems and solutions to student success as a team.

Despite having only 23% African American student population, Brian stated it was important to “honor the culture and use our knowledge of it in our instructional practices to promote growth…academic growth.” He suggested that because he was aware data showed his African American students were underperforming compared to their white counterparts on various assessment measures (Aimsweb® and MAP® as well as weekly curriculum assessments), it was imperative to use such assessment measures to create goals on a regular basis for African American student success. This did not include simply responding to the district-mandated quarterly goals, but creating weekly goals to show academic growth and progress, building level goals for African American students, as well as teacher team and individual goals for student growth.
Warren leaders also stressed the importance of having formal and informal conversations around the art of teaching and what teachers could do instructionally to improve student outcomes. This, according to Brian, had significant meaning for instructors and students, particularly in how teachers accessed data, how they approached students in culturally responsive ways, and how they moved students from needs improvement to being proficient or excellent on a higher level. Thus, he emphasized the need to have teachers ask how data use would help shape African American student outcomes. He stated,

…Have teachers ask this question “How will the data support decision making and guide student outcomes especially for African American students?” …I think it’s pretty obvious that they need to be asking themselves how we translate this, but we also have conversations in our formal and informal collaborations when we’re looking at the framework for teaching because that’s really what teachers do instructionally. That’s their practice. We look at it in terms of how do you access data? How do you approach students in a culturally responsive way? How do you do all of that? Where does it fit? You are sort of at this level now. How can you bump this up from needs improvement to proficient or proficient to excellent level?

Likewise, Susan stated that her role as instructional coach allowed her to come in and co-create strategies with teachers to address instructional strategies.

That’s my role. That’s where I come in and we collaborate and say what did you do last time. Did you meet with them five days a week as in a guided reading group doing Jane Richardson? Did you meet with them 3 days a week? …I will coteach with them. You want me to be there with you? A lot of it is collaboration. What do you think about this? And, you know, what have you tried? …That’s how it work, when it’s working, but that’s when you get to that point, you say “come see me” because that’s when we can work at it. If I don’t know the answer I can help find the answer because there are other coaches or I can pull someone in who might help us.

Warren administrators created an inclusive “we” approach to creating more equitable data use practices for students. Because of the beliefs of the principal in the importance of honoring student culture as a way of improving student outcomes, the school developed a culture of equitable data use and goal setting steeped in an understanding and awareness of student
culture, recognition of teacher biases, and through an indepth understanding of the ways in which
teacher instructional practices impact student growth. Because the principal emphasized
honoring students’ cultures, the principal did not seek to blame parents or students for their lack
of skills. Similarly, he did not seek to berate teachers with data or exclude teachers from the data
use process, as he considered teachers integral to their collective effort to raise student
achievement.

The openness of the collaborative process allowed teachers to collectively address
problems and brainstorm struggles with African American students in a way that supported
student growth. This approach to equity was shaped by leadership’s use of a variety of
assessment data, but was also shaped by an emphasis placed on knowing students holistically.
While the data used at Warren was fairly limited to assessment data (i.e. student generated,
weekly assessments, and district mandated quarterly assessments), the types of discussions, ways
of interacting among staff members, and the approaches to teaching and learning helped create a
different milieu around the topic of data use more so than at the two previous locations.

Discussion

How school leaders interpret data and use it in service of achieving equitable outcomes
for students within schools is contingent upon their personal beliefs and values. Although East
District leaders have mandated a wide variety of data use policies and practices around the topic
of equity, these mandates are still filtered through the belief systems of local school leaders.
Thus, it is very important to understand whether school leaders see the use of data to achieve
equity as just another accountability mandate or an opportunity to focus on the teaching and
learning process (Firestone & Gonzalez, 2007); whether they feel they are morally obligated to
use data in equitable ways (Obama, 2008; Duncan, 2009; CCSSO, 2008; Brown, Benkovitz, Mutillo, & Urban, 2011); and whether they regard the use of data as a key component for creating a culture and climate based on social justice ideas (Johnson, 2002; Skrla, McKenzie, & Scheurich, 2009; Lasalle & Johnson, 2010). In this regard, leadership beliefs about data use and equity may shape whether school leaders follow district mandates around equity and data use in the “spirit of the law” or simply the “letter of the law”.

Leaders’ beliefs about the role of data and equity have huge implications for the types of data school leaders collect and also choose to ignore. Stacy’s emphasis on accountability data meant that Stacy’s leaders could only ask very limiting questions regarding student achievement and equity, while the variety of data at Brook allowed leaders to address equity concerns at the broader institutional level (e.g. discipline data and enrollment data). Although both Brook and Stacy are both in compliance with district data use practices, Stacy misses opportunities to use data in ways that can address the “adult problem” she claims is the root cause of the inequality within her school. This includes the use of student disciplinary data per classroom (teacher), the amount of time each teacher allocates for instruction, specific data regarding instructional practices of teachers, and classroom/school climate data. Larson and Ovando (2001) state it is important that we challenge the ingrained institutional factors that affect access to a quality educational experience by students of color. It is also important that we are critically assess types of data we place most confidence in and the data we ignore as a result (Khalifa, Jennings, Briscoe, Oleszweski, & Abdi, 2013).

Similarly, leaders’ views of their instructional staff, parents, children, and other administrators have significant implications for how they address topics of data use and equity within their schools. While much has been written about deficit views of teachers and their
impact on data use (Skrla, Mackenzie, & Scheurich, 2009), considerably less has been written about deficit views and strength based views of school leaders toward teachers, parents, and other administrators and how they impact data use within their school setting. For example, in Brook, the leadership’s view of teachers and parents as allies in the fight for equity, helped school leaders be responsive to data that showed inequities. Such a change did not occur at Stacy, where the leadership considered teachers and parents forces to be acted against, rather than people capable of helping the school enact change.

While data can inform decisions, data cannot drive the individual leader to make a particular decision. A leader is still subject to his or her own mindset and must make a conscious effort to choose an equitable use of data. Thus, for leaders, equity driven decision making goes beyond Datnow and Park’s (2014) suggestion that school leaders be attuned to people, policies, practices, and patterns in order to plan and implement reforms wisely; school leaders must be willing to take an introspective look and begin to ask for what purposes are data truly being used and how do my beliefs regarding equity and the power of data shape the use of data within my schools.

Conclusion

In each school, principals took up the topic of data use and equity in different ways. Their decisions for student placement and instructional practices were all based on the data they received as well as their beliefs about what equity meant within their schools. In Stacy, the principal collected, reviewed, and responded to assessment data from a single indicator: Aimsweb®. Her response set in motion a series of steps to improve student achievement—few of which were going to improve student results on future assessments. What I see as problematic is that these beliefs, values, and executions of strategies excluded teachers from the data use
process, ignored discussions of how instruction impacted data use, and focused exclusively on intervention groups as “the” answer to student achievement. In my estimation, this is not the response we want or prefer when we advocate for data driven decision making. This may be best seen as an incomplete use of data. In this case, data were used and decisions were made, but the process of reviewing and discussing data had little to do with how data could be used to support students and train teachers in the future.

In Brook, school leaders collected enrollment and discipline data to examine institutional inequities within their school. Furthermore, they encouraged teachers to use a wide variety of assessment data (e.g. teacher generated and benchmark assessment data) to think about their instructional approaches to students. At the heart of their discussion was a commitment to hold both teachers and the institution responsible for improving African American student achievement and to addressing institutional inequalities. This included openly challenging teachers to look beyond the homelife of the child and focus on what they can do to successfully reach each student. As a result, teachers felt more in control over their students’ achievement than at Stacy, but still felt stifled as the professional development and support networks were not extensive. Although they harbored feelings that factors outside their control impacted student performance more than their instruction, teachers still made a conscious effort to support students. In this context, data were collected and analyzed by both the teachers and the administrators for multiple purposes; decisions to challenge inequitable practices and teachers’ perceptions were made; but the lack of a support structure caused teachers to waver in their beliefs that something could be done to impact student achievement.

In Warren, school leaders and instructors took up the topic of equity before taking up the topic of data use. Through the use of a collective, culturally responsive approach to examining
issues of equity within the school and the larger society, school leaders strongly encouraged teachers to use this knowledge to really engage with the topic of equitable data use within their school. This included having teachers look at benchmark data and teacher generated assessments to discuss the problem of low student achievement. They also established growth goals for students outside the district mandated growth goals. Because of such a collaborative approach, teachers were able to participate and discuss concerns in a space that supported inquiry into why African American students weren’t achieving. Although these teachers were supplied with many professional development opportunities on issues of equity, the types of data explored were limited to assessment data, and thus meant that teachers and school leaders could only discuss “evidence” of equity in very limited ways.

Each of these cases is an example of decision making by school leadership in an attempt to be “data driven.” However, we can clearly see the distinctiveness of each way of understanding this idea and its actual impact on these school settings. In the best of all words, we would want some combination of Brook and Warren. Brook privileges a wide variety of data but have yet to focus on strategies for improvement. Warren provides professional supports, but uses a small variety of data. What we learn is that in a given school district, we do have school leadership promoting “data driven decision making”. Yet, each instantiation looks remarkably different from the others. These instances shows us that data driven decision making is a work in progress, and as such school leaders must begin by assessing their own beliefs regarding equity and data use and work to ensure that such beliefs, thoughts, and actions are in the best interest of all students.
References


CONCLUSION

In this thesis, I discussed the importance of examining practices of data use as a reform strategy for promoting equitable arrangements within schools. This discussion began with a critical examination of the ways schools use student-level and school-level performance data to either promote or inhibit equitable arrangements within their organization. I also defined the term equitable data use and showed why this particular use of data is important for shaping teacher teams' views of diverse students.

The papers presented here suggest that there are both benefits and challenges to using data for equity wisely. These challenges include, but are not limited to, societal level beliefs that promote cultural deficit notions of students as well as socio-political-cultural context that may label diverse student populations as desirable and undesirable; institutional level challenges in which data use routines employed by the school only seeks to use data for triage instead of an in-depth exploration of the structural inequalities that affects how teachers use and view data; interpersonal levels that promote dominant narratives about students that inhibit equitable approaches to data use; and teachers personalized beliefs about their (in)ability to teach and make a lasting impact on diverse student populations. Such challenges create a problem in not only how teachers view data, but also for how teachers and school leaders shape the educational experiences of diverse student populations.

Despite the challenges, there are benefits of having smarter uses of data for addressing issues of equity within schools. This begins with an understanding of how policies, practices, and behaviors (Datnow & Park, 2014) may be sources of both affordances and constraints in the teaching and learning process. One way around these challenges is to have a framework that helps facilitate our thinking of the relationship between educational inequality and data use. The Hodges Persell (1979) framework is a step in the right direction by allowing school leaders to
shape institutionally situated dialogue in ways that tackle the root causes of inequality at the local level. This framework allows us to examine our own behaviors, policies, and practices in a way that critically assesses both the macrolevel and the microlevel, and how these multiple levels add to the complexity of data use for equity. In doing so, not only do we develop an understanding for how ideologies impact federal, state, and local policies (particularly surrounding the topic of data use), but we also come to understand how these ingrained beliefs and practices come to shape student outcomes at the local level. This approach also allows us to begin to unravel these complexities and begin to seek new approaches and ways of organizing data to create better schooling experiences for all students.

Furthermore, my research here has challenged the models presented by scholars and various how to manuals (e.g. Boudett, City, & Murnane, 2003; Earl & Katz, 2006; Bernhardt, 2009; Goldring & Berends, 2009) that consider data use to be a linear process defined by simply identification of problem, finding appropriate data, and developing a solution, particularly for diverse student populations. Rather, this thesis hopes to show the complexities of factors that shape data use in schools serving diverse student populations in hopes that school leaders will be better able to address the macrolevels and the microlevels necessary to promote equity within schools.
References


Appendix A: Teacher Team Group Observation Protocol

Descriptors
School
Team
Type of meeting (Grade Level Meeting, Vertical Team Meeting, Data Day)
Location
Date
Time (start / stop)
Observer
Names / Titles of all others present + seating arrangement

Data at meeting
Use the table below to describe the data used or referred to at the meeting. For each data set, describe the subject matter (e.g., math, reading), data source (e.g., benchmark assessment), type of data (e.g., individual student scores, item-level data), data display (e.g., printed spreadsheet, computer display). As possible, get a copy of the data (with identifiers deleted).

<table>
<thead>
<tr>
<th>Name</th>
<th>Subject Matter</th>
<th>Data Source</th>
<th>Type of Data</th>
<th>Data Display</th>
<th>Copy of data obtained?</th>
</tr>
</thead>
</table>

Other materials or artifacts
Describe any other materials or artifacts that were a part of the meeting.
As possible and appropriate, get a copy of each one.

New Jargon

Summary
Provide a summary of the meeting, including whether there is a set agenda, purpose and topics of the meeting and brief summary of what happened.

Narrative account
From notes and audio recording, prepare a descriptive, chronological account of the interactions and discourse of the meeting. Note who is speaking and for how long. Note what data are being discussed or what other topics are being discussed. Also record non-verbal interactions and gestures (e.g., raised eyebrows), as well as the ‘tone’ of the meeting that you were able to observe. For especially relevant parts of the meeting, transcribe selected dialogue from the audio recording. Be inclusive of all possibly relevant conversation. Beyond a summary statement, no need to detail irrelevant conversations, e.g., on food or baseball.

Feel free to comment on any parts of your descriptive account with an observer comment [OC: comment].
Bold the header of each part of the meeting. [in brackets write XmYs to document the total minutes and seconds for each part of the meeting.] Example: Choosing new STEM projects [3m45s]; Assigning interventions to students [16m25s]

Methodological comments
Comment on the quality of the data in this field note. Specify all concerns you have regarding data quality (e.g., you couldn’t hear well, the team was not really on task).

Analytic, interpretive comments
Comment on what was learned from this observation related to our study foci. Address the following questions:

1. Participant relationships and engagement
How was the meeting conducted? Was there a clear leader who directed the conversation to specific issues or questions? Did everyone participate? What was the level of engagement among meeting participants?

2. Character and Tenor of Meeting
How would you describe the overall character or tenor of the meeting, noting in particular silences, tensions, disruptions, as well as harmonies and connections. Were there disagreements or even arguments, and if so, over what?

3. Character and quality of data use conversations
What was the character and quality of the data use conversations? What specifically did the team spend its time discussing – trying to understand a set of data, discussing the quality or accuracy or relevance of some data, including student characteristics (which ones?) as part of data interpretation, discussing instructional or other uses of the data, other? How would you characterize the quality of the data use conversation? What were the decisions that were being debated (e.g., what to teach, how to teach, how to manage a number of kids) and how did evidence play into that?

4. Student characteristic data
Elaborate here on if and how student characteristic was discussed in this meeting. Which student characteristics were discussed? How did it pertain to individuals or groups of students? How was it discussed relative to discussions of student performance data and/or instructional decisions?

5. Politics of Data use:
In what ways, if any, did the conversation reference the politics of data use, for example, requirements or expectations regarding data use imposed from the outside? How salient were such conversations as part of this data use meeting? How does the politics of the data systems
(e.g., what is valued in what is measured) show up? How does it define achievement and learning? It is discussed or just taken at face value?

6. **Resolution of issues and topics**
How well did the team come to some resolution of the issues and topics discussed? Which issues were resolved and which were left on the table? What do you think both facilitated and hindered resolution?

7. **Areas of further inquiry**

8. **Anything else of importance**

9. **Running record**
Appendix B: Interview Protocol for School Leaders

School Leaders Research Questions:

- What are East District school leaders’ conceptualizations of the connections [or relationships] between teacher data use and equity?

- What influences these school leaders’ views of the role of data in addressing issues of equity, specifically around data for instructional practices? Specifically, what are the influences from their personal beliefs, school level factors, and district level factors?

The purpose of this interview is to examine school leaders’ understanding of equity and subsequently the use of data for engaging “issues of equity” within their school and within the district. Furthermore, I am interested in understanding how school leaders position themselves (what do school leaders see as their role) in the equity conversation.

Thanks for agreeing to sit down for a conversation with me today. As you may or may not know, I am a member of the research team at the University of Illinois working on a study sponsored by the Spencer Foundation examining how teachers use data to make instructional decisions and, overall, how teachers make sense of the whole data use phenomenon. My own research for my dissertation is a sub-study of this larger project and seeks to examine how educational leaders come to understand data and their own sense of how, if at all, data can be used to promote equity within schools.

1. Before we begin, I am always interested in hearing a little about the stories behind school leaders and what made them realize they wanted to be in the field of education. Also, I am interested in why they choose this school district. So could you briefly tell me the story of how you came to be a principal/vp/instructional coach/psychologist/assistant superintendent at this school/district?

I have been reading up on the East School District and have come to understand that this district has a unique recent history. Furthermore, given the words “achievement gap” has been used frequently in the course of national rhetoric, almost inevitably the word “equity” also enters into the conversation.

2. Let’s begin with how you define equity (probe: what does equity mean to you)? Can you share a story or a vignette about where this view of equity comes from?
   a. On a day to day basis, how do concerns about equity show up in the school and specifically in your role as school leader? Could you give an example of equity in action at your school?
   b. And could you give an example of a persistent and important challenge at your school in which equity plays a central role?
   c. What is your understanding of the “issues of equity” currently present in the district? Can you provide an example?
d. What is your understanding of the district’s vision of equity? How is this vision of equity similar or different from the one you articulated earlier?

e. What might be near to the top of your list of what the district can do to more meaningfully or more effectively address the district’s persistent equity concerns?

For Stacy: In talking with teachers and looking back over our notes, we heard the words “this student population” a lot. Can you give me a little insight into what that means? Describe the uniqueness of the words “this population”.

3. What avenues of support do you experience for your view of equity? How important are these support mechanisms? What might you imagine to be possible if actually a lot of school leaders in this district shared your view of equity?

4. How do you see the relationship between issues of equity and efforts to engage in instructional practices for teachers and students? How does this equity talk shape the instructional practices for and data talk specifically for instruction (e.g. in making decisions, in addressing beliefs, in focusing attention to teaching and learning)? In your view, what kinds of data and data systems are needed to address equity issues in your school, in the district? In what ways have you seen this enacted within your school? Within your district? Can you please provide an example of that?

And again, what ideas might you have for how data driven decision making could be used more effectively to advance an equity agenda?

What support is available for these ideas about using data for equity?

5. How do you position yourself in the equity conversation and your school in the equity conversation? What do you see as your role or position in the equity or data use conversation? (e.g. protecting teachers from pressure, leaders in addressing equity, do you see equity conversation as a distraction)

Thanks so much for your willingness to sit down and discuss your ideas with me. Are there any additional questions or comments? Do you have any questions for me?