

SCHOOL BOARD DECISION MAKING PRACTICES

By

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ABSTRACT

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The purpose of this study was to examine the way in which school boards use data when making decisions, specifically their orientations, perceptions, concerns and priorities around data. This study sought to understand how school boards use data when setting or tracking progress toward goals and aimed following the process of board use of data to discern how they create knowledge upon which to base their decisions and direct subsequent action. Three school boards were selected based on specific criteria that were found beneficial to the study's purpose and goal. Participants were sent an online survey to complete, as well as observed during board meeting and committee meetings. In addition, each superintendent and two school board members from each district participated in face to face interviews regarding their views on the role of data when making decisions.

The results of this research study brought into focus how organizations such as these learn about data and put this knowledge into action in the form of decision making. As school board members examine data, they take part in an information sharing cycle that transforms the data into contextually relevant information that in turn becomes knowledge. This knowledge can be acted upon and enables school boards to validate their reasons for the decisions made as a collective body. Learning about this cycle can be helpful in helping community members and other stakeholders better understand the level of analysis that takes place when board members make decisions.

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This dissertation is dedicated to my husband, Calvin.
Thank you for bringing out the best in me.

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KEY TO ABBREVIATIONS

DDDM	Data-Driven Decision Making
ISD	Intermediate School District
LEA	Lansing Education Agencies
MASB	Michigan Association of School Boards

CHAPTER 1: INTRODUCTION

Amidst an almost chaotic education environment, the future of local school boards is uncertain. In recent years in Michigan, policy efforts have threatened to shift some control away from Local Education Agencies (LEAs) and place more responsibility in the Intermediate School District (ISD), with expectations of cooperation among LEAs and ISDs. The Michigan Governor not long ago proposed that LEAs would need to share some of the burden of debt incurred by Detroit Public Schools. These two policy discussions were important in the state context during the time in which I collected data for the study of school boards presented in this dissertation.

Currently, policy proposals continue that are likely to influence local school boards and the work they do. With a new administration in the White House, just three months ago, national education policy is unknown, particularly for funding and accountability policies, two of the priority policy areas on which local school boards have focused much attention. It does seem certain that more responsibility will be devolved to the states, but whether and how any shifts ultimately change the work of school boards remains to be seen.

Though situations might change rapidly, the current reality is that LEAs in Michigan have locally elected school boards with ultimate responsibility for the effective and efficient operation of the district, which is educating its students. Over time, the meaning of “responsibility” has likely intensified. Hess and Meeks (2011) contended that increasing levels of accountability have been placed upon board members by the stakeholders or community members they serve. Additionally, governmental scrutiny at the local, state and federal level has led to a need for board members to better account for the fiscal

management of resources. As a result of dwindling resources, and greater scrutiny of governance practices, concerns have arisen regarding the capacity of school board to govern effectively. Hence, there is a newly charged push to shift power and control away from local schools to a more consolidated structure, as evidenced by increasing criticism from state governments, researchers, and the community members that boards serve (Todras, 1993). In Michigan, state education policy includes such consolidation incentives, which could ultimately reduce the number of LEAs, and thus, the number of school boards. In many places, the call to serve on a local school board is less attractive. Further, the demands on someone in the role are more challenging than in earlier years. Knowing the expectations of governance and how to fulfill these expectations are important as board members continue to face new and increasingly difficult challenges. One expectation is that members of school boards are able to examine and analyze all sorts of data to assist them in making decisions.

In almost every walk of life you can find some sort of data analysis. Farmers analyze the previous seasons yield and current weather trends to better predict and prepare for optimal growing conditions. Meteorologists study past weather patterns to better determine the weather for the day. Marketing companies study the results of focus groups and opinion survey to better determine product placement, with the goal of increasing quarterly sales. Children scan recess equipment to better determine their odds of getting to play with the toys they desire. The local school board as a governing body is no different. Members routinely interpret multiple sources of data with the goal of making sound decisions for the schools they serve. Local school board members review a range of data in order to make decisions about school finances, staffing, facilities management and

the like, all in an effort to support and improve the academic performance of the students they serve. They work in conjunction with the school superintendent to develop plans of action as to how to respond to state laws and regulations regarding education, as they pass the information on to teachers and other school personnel. In addition, local school board members strive to incorporate the desires and needs of their local community as they make decisions for their school district. This places a significant amount of responsibility on board members, making it vitally important that they are aware of their governance roles and responsibilities. A major part of decision making among board members is data analysis.

There was a time, however, when school board governance was less uncertain. Board members had fewer contextual variables to contend with. Communities were less fragmented and students generally attended schools in their own neighborhoods. State and federal pressure and mandates were not in the forefront and decisions were made with less contention and strain. As the educational climate began to shift, more pressure was placed on administrators and teachers to improve student achievement. Laws were passed, accountability measures increased, now requiring teachers and school administrators to show evidence of student growth. Inevitably, eyes began to shift towards the local school boards, and questions began to surface regarding their relevance as a change agent in the fight to provide a fair and equitable educational experience for all children. More scrutiny is now placed on boards as they now have to account for the management of fiscal resources, as well as providing justification for decisions that they make. Although data has always been used, board members are now expected to analyze multiple data sources and be prepared to clearly provide justification of how the data

contributes to a sound decision. This can be complex, as board members are generally non-educators and may not work in careers where large amounts of data is analyzed on a regular basis. Consequently, board members often rely on school administrators and other school personnel to streamline and aggregate the data for board member's use. Perhaps this is one reason why many have begun to question the relevance of school boards in today's educational climate. In many places, the call to serve on a local school board is less attractive. Further, the demands on someone in the role are more challenging than in earlier years. Their role, however, is still viewed by some as a vital part of overseeing the educational process for students and schools. Knowing the expectations of governance and how to fulfill these expectations are important as board members continue to face new and increasingly difficult challenges.

Statement of the Problem

The phenomenon of interest in this study is the way in which school boards use data when making decisions. Over 30 years of research on schools using data to inform practices indicate that thoughtful use of student data may have a positive effect on student's academic performance (Edwards, 1979; Stringfield, 1994; Teddie & Reynolds, 2000; Weber, 1971) and suggests that data use is central to the school improvement process (Chrispeels, 1992; Early & Katz, 2002). However, little research exists that examines the role school boards play in improving schools, specifically how they use the variety of data at their disposal as part of their decision making process. Due to the current climate surrounding school board governance it is important that decisions be made based on sound decision making practices, which involves a detailed and systematic process. As a

result of such pressure, it is important to examine the ways in which school boards utilize data to help inform their decisions.

Significance of the Study

The role of board members has shifted over time as they attempt to keep pace with the changing needs of our nation. Indeed, it appears that schools are expected to adjust to current social issues and constantly shifting legislation. The burden of ensuring that students are succeeding academically is placed upon board members, as well as to make sure that expectations for improving learning are clearly defined. As a result of the pressure board members currently face, a need arises to understand the role and relevance of data when the school board makes decisions. This would include board member's perceptions about data, their preparedness and comfort using data. Hence, the purpose of this study is to examine the role data plays in the decision making practices of school boards, with a particular focus on how data are used in generating knowledge. Increasing pressure from state, federal and local accountability policies regarding school improvement threatens to shift the local power and control of schools away from Local Education Agencies, putting the future of school board in Michigan at risk. Hess and Meeks (2011) contend that a greater level of responsibility is placed upon board members for accountability by the stakeholders or community members they serve. The burden of ensuring that students are succeeding academically is placed upon board members, as well as making sure that expectations for improving learning are clearly defined. Hence, an investigation into how school boards use data when making decision is warranted.

This study is informed by recent work from the RAND Corporation (2006), a non-profit research organization that analyzes and offers solutions for public education

agencies. The report synthesizes findings from four studies previously conducted by the RAND Corporation, and seeks to clarify the ways in which multiple types of data are used in schools and districts. While the RAND review examined the ways teachers and administrators used data, I adjust the framework for my inquiry into how school board members, with the assistance of the superintendent, use data.

The RAND report on school and district data use indicated that test data is used more often and in a more systematic manner than other data. This is due in part to the high stakes that are attached to tests as a result of federal mandates that require states to variously aggregate and disaggregate test data. Certain types of decisions are more likely to be informed by data than others. For instance, the study found that district and school staff members used data frequently to set student goals for academic improvement. Support on how to use data to inform decision making is usually offered in the form of workshops or trainings, but the content and perceived quality of support varies in the eyes of the research participants (Rand, 2006). One implication of the studies referenced in the RAND report is that making decisions using data does not necessarily guarantee effective decision making. In addition, practitioners and policymakers need to use multiple forms of data that are collected at different times to help inform decision making. Finally, users of data need to be as attentive to taking action based on the data as they are to drawing meaning from the data (Rand, 2006).

For purposes of my study, I adopt the general definition for “Data-driven Decision Making” as “systematically collecting and analyzing various types of data” to inform decisions ultimately taken (Rand, p.2). My focus will be on the decisions school boards make, many of which are policy decisions. Even with this adjustment, the Rand study offers

a helpful framework, shown in Figure 1. Data-Driven Decision Making (DDDM) holds that decisions are based on various types of data, including: 1) input, 2) process, 3) outcome and 4) satisfaction data. After data is collected, it has to be organized in such a way that it can be placed within the proper context in which it is intended to be used. Data analysis is a multi-step process that requires decision makers to use sound judgment when deciding how the data will be utilized in setting goals and tracking progress toward those goals.

Several factors inform DDDM: 1) Access to data, 2) Quality of data, 3) Motivation or Reasons to use data, 4) Timeliness of data, 5) Staff capacity and support, 6) Curriculum (or general) pacing pressures, and 7) Lack of time (RAND, 2006). While at the district or school level, data is used primarily to inform decisions or to make changes such as allocating resources or altering the curriculum, school board members take up issues at a higher level or broader scale. As decisions are made, new data is collected with the intent of assessing the effectiveness of the decisions that were made based on prior data results that leads to a continuous cycle of action.

Conceptual Framework

The decision making process of school boards involves a systematic and analytical approach. The diagram below was adapted from a study by the RAND corporation (Rand, 2006) and will be helpful in explaining how decisions for simple or complex issues take into account multiple types of data from multiple sources, and depend on school and district administrator advisement within contexts of limited resources.

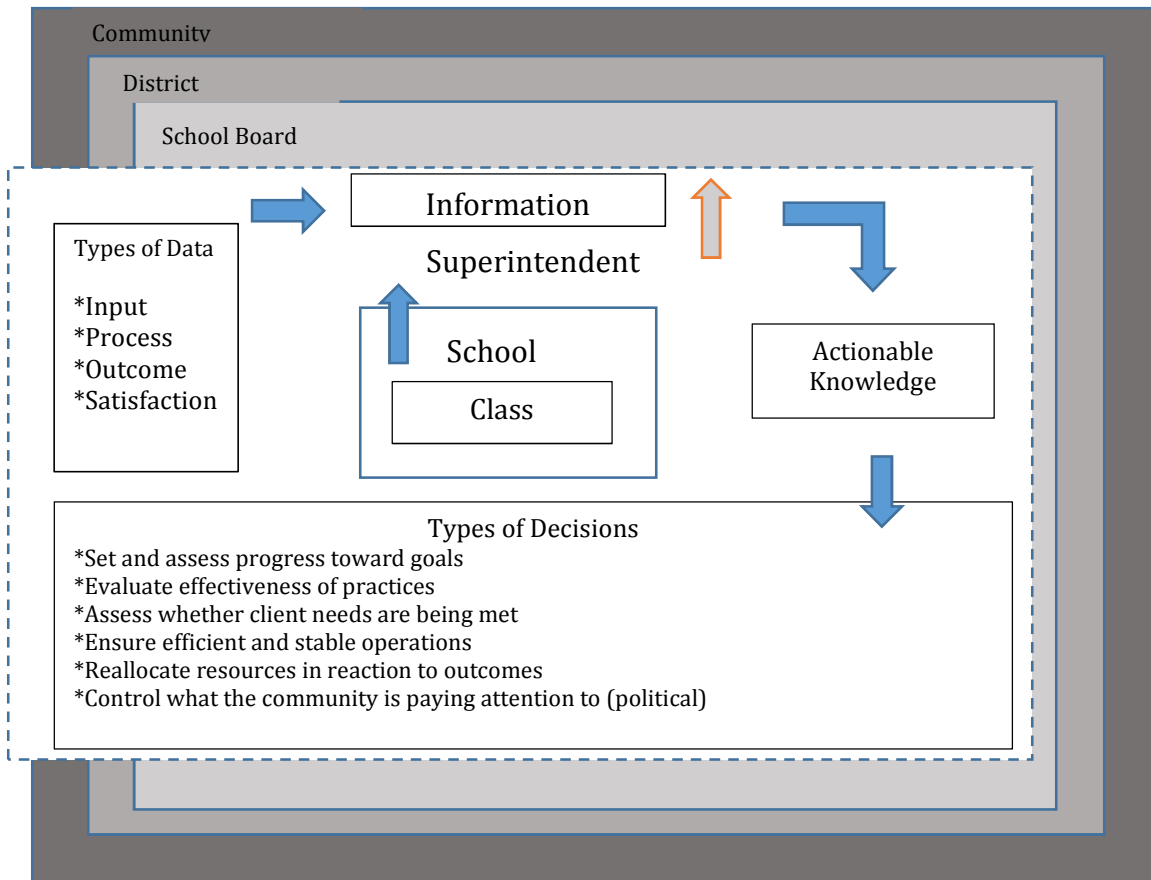


Figure 1: Data-based Decision Making Framework

At the heart of the decision making process is the ground level data that is produced at the school and classroom level. Test scores and student achievement data is aggregated and compiled and viewed by the superintendent and others. They in turn organize or streamline the data, making it more palpable and easier to manage and analyze. In essence, the data is organized into information. This step is very important as school board members are often dependent upon others to compile multiple data sources in to a user-friendly format. In addition, the superintendent is an important resource as data synopsis are developed because they often have the historical knowledge and contextual relevance of the problems the district faces. They understand the experiences that districts have

encountered, and may have a better handle on what resources are best needed to prepare this data for school boards. This process implies that boards have a trusting relationship with the superintendent and can count on them to prepare quality and reliable information in a consistent manner. The information is organized in the board packet, which provides the basis for the board members' work together to process the information, create actionable knowledge, and make decisions.

The overarching research intent for my study, is to inquire into how school boards utilize data as part of their decision making process. I am interested in learning about individual board member's general orientations to using data, including their perceptions about data, their concerns about using data, and how they establish priorities for using data. I will also seek to understand how school boards use data when setting or tracking progress toward goals. Finally, I aim to follow the process of board use of data to discern how they create knowledge upon which to base their decisions and direct subsequent action. The study is guided by the following research questions:

Research Questions

1. What are board members' orientations to data use?
 - a. What are their perceptions about data?
 - b. What are their concerns when using data?
 - c. What are their priorities when using data?
2. How do boards of education use data to accomplish district goals?
3. How do boards of education use data to create actionable knowledge?

Chapter 2 provides background for the study through the Review of the Literature.

Chapter 3 presents details of the Methodology for the study. Findings derived through

analysis of three data sources are presented in Chapter 4. Chapter 5 revisits each of the Research Questions, above, with extensive description of how school boards generate knowledge with which they make governance decisions.

CHAPTER 2: REVIEW OF LITERATURE

School boards play an important role in schools as they adopt and oversee policies that are based upon the goals and mission of their school district. In addition to established governance responsibilities, they work in conjunction with the superintendent to develop a plan of action for how to respond to various educational policies. This information is disseminated to school administrators, who then pass it on to teachers and other staff members. That places a significant amount of responsibility on board members, making it vitally important that they are aware of their role and their responsibilities to their districts. Hence, knowing what is clearly expected of them is important in the wake of new and increasingly difficult challenges.

A Future for School Boards?

The current constrained resource environment under which school boards operate has expanded the debate regarding their functionality and relevance. This is important because the board is held accountable for the decisions by the community they serve (Shannon, 1994). A study by Kirschenbaum (2010) of the activism in Southeast Los Angeles regarding the development of new schools found that community involvement in schools is vital to improving urban schools, and that the public engagement garnered in the development of their new schools produced positive results in both the schools and the neighborhoods they served. When community members are clear on their expectations for school boards, it makes it easier for boards to work to meet the needs of the community.

There are many challenges that lead experts to question if boards are still qualified to lead schools (McReynolds, 1997).

Some scholars, such as Maeroff (2010), have suggested that school boards are the cornerstone of a democratic society, and restructuring them would be the better course of action to follow than abandoning them. He argued that many view boards as an American institution that is deeply ingrained in our society, with the sole purpose of ensuring the academic success of students. Schools, in his assessment, will not fare much better without boards, and he encourages training and development opportunities to assist board members to achieve a better understanding and appreciation of “their own need for training” (Maeroff, p.193). While boards may be viewed in this light, there remain many questions about board capability and effectiveness. Rallis and Criscoe (1993) viewed the role of boards as ambiguous and mainly symbolic in function. She contended that the lack of role clarification that board members face, and their current performance make it unlikely that they can be an effective player in school restructuring, simply because boards were not designed to provide leadership for change. As it appears that the future of school boards is at stake, this dissertation will focus on how school boards use data as a basis for decisions as one lens to gain traction on whether and how they provide leadership.

To understand better board governance practices, it is important to examine the current literature as it relates to school board governance. This review begins with examining the role of board members and the social expectations surrounding their position, the laws that govern their roles, and the identification of effective school board practices. This review continues with a discussion of the challenges that school board members face, identifies three themes emerging from current research regarding the needs vital to effective governance, and finally discussing the various ways in which school boards make decisions.

The Role of School Boards in Public Education

School board members are elected officials who are often viewed as guardians who make policies for schools and ensure that students receive a quality education (Maxson, 2006). Their stewardship of resources and public perceptions gives credibility to their actions as it relates to the districts they serve. As an established fixture in the community, school boards strive to ensure that decisions are made that best support the voices of the people. Although the school board's presence and influence can be felt as far back as the 17th century (Howley, 1992), criticism and concerns have been presented that question boards' ability to lead schools amidst growing financial pressure and legislative changes.

School boards are faced with the task of managing the school districts they serve, while abiding by the laws and regulations in Michigan. As a body, they adopt policies and oversee that they are implemented adequately by superintendents and their staff. The overall role can be summed up by articulating, "It is the board's role to make policy, the administrator's role to implement policy, and it's also the board's role to oversee its policies" (MASB Course CBA 102, p.3). The National School Boards Association outlined the major responsibilities of board members as follows:

1. Policy Making - Policies that are adopted should clearly describe how schools should operate. Boards may not carry out policy, but they should take part in the oversight and the evaluation of the success of the policy.
2. Hiring and Evaluation of Superintendent - Board members hire superintendents with the expectation that they will implement policies that have been established. It is not the responsibility of boards to offer assistance to superintendents as they implement the directives of the school board.

3. Planning, Goal Setting, and Appraisal - School board members work together to establish and communicate a vision for the district that is to be shared with the community and other stakeholders.
4. Safeguarding Financial Resources - School board members and superintendents work in conjunction with each other to approve and adopt a budget. All finances should align with the vision of the school district.
5. Hiring and Evaluation of Staff - Board members apply state laws and guidelines as they establish policy that determines salary schedules and other terms of employment. In addition, all collective bargaining contracts must be ratified by school boards (NASB, 2016).
6. Set Clear Expectations for Instruction to Administrators - School board members must establish policy that gives administrators directives on instructional programs, expectations, and resources.
7. Maintain School Facilities - School board members must ensure that all operational and maintenance needs are necessary before authorizing funds to be distributed as requested.
8. Set Policies That Support Student Success - All actions, policies, and decisions made by school board members should be made with the interest of students in the forefront.
9. Collaborate with All Stakeholders - School board members must actively seek out community support to maintain a strong and viable vision for the district.

10. Student Advocacy - In addition to seeking out community support, school board members must maintain collaborative relationships with stakeholders to solicit support that will be beneficial to all students serviced by the district.

11. Help to resolve staff or student conflicts - School board members have the responsibility to hold appeal hearings to help resolve student or staff conflicts.

(NASB, 2006)

Whether urban, suburban, or rural, school board members are charged with the task of safeguarding the resources of the district. While there may be unique circumstances related specifically to the districts which they serve, board members have a common function of governance and policy oversight.

Laws, Regulations, and School Board Activity

The 10th amendment limits the role of the Federal Government as it relates to education, placing the responsibility at the state and local level. There has, however, been a major impact on the accountability and assessment practices of schools as a result of the Elementary and Secondary Education Act, also known as the No Child Left Behind Act of 2001 (U.S. Department of Education, 2013). Designed to increase the amount of federal funds allocated to education reform and to increase school accountability, the act has received mixed reviews, as well as much criticism in terms of its ability to improve the overall performance of schools and student achievement. A major point of contention is its inability to maintain a level of consistency in how states respond to this mandate, which makes it difficult to determine the act's effectiveness (Davis, 2003). Another concern is the possibility of an inappropriate amount of emphasis and resources used by teachers and administrators on test preparation to ensure that students perform well. This leads to an

imbalance in instruction in areas not required on standardized tests. Despite these and other criticisms, the Obama Administration tried to make changes to the act that would make things less stringent on students, such as the decision to waive the requirement of meeting the 2014 deadline in which all students would have to be proficient in math and language arts (U.S. Department of Education, 2013). It should be noted, however, that recent changes in legislation have offered states the option to develop a different accountability measure to monitor the academic progress of schools.

Michigan received a waiver as part of the ESEA Flexibility Act, and it has established another accountability measure to assess student achievement, which will be discussed later in this chapter.

The Michigan Department of Education disseminates information about educational laws and regulations to local and intermediate school districts (MDE State Board Constitutional Responsibilities, 2013). The districts operate with the mission of ensuring that all students graduate with the skills necessary to participate in higher education and career opportunities, thus enabling them to be active members of their community. In addition, they are charged with the responsibility of interpreting information on the laws and statutes that school districts must respond to. They also streamline and package the information for use by local school board members, administrators, and school personnel, as well as community colleges. There are several laws and regulations that guide school board governance practices. Below is a brief description of the policies that surround school board activity:

- A. The Revised School Code Act 451 of 1976- Enacted to bring order and clarity to all levels of operation and functioning of schools, as well as the laws pertaining to all

public entities (Michigan Legislature-Act 451, 1976). This act also gives instruction regarding school employees, tax levying, tax collection, and other financial matters, as well as the basis for changes or repeals in other acts.

- B. State School Act of 1979- This act was developed to make provision for the financing of public and intermediate school districts, as well as community colleges and universities (MDE School Law, 1979). It also provides resources to state boards of education. This act serves as the basis to repeal and adjust acts.
- C. Elementary and Secondary Act of 2001- On July 12, 2012, the U.S. Department of Education granted Michigan a waiver that no longer requires them to have to respond to the No Child Left Behind Legislation. This act requires all students to be proficient by 2014 (Murray, 2012). In its stead, Michigan schools now use the new State Accountability reports.
- D. State Accountability Reports –Announced this year, this system is designed to replace the old requirements of No Child Left Behind; it requires that 85% of students show proficiency in various subjects by 2022. To monitor a student’s school performance, a series of accountability measures have been designed.
 - 1. *Michigan School Accountability Scorecard (Report Cards)*: A color system serves as a measure of progress. Colors are assigned based on points accumulated for the level of improvement schools show, or the goals that are met (MDE School Report Cards, 2013):
 - a. Green- 85% or more of possible points
 - b. Lime- between 70% and 84% of points
 - c. Yellow-between 60% and 69% of points

- d. Orange-between 50% and 59% of points
 - e. Red-less than 50% of points
2. *Top to Bottom Ranking:* Schools are ranked based on student academic performance and graduation statistics for high schools. School performance is also based on the level of improvement between the 30% of students at the highest and the lowest levels of performance.
 3. *Priority Schools:* This is a list that identifies the public schools in Michigan that are the lowest 5% in the Top-to-Bottom ranking. These schools face a higher level of supervision and state involvement in school improvement planning, and they are placed under the supervision of the State School Reform and Redesign office.
 4. *Focus Schools:* Focus schools represent the 10% of schools on the Top-to-Bottom list that show the largest achievement gap between the highest and lowest performers.
 5. *Reward Schools:* These school have outperformed schools that have similar demographic and risk factors.

(MDE, School Report Cards, 2013)

- E. *Michigan Student Test of Educational Process (M-STEP):* In June 2014, the Michigan Legislature put forth a mandate to the Michigan Department of Education to develop a test that would replace the MEAP test, which was previously used for the past 44 years as a way to assess student achievement (MDE). Students in the 3rd-8th grade will be assessed in English language arts and math skills, grades 4th -8th will be assessed on social studies and science skills, and students in the 11th grade will take

a variety of assessments ranging from college readiness to work skill assessment (Michigan Department of Education, 2015). At this time, schools will not be penalized based on the assessment results, but will be required to have a minimum of a 95% participation rate.

The increased requirements from government agencies describe above resulting in pressure for student achievement and competition for resources created a turbulent environment for schools. Along with this, a greater scrutiny of school board governance brings interest in learning about the capacity of school board members.

Challenges Facing Michigan School Boards

Many issues vie for the attention of local school board members, such as funding for schools, facilities management, teacher pay, classroom size, collective bargaining, academic achievement, and the like. As school boards work together to decide what determines the order in which problems are addressed, what resources and information do they rely on to help support their decisions? Are their decisions producing the desired results? Although research has been conducted that surveys board members, there is little substantive information document how school board governance practices improve from the use of data. Further, in an achievement-centered climate, the question of the local school board's capacity to "control local education policies" (Shober & Hartney, 2014) is questioned.

Historically, school boards have had much influence over how schools operate. Despite this fact, school boards in Michigan have come under great scrutiny surrounding their role in school improvement and the educational process as a whole. Similar to board governance in other states, members are facing increasing pressure and new challenges that make their job more difficult, resulting in a lack of clarity regarding governance

responsibilities in the midst of a rapid and uncertain educational climate. Increased state and federal influence factors affecting school board governance practices (Smoley, 1999), causing stakeholders, lawmakers, and researchers to question their ability to govern effectively under new constraints. Poor student achievement scores have weakened the opinion of educators and lawmakers as it relates to the ability of students to compete academically and professionally with students in other countries. Mismanagement of funds and other resources have resulted in cities, such as Detroit, experiencing mayoral takeovers (Hess, 2007).

In recent years, Michigan school boards have been faced with policies that limit or complicate their decision making practices. First, school choice policies require local board members to represent students from within and outside their local community. Next, as most board members serve as volunteers, there are questions regarding their ability adequately to guide student learning and improve educational practices. Finally, school board members lack the fiscal authority to properly appropriate resources for schools.

School Choice Policies

The State School Act allows families in Michigan to select schools for their children that cross the traditional boundaries that have limited which schools their children could attend (Michigan Legislative Website, 2014). As a result, parents are able to send their children to different schools within their district, as well as in neighboring districts. Commonly known as “Schools of Choice,” parents are faced with choices they have never had before. In addition, the state began to see the development of public charter schools. While this opened new doors of opportunity for families, it also caused uncertainty and discomfort in schools, and among administrators and local school boards. Opponents of

school choice have argued that school choice policies threaten to hurt underserved populations of students because much needed funds will be diverted to different schools, as families decide to choose a new school for their children to attend (Arsen, et. al, 1999). In addition, concerns arise regarding the motivations of parents as they relate to selecting a school for their children. Supporters of school choice argue that the option for parents to choose a school for their children is fundamental to their right to ensure a fair and equitable education (Rees, 2014).

At the heart of the concern regarding school choice is the capacity of school boards to govern in a way that supports the needs of students. Schools are faced with a barrage of legislative demands to improve school climate and achievement. In addition, school choice may leave schools with fewer monetary and physical resources, causing them to cope by cutting programs, reducing staff, closing or restructuring schools, and consolidating resources, all of which brings to light questions by scholars such as Green (2001), who questions whether or not school choice policies promote the best interests of children and families, or spark healthy competition among schools and districts, claiming to provide equal access to public funds set aside for families that choose to select schools for their children as part of this initiative (Freidman Foundation, 2015). This takes a toll on the students and staff, and it blurs the lines once formed by a predictable and stable local community.

The reality of things, however, is that schools and communities have changed. The re-districting of schools causes students to be uprooted from familiar settings as they move to a new school. Schools of choice allow parents to choose which school they would like their children to attend, while others choose to move into a new district, causing a possible

disconnect between community members and the local school boards that serve them.

When community members are clear on their expectations for school boards, it makes it easier for boards to work to meet the needs of the community. These and other challenges lead experts to question if boards are still qualified to lead schools (McReynolds, 1997).

School Board Members' Capacity to Govern Effectively

Previous research studies argue that school board members should be well informed about the condition of their school district, as there is the assumption that they are more educated, politically active and affluent than many of the stakeholders they represent (Smoley, 1999). Studies also show that board members tend to respond more favorably to their constituents and stakeholders when they have similar views of school spending (Berkman and Plutzer, 2007). There are, however, opposing viewpoints on school boards and their capacity to contribute effectively to educational reform.

Proponents argue that democratically elected boards imply the very need for local or lay people to govern schools as they may be more in tune and responsive to the concerns of the community, but they acknowledge that they need additional support, such as role clarification and training. Some scholars, such as Maeroff (2010), suggest that school boards are the cornerstone of a democratic society, and restructuring them would be the better course of action to follow. He argues that many view school boards as an American institution that is deeply ingrained in our society, with the sole purpose of ensuring the academic success of students. Schools, in his assessment, will not fare much better without boards, and he encourages training and development opportunities to assist board members in a better understanding and appreciation of “their own need for training”

(Maeroff, p.193). Removing them will do more harm than good, because the community may not support such a drastic change.

With school boards still in operation, community members may feel a greater sense of importance and validation when sharing their ideas (i.e., they will feel acknowledged), and they may feel that they can have more of a say as to what goes on in the district. Without local school boards, there may be concerns that they as community members may lose their voice, and many support school boards because they are a community fixture and are important to keeping a strong connection with the desires and needs of the students and family they serve. There is a fear that without them, state run schools will focus more on numbers and statistics and less on community needs and perceptions (Maeroff, 2010). This is problematic because healthy school districts require strong community support. While state run boards may bring a level of objectivity needed to be more proactive and to consider better all the factors before making decisions, the level of change needed is complex and multi-faceted. Even if boards are trained adequately and are clear about their role, the fact that they largely consist of volunteer participants may prevent them from being willing to put in the time and labor necessary. Further, their ties to the community can cause a lack of objectivity and hesitancy to make the changes needed, which can lead to the option of a state take-over.

Another viewpoint surrounding school boards is that local boards are mainly symbolic in nature, and they are part of the reason why schools are struggling because they 1) are in the way of progress; 2) are out dated; and 3) were never designed to be a change agent (Rallis and Criscoe, 1993). Opponents of local school boards argue that their current way of governance is outdated and thus incapable of helping to solve today educational

problems. Further, they contend that members selected from the local election process are not informed as they could be, therefore and lack the commitment needed to govern effectively and state that positions are often filled personnel with ulterior motives. Their argument is further bolstered with the emergence state takeovers and other agencies that take have begun to take the helm of struggling schools and districts. The argument here is that boards are in the way and cannot handle the press of educational reform. They are too emotionally invested, are unable to weigh community thoughts and perceptions in a balanced manner, and may make decisions to appease the community, even though it may not be what is in the best interest of the district as a whole. Rallis and Criscoe (1993) viewed the role of boards as ambiguous and mainly symbolic in function. She contended that the lack of role clarification that board members face and their current performance make it unlikely that they can be an effective player in school restructuring, simply because boards are not designed to provide leadership for change.

Fiscal Power

Funding challenges have forced local school boards to change how they manage schools. The loss of funds is due to school of choice measures and other factors, such as low enrollment, restricting the budget, calls for creative ways to fund school operations. Schools may receive federal funding, such as Title I funds (Michigan Department of Education, 2014), for servicing certain demographics of students, but there may be restrictions on how those funds can be allocated. In many districts, funds such as these are utilized for specialized staff, para-professionals, and additional resources for students. In addition, the financial officer of a school district may have concerns regarding the way

board members recommend funds be utilized, which may cause tension and strain in their relationship.

Not every district qualifies to receive such funds because they do not serve a large percentage of under-represented or specific demographics of students. School districts such as these are forced to continue to rely on funding from tax revenue, general per pupil funding, and any mileage proposals that they may pass. Issues such as supporting mileage proposals and other financial matters become problematic, because a large percentage of students who will benefit largely from such decisions may not reside in the district, and out of district parents may not be as invested as they might be if they lived in the district of the school which their child attends. With federal monies often contingent upon having certain demographics present in a school district, superintendents and school boards may be tempted to make decisions without being totally forthright to the community. Vincent (1967) identified three factors that influence the fiscal performance of large school districts; 1) the education and occupation of board members; 2) the effect or impact of public votes on their budget; and 3) the effect of the size on the district (Vincent, 1967). Other factors that may impact school board governance include declining enrollment due to charter school enrollments, low birth rates in the state, and families moving out of state to pursue financial opportunities.

School boards employ a variety of measures to try and run schools. From closing schools and reducing staff, to decreasing funding for such things as school enrichment programs, (Zeehandelaar, 2012,) their decisions do not always produce positive response and results. In her 2012 study, Zeehandelaar used a political systems theory to understand better the interaction between school board members, superintendents, and teacher

unions as it relates to remaining strong financially, as well as increasing student achievement. Her major finding was that the power of superintendents was directly related to the amount of authority the school boards relinquished to them (Zeehandelaar, 2012). Further, if multiple reform efforts and legislative requirements contribute to an increase in role uncertainty and governance, internal challenges, such as member turnover, and the relationship between boards and the superintendent, as well as role clarification, may further increase the governance challenges faced by school board members, thus increasing the scrutiny and pressure from families, schools, and government agencies. With such turbulence in public education, and uncertainty from year to year as to how much revenue each school will receive, the ability of local school boards to give fiscal direction as needed has weakened.

Needs Vital to an Effective School Board

A primary role of school board members is to establish policy (Adamson, 2011). Adamson's 2011 study implied that training can have a potential effect on school board performance, but cannot offer any guarantees as to its level of effectiveness. She used six competency areas of governance leadership identified in prior research studies: contextual, educational, interpersonal, analytical, political, and strategic. In examining whether training can improve effectiveness, it is difficult to measure because each district has unique needs to be addressed, and it can be challenging to know what is best (Adamson, 2011). The review of literature indicates three themes surrounding the needs identified as vital to performing their role optimally. The first theme identifies the role of school board members and the confusion often associated with school board governance. A second theme involves the proper role of training in school board governance, including the issues

surrounding mandatory training requirements for school board members. A final theme identified is the need for a strong and healthy relationship between the board and the superintendent.

Role Clarification

In general, the role of the school board is to “make policy, the administrator’s role to implement policy, and it’s also the board’s role to oversee its policies” (MASB Course CBA 102, p.3). A deeper analysis of their role, however, has uncovered several areas in which they request clarification and support. Carnes (2008) studied the perceptions of school board members and superintendents in Ohio. School board members expressed feelings of inadequacy related to their role in school board governance, particularly how to balance increased demands and expectations. Superintendents felt that in order for members to experience a decrease in role confusion, board members should receive training in their primary roles and responsibilities of governance. This training should be mandatory and offered frequently. The author argued that these changes could also help decrease criticism of board conduct, as well as help board members respond better to criticism from parents, staff, and other stakeholders (Carnes, 2008). A Georgia study of school board members (Nutt, 2010) also identified role and responsibility as a major area of training needed for school boards. In addition, how to manage properly the district’s budget was identified as a high area of importance. A cross-state analysis of the in-service training needs of school boards sought to identify differences in perception among school board members and superintendents. Howley (1992) sent questionnaires out to school board members in Georgia, Kentucky, Oklahoma, and Texas. These are states that currently mandate school board training at various levels. She sought to determine which of the 18 skills identified

by the states and covered in their certification programs were perceived as having positive impacts from the training. All five states agreed that training in administrative skills was of greatest importance. Kentucky school board members valued training on decision making, while Georgia school board members found that training in the areas of decision making, policy, finance, curriculum and instruction, and administrative procedures was most beneficial to members with five years or more of experience. Both Oklahoma's and Georgia's superintendents felt that leadership training would be more beneficial for the role of school board governance, versus superintendent administration. In Arkansas, superintendents valued training in budgeting and finances more than the school board members did. Kentucky and Georgia school board members and superintendents agreed that most areas of board governance were covered by the training skills identified by their state's certification programs. Few respondents in Arkansas, Oklahoma, and Texas felt that various areas of board governance should be included in the certification training program. Overall, all five states felt that the needs of school board members were being adequately addressed (Howley, 1992). While some areas were perceived as having a positive impact on governance, Howley's study was limited in its ability to demonstrate specific example or areas in which the skills identified were applied by the five states in an attempt to improve governance.

Areas of Training

The state studies mentioned above argue that board members need training, in part to understand their roles and responsibilities as school board members. In a study focused on defining the needs and importance of training board members, McGeough (2000) interviewed 336 superintendents and school board presidents in South Dakota.

Participants indicated that training for school board members should receive a higher level of importance when establishing a budget for the school district. A similar study by James Halik (2012) sought to determine if the training for board members is beneficial in positively affecting the direction of schools. Nearly 90% of the superintendents and school board presidents surveyed promoted professional development during the first year of board service. Kerkins (1984) sought to identify differences in the perceived needs of school board members and superintendents in Colorado. She surveyed all of the school board members and school superintendents and found that both groups identified training on appropriate roles and responsibilities as the main area for development. There were differences in the groups in their views as to how the income range and education of families impacted school success, but both groups also agreed that training from local agencies would be most beneficial.

A study of superintendents and school board members in Illinois questioned if the identified training needs of school board members would lead to an increased perception of effectiveness in the eyes of board members and superintendents. McReynolds (1997) collected data from seven counties. Her research indicated three areas in which participants felt training would be most effective: 1) conferences sponsored by the Illinois Association of School Boards; 2) candid discussions between the superintendent and school board members; and 3) the opportunities to have informal discussion with other superintendents. Superintendents supported mandatory training for board members, and they likened their role as that of a “trustee” who works in conjunction with management or school administrators to oversee school functions properly (McReynolds, 1997). A Tennessee study on the effects of mandatory training for school board members sought to

identify any perceived impact from the perspective of 60 boards of education and their superintendents. The results indicated that both groups perceived a benefit from mandatory training, with board members seeing more value in mandatory training (Grissom, 2005). Although board members found more value in mandatory training, they did feel that the content of the training was as useful as the superintendents thought. Such topics included finance, policy, and team building. This coincides with Rice's study (2010) on the perceptions of superintendents and school board members' perceptions of training and evaluation. While both groups saw a need for training and evaluation, there was no consensus as to form and scope (Rice, 2010).

A primary role of school board members is to establish policy (Adamson, 2011). Adamson's 2011 study implies that training can have a potential effect on school board performance, but also that there is no guarantee as to its level of effectiveness. She used six competency areas of governance leadership identified in prior research studies: contextual, educational, interpersonal, analytical, political, and strategic. Determining effectiveness of training is near impossible to measure because each district has unique needs to be addressed, and thus it can be challenging to know what is best in specific contexts (Adamson, 2011).

Strong School Board and Superintendent Relationship

The relationship between school board members and superintendents is very important and as they work together they should strive to sustain a shared vision. As the school board sets policy, the superintendent should carry out the policy (MASB, 2012-2013). When school boards and superintendents experience a breakdown in their relationship, it is usually the result of one or more parties straying away from their

prescribed roles. Among issues that cause a strain, a lack of clarity regarding their governance or administrative responsibilities is a major issue that may improve with training.

Judith Randazzo (1995) analyzed the dynamics of communication between school board members and superintendents. She conducted interviews with school board members and superintendents from 20 mid-sized school districts. She found that board members prefer more intimate methods of communication, such as personal meetings or phone calls to more formal methods such as board meetings and memos and other forms of writing (Randazzo, 1995). In addition to communication, trust was found to be a vital component to building strong relationships between both parties (Raeburn, 1994), and there were interdependent components that correlated with higher levels of communication between school boards and superintendents (Alseshire, 1980). The role of the school board is to make and oversee its policies, and the superintendent's role is to implement policy (MASB course CBA102).

Board Capacity

Studies about the capacity of a school board or its members can provide helpful background for this dissertation research. A survey by Shober and Hartney (2014) is useful for this purpose. These researchers combined specific demographic information and student achievement data from select school districts to create a basis for assessing the governance capacity of the school boards. They then linked the responses to individual survey participants in order to establish criteria for successful governance practices. Specifically, they tested participants': 1) ability to exhibit accurate knowledge of the

condition of their school district, 2) degree of emphasis on improving student achievement, and 3) work practices that exemplify commitment to their governance responsibilities.

In asking if boards are capable to govern effectively, their research suggests that school boards do possess knowledge, though sometimes limited, about the condition of their school districts. Further, there was little consensus regarding which goals should be central to each district. While board members did indicate knowledge regarding the finances of the schools, teacher compensation, the status and condition of collective bargaining, and class size, they often did not appear to have a strong academic focus. Most important for purposes of this study, school districts that have school board members with a higher capacity level tend to have stronger levels of academic achievement, regardless of their characteristics or demographics (Shober, & Hartney, 2014). The study found that school boards that assigned a high priority to academic achievement and possessed strong work practices were likely to oversee schools that were associated with better student achievement than school boards that exhibited division or different priorities over school achievement. These results were controlled for competing explanations for achievement such as prior achievement and socioeconomic status. Effective capacity, according to Shober and Hartney (2014) is directly correlated with the academic performance of school districts. Interesting for a comparison of Michigan school board members, the knowledge and focus on school board priorities is connected to the occupational background and political ideology of school board members. As mentioned previously, school board members with prior educational experience tend to be more sympathetic toward the plight and concerns of teachers, and will often support choices that support them, even if there is no data to support their argument. On the other hand, school

board members with little or no educational experience will be more likely to display more accurate knowledge of financial matters and teacher conditions.

While the training, compensation and time spent by school board members was shown to correlate to academic success of the districts they serve, there was no evidence found on the quality of said training or to the degree of which research participants complied with the demands of stakeholders, as well as what the best practices for school board governance should be. Their final recommendations included taking care to hire the best qualified staff, as well as providing responsible oversight without micro-managing others (Shober & Harney, 2014).

Factors Contributing to Successful Decision Making Outcomes

Beach (1990) argued that the results from research on decision making practices show that most decisions are made in conjunction with a group of others, rather than in isolation. As school board governance requires the ability of members to collaborate effectively as they make decisions, it is important that they understand the importance of working together as a cohesive unit.

There are several benefits to group decision making. First, groups are able to benefit from the knowledge and multiple perspectives of each group member (MASB, 2013). In addition, group members are more likely to support the decision, having had ample opportunities to offer input and suggestions. Finally, group decision making can help foster team building and collegiality. Group decision making can also have drawbacks. The pace of work is often slower, and a great level of compromise may be needed to come to a consensus. If one or more team member tends to dominate the process, negotiations can

stall and cause contention with the other members. Group decision making may also inhibit quick and decisive decisions when all members must take part in the process.

School boards are under greater scrutiny to align curriculum and other facets of governance with state mandates and requirements (Kreassig, 2007). Norton's study (2007) of the decision making practices of school boards in Michigan sought to understand the factors affecting school board decision making practices. From his survey findings and artifact analysis, he found that school boards are highly influenced by the perceived competition from surrounding districts. He concluded that the possibility of coordination between districts is doubtful due to how institutions are arranged (i.e. schools arranged by demographic and socioeconomic factors). Kreassig's 2000 study tested a synthesized decision making model from Beach (1998), and others to determine better the effects of "No Child Left Behind" on school board governance practices. He conducted interviews and studied artifacts from schools, to determine better the ways in which schools might use this decision making strategy. His findings were that the model would not have a far-reaching impact at the school level because the dynamics and demographics of schools have changed, while the decision making characteristics have not. The lack of change in how school boards make decision did not meet the needs of today's educational and financial climate. The Michigan Association of School Boards seeks to address this situation in their training programs.

Decision Making Models

School boards make decisions based on various types of information. Some decisions can be made in a single meeting, while others may need to be considered and examined over time. The nature of a decision may be contingent upon the group's

perceived level of importance. Certain “low-level” problems may be solved using one model of decision making, while problems considered “medium or high-level” require a more systematic approach towards a solution. In short, it is highly probable that over the course of a board’s tenure, several different models may be used to make decisions, perhaps more than one model in a single meeting. In fact, Beach (1990) argued that the results from research on decision making practices show that most decisions are made in conjunction with a group of others, rather than in isolation. Because school board governance requires the ability of members to collaborate effectively as they make decisions, it is important that they understand the importance of working together as a cohesive unit.

Being familiar with alternative decision making models will assist in analyzing data in the dissertation to illuminate the decision making processes of school boards. A comprehensive examination of various models has led me to identify three that could be beneficial towards my future studies of the decision making practices of school boards, the classical model, the administrative model, and the garbage can model (Simon, 1976)

The **Classical Model** of decision making is a normative model of how to make decisions. This model focuses on making rational decisions by looking at all the possible alternatives and outcomes before making a decision. The assumption is that all sources of information are perfect and readily available. Of all the alternatives generated, school boards will select the choices that will most likely produce the most optimal results they desire. Human intellect and intuition are not strongly considered when making decisions using this model. The classical model is considered unrealistic and unattainable by most scholars because real world problems are often complex, and humans are not capable of

processing mass quantities of alternatives and evaluating each of its solutions in a systematic and timely manner (Simon, 1976).

The **Administrative Model** of decision making is credited to Herbert Simon and James March (March & Simon, 1958). The authors contended that decision making is more realistic when understanding the limitations of the human mind and the reality of multiple decision alternatives. Two key concepts make up the Administrative model; 1) Bounded Rationality, and 2) Satisficing. With Bounded Rationality (March and Simon, 1958), the information organizations use to make decisions will always be incomplete, and therefore impossible to anticipate all the possible solutions. Therefore, the decisions made must be based on other criteria, such as the objectives of the organization or which scenario is likely to solve the problem at hand. Satisficing is a behavior that involves incremental changes that are driven by the organizations, and by long term decisions, in which decisions are made when a solution that is acceptable or satisfactory is identified, versus trying to find all the possible solutions and alternatives. Problems are defined and analyzed, criteria for a satisfactory solution are developed, and a plan of action is established and then finally initiated. A plan such as this is cyclical in nature and can be utilized at various stages of the decision making process (Simon, 1976), and is thus more suitable for problems that school boards typically encounter.

The **Garbage Can Model** of decision making was developed in 1972 by James March, Michael Cohen, and Johan Olsen. In this model, organizations do not base their decisions on a specific problem, and the result does not end with an acceptable solution. Called “organized anarchies” (Cohen, et. al., 1972), problems are identified, but the solutions that are proposed are disconnected. It may be that a particular school board

member proposed a solution that has worked in a different context with a previous problem, and presents it to the group because the solution may have solved the previous problem. Decisions made using this model are not completely thought out, and there may not be a complete understanding of the problem. In addition, the problem may not be completely addressed, and a decision that is “good enough” is selected because action is implemented before the thinking processes are fully completed. This approach to decision making is not rational, and decisions are made under circumstances that involve multiple problems, various solutions, and a variety of decision makers (Cohen, et. al. 1972). This alternative is not likely to produce the best solution, but could be used in some governance settings where there is a high level of uncertainty, and board members feel pressed to make a quick decision based on internal or external pressures.

These different approaches to decision making may be evident in the qualitative data I collect through observation or interviewing. This review develops my awareness of ways individuals might interact and approach making decisions.

The Role of Data in Decision Making

When understanding the role data plays in school board governance, it is important to know what forms are available, as well how to determine which data best serves the needs of districts. At the organization level, data is used to help boards determine how successful their goals are. It is also used as a barometer to determine if teaching practices are showing a positive impact. In addition, data informs the board as to the overall effectiveness of their plans (MASB course, CBA 109). Bernhardt (1998) defined data as follows:

1. Demographic Data-This type of data includes information on the school's students, staff, community, and building.
2. School Perception Data-Perception data shares the viewpoints and opinions of stakeholders regarding their school.
3. School Processes Data-This type of data involves the policies and procedures and overall information as to how the business is conducted.
4. Student Learning Data-This type of data informs boards and schools as to the success of students.

Data is important because we need an improved and accurate accountability system, and it is also important to assess and monitor what gains are being made. According to the MASB, information that gets measured has a better chance of being addressed. In addition, data helps with accountability measures, and continuous improvement goals, especially if those goals are aligned with the goals of the district. A primary role of school board members is to establish policy (Adamson, 2011). Data gauges whether policies are being implemented and the extent of same.

While the dissertation study does not have a specific focus on training offered in Michigan to school boards, it is informative to know the focus and content of available courses. Since Michigan Association of School Boards could be assumed to hold expertise in regard to what board members should know and be able to do, a review of courses provides information about how data should be used. MASB has two unique programs that reinforce researched-based approaches to data. These two programs illustrate their theory of action, as well as their approach to decision making in relation to data usage.

The “Data-Driven Systematic Planning” program offered by the MASB is a comprehensive program designed to change the way in which school boards respond to the climate and state of affairs in education, by guiding members in the collection, distribution, analysis, and presentation of data as it relates to decision making practices. This “Data-Driven Systematic Planning” supports the development of a customized plan that includes input from all stakeholders as they devise and develop a cogent plan of action for their districts, based on information obtained from the data collected. Participants in this program learn how effectively to collect and analyze data. In addition, strategies are shared in the appropriate ways to present data to school personnel and community members when presenting a plan for improvement. A customized plan of action is developed, based on the needs of each school district. As they work together, they learn strategies on how to frame data results in a way that aligns with the vision and mission of the district. This also helps boards to develop long- and short-term goals, and to create and evaluate improvement plans (MASB Data-Driven Strategic Planning, 2013).

The MASB’s “Systemic Governance Training Process” program seeks to help board members develop a well-organized and functioning governance team that, again, takes a proactive approach to the educational climate under which they serve (MASB Systemic Governance Training Process, 2013). The idea here is that school boards must improve governance by placing proper emphasis on data as they make decisions, as well as establishing trusting and communicative relationships with all stakeholders. If school board members examine their current governance practices, they can determine what kinds of data are needed to improve school performance. When board members work together to identify these resources, the team develops into a more cohesive unit. As the

team develops, mutual respect is fostered, and the focus turns from the needs of the team and is returned to the needs of the students.

A significant amount of responsibilities rests on board members, making it vitally important that they are aware of their role and responsibility to the districts which they serve. With training and professional development often left to the discretion of individual members, it can be difficult to ensure that their governance responsibilities are being met consistently and with accuracy. This is troubling because their role in school improvement is vital, and, sadly, often overlooked (Rice, 2010). Hence, training for school boards is vital as it may help members as they go about their business of running schools.

Conceptual and Theoretical Frameworks

At the end of Chapter 1, I presented a conceptual framework for DDDM that provided organization for the study. School board activities are embedded within district and community interests and concerns. DDDM refers to school board members, individually and collectively reviewing multiple types of data generated locally or secured from other entities. Under direction of the superintendent, district personnel organize data, creating the packet of information which board members consider. Through deliberation, board members generate actionable knowledge, leading to decisions that shape policy. These policy imperatives provide guidance for superintendents as they undertake action to implement the board's decisions.

When decisions have to be made, board members may not always agree on the final outcome. What is important however, is that board members present a united front when communicating to the community members and other constituents. Interview respondents indicated that when voting, there are times when all or the majority of members should

vote in favor of a decision, usually when the decision will have a major impact on the district for which they serve. As mentioned earlier, stakeholders may at times try and use personal agendas and opinions as leverage and influence the decision making process of board members. Having data available can help balance these decisions and help ensure that they are making decisions in the best interest of all students.

The RAND study framework, summarized briefly above, indicates that information is transformed into actionable knowledge (Rand, 2006). The report in which this framework is developed, however, does not specify the processes by which this generation of knowledge occurs. Like so many things in education, knowledge generation is a black box. The assumption is that knowledge takes shape, but not how or why. One intention of this study is to open this box and offer at least a beginning explanation of how this generation occurs.

Knowledge Generation Theories

The members of a Board of Education use data as one source of information to consider when making decisions. As a collective group, they vote at the same time and they vote publicly. Each individual has his or her own ideas, and ostensibly they will have the same opportunities to examine the same data and other information. Before votes, it seems that the board members need to come to shared understanding of the data, even if individuals maintain differences of opinion about the actual vote. While not a member of the board, I assume that the superintendent plays an important role in generating knowledge upon which decisions will be made, even if the superintendent does not vote.

I review several promising theories of knowledge generation briefly here. The first was developed by Nonaka and Takeuchi (1995). They describe a shared knowledge space

that is essential to knowledge creation. Within the right context, what the authors refer to as “ba,” knowledge can take shape. To describe their knowledge creation cycle, they situate the discussion in an engineering problem. A company planned to develop a new bread making machine and sought to replicate the process of kneading that a baker undertook. A team of anthropologists set about studying that process through observation and interview and ultimately defined a “twisting-stretching” skill that they sought to replicate in the new machine. Expressing the movement of the baker in this illustrative phrase, “twisting-stretching” enabled engineers and designers to talk to each other in a way that drove shared understanding and collective commitment to the project – in essence it created “ba.”

Four interactions among all individuals involved in the discovery, design, and engineering contributed to an overall enabling context: originating, conversing, documenting, and internalizing. These interactions spiral around and continue to spiral as any knowledge created continues to evolve. There are interactions that happen between individuals and among members of groups. There are interactions intended to surface tacit knowledge and make it explicit and to reverse the process and make explicit knowledge tacit. Figure 2 shows the dynamics of these four interactions:

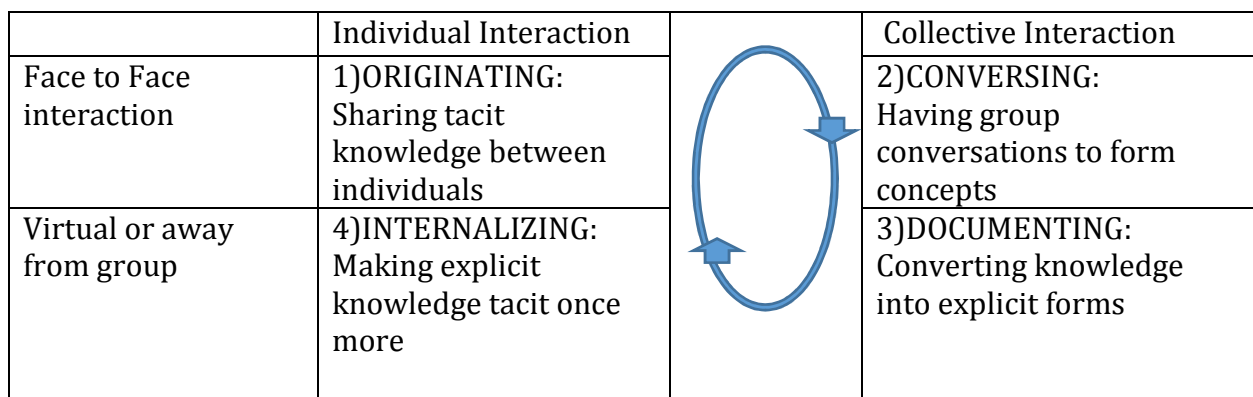


Figure 2: Interactions in a Knowledge Spiral

The importance of context to this model appears important for my study, since the participating districts are quite different. I would anticipate that they might decide how to solve similar problems in very distinctive ways. Whether I can determine shifts in thinking from tacit to explicit and vice versa may be a problem with this model. It does, however, explain how individual thinking or learning can shift to collective learning as a basis for action.

In addition to describing the cycle of knowledge generation, Nonaka and Takeuchi (1995) point to enabling conditions in the context (ba):

1. Intention – every organization has its own vision, the objectives to be achieved in the long run, and the performance that is expected which specifies its future position.
2. Autonomy – motivation to encourage individuals and groups to create knowledge.
3. Fluctuation and creative chaos – Interaction between the organization and the environment allow questioning of knowledge already created and held and open to question; something happens that causes individuals to reconsider.
4. Redundancy – multiple structures or causes for repetition and overlapping
5. Requisite variety – internal diversity that allows an organization to deal with the variety and complexity in the environment.

The second theory was developed by Dixon (1999) related to collective processes for organizational learning. This model is in line with the following definitions: generally, data are defined as raw facts, information is viewed as an organized set of data, and knowledge is conceived of as meaningful information (Alipour, Idris, & Roohaniz, 2011). Information is tangible. It is independent of context and is easily transferable by means of recording, recitation and graphic representations. Information can be gathered, compiled, and disseminated. To build knowledge from information, one has to add context. The context affects the meaning and value of knowledge, and can be seldom easily “reproduced” or “transferred through dissemination” because knowledge is filtered according to the

perspective of individuals or organizations, reflecting their context and internal understanding (Hordijk & Baud, 2006).

Dixon describes an organizational learning cycle that involves four steps:

1. Widespread generation of knowledge
2. Integration of new/local information into the organizational context.
3. Collective interpretation of information.
4. Having the authority to take responsible action based on the interpreted meaning.

Figure 2 shows the organizational learning cycle and the relationship between private meaning structures, accessible meaning structures, and collective meaning structures. This last idea describes a dynamic or mechanism by which individual knowledge is negotiated into collective knowledge. As with Nonaka and Takeuchi's model, context is critical in Dixon's model.

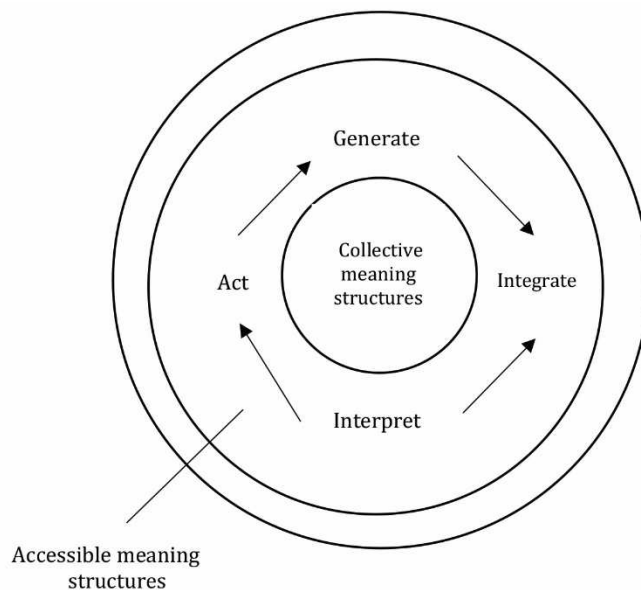


Figure 3: The Organizational Learning Cycle

Conclusion

School board members are elected officials who are often viewed as guardians who make policies for schools and ensure that students receive a quality education (Maxson,

2006). Their stewardship of resources and public perception gives credibility to their actions as they relate to the school districts they serve. Thus, they play a major role in the overall success of their district. They are faced with the task of managing the school districts they serve, while abiding by the laws and regulations in Michigan. As a body, they adopt policy and oversee that it is implemented according to the goals and missions they have established. Knowing the expectations of governance and how to implement it is important as board members continue to face new and increasingly difficult challenges. Times, however, are changing. Michigan is facing an unprecedented era, in which simultaneous and heavy hitting changes have swept the landscape.

CHAPTER 3: METHODOLOGY

As a teacher, my training and experience was to use quantified data as evidence of student learning. Every month, I would gather with other members of our teacher teams, each bringing our individual student performance data to the meeting. We each had several sources of class based summative assessment data to share: Aims-Web reading and math scores, math chapter tests, literacy reading prompts and reading comprehension scores, as well as behavioral data. As we took turns, we described our data in an attempt to gain insight about our students, and to plan collectively with our colleagues. In addition to the quantifiable data, we also discussed what we knew about our students from the day to day interactions of talking with our students, monitoring progress on daily assignments, checking for understanding during lessons and other types of formative assessments. We also took into account external variable such as attendance, family support and individual unique need that particular students might have. The goal of each meeting was to walk away with a deeper understanding of what our students needed academically and behaviorally and what we would need to do collectively to support them. I suspect that this regular experience has had an influence on me as a researcher. I recognize the benefit of quantified data but also know that deeper understanding results when accompanied by descriptive narrative accounts.

My dissertation topic shifted over time from a focus on board member training and whether it enhanced data use to focusing on board members' data use, with minimized attention to training per se. I wanted to understand how individual members are oriented to data use, including their perception of the importance of data as the basis for decisions, their concerns about data use, and any priorities they established when using data. I hoped

to observe the ways in which school boards use data collectively to establish goals and track progress toward goals. What kinds of data do they review and in what contexts? What conditions enable or constrain data use? Finally, I wanted to gain some insight into how data plays a role in developing actionable knowledge upon which decisions are based. The overarching topic for my study is the relationship of data to board decision making. The specific research questions include:

1. What are board members' orientations to data use?
 - a. What are their perceptions about data?
 - b. What are their concerns when using data?
 - c. What are their priorities when using data?
2. How do boards of education use data to accomplish district goals?
3. How do boards of education use data to create actionable knowledge?

Qualitative Research Approach

Of the two general approaches to research, the approach most appropriate to my study is the qualitative approach. I am interested in the reality of school board members' experiences in decision making, with a specific accounting of the kind of data they use and the ways in which they use data.

Glesne (2006) notes predispositions that researchers might have to qualitative research, many that ring true to me. Just as I took the time to invest in the academic and behavioral needs of my students, I see my role as a researcher as one that seeks to become personally involved or somewhat immersed in the lives of my research participants. I seek to listen, watch, observe and ask clarifying questions to better understand how school board members work together to use data to make decisions while balancing the needs of

the community against the availability of fiscal resources. I seek to empathize with board members as they express their frustrations and difficulties that they face as board members.

As a researcher, I also see my purpose in learning about data use among board members to be to understand the proper context in which data is used, as well as effectively interpreting how they translate data into knowledge. I see the importance in looking for patterns and similarities among all three school boards that could help the reader better understand how knowledge is generated when individuals come together with individual ideas that eventually transform into a collective understanding of how best to utilize data when making decisions.

Case Study

I use a case study approach in choosing what to study, recognizing that I am interested in “bounded integrated system[s] with many working parts” (Glesne, 2006, p. 13). Stake (1995) differentiates several types of case study; my work is instrumental case approach in that a particular case is studied to provide insight into an issue. When the instrumental case involves looking at several cases, it becomes a collective case study that allows the researcher to “investigate a phenomenon, population, or general condition” (Stake, 2000, p. 437). In sum, this dissertation identifies using a *collective, instrumental case approach* in determining what is to be studied. This dissertation seeks to describe the phenomenon of how school boards utilize data in decision making.

This study will utilize qualitative methods and will be conducted in two phases: a survey phase and an observation and interview phase.

School Board Sample

A purposeful sample of three school boards was chosen. I selected specific districts to achieve variation (e.g. size, location, average student achievement, % free/reduced lunch, college going rate or AP enrollment). My preference was to select districts that have variance in their school achievement results. Targeting 3 school boards, I also aimed for variations in the communities which these school boards serve.

To recruit potential research participants, I made initial contact by email indicating the purpose of the study and my desire to include them in my study (See Appendix B). A link to the survey was attached to the initial letter of invitation. I received agreements from each superintendent and several members of each school board. Once the survey phase was completed, I began attending school board meetings from each of the three districts. After the observations were completed, I called each superintendent and two board members from each district and invited them to be a part of the next phase of the survey. I selected the board members in such a way to obtain a range in number of years of board service.

Oak School District. Oak School district is located in a large Mid-Western City with a population of over 110,000 people. The racial make-up of the city is described below:

City of Oak Demographics

Race	Percentage
Caucasian	61.77%
African-American	22.45%
Asian	4.23%
American-Indian	.57%
Native-American	.10%
Mixed Race	7.47%
Other	3.42%
Hispanic-Latino	12.46%

Table 1: City of Oak Demographics (Area Vibes, 2015)

The median income is \$37, 128 and the unemployment rate is 9.4%. The poverty level is 27.1%. The City of Oak has 59 public schools, 23 private schools and 4 post-secondary institutions. The population density of the City of Oak is 2,939 people per square mile. 86.8% of the population aged 25 and over have a high school education 25.1% of the populations over age 25 hold a Bachelor's degree or higher (U.S. Census, 2010-2014). During the 2012-2013 school year, the Oak School District had the 12th largest enrollment, serving approximately 12,500 students in 27 schools (Ballotpedia, 2015). The district had a graduation rate of 51.6%, a drop-out rate of 21% (www.mlive.com, 2015) and has an operating budget of over \$150 million dollars. The Oak School board is comprised of 9 members, with a term length of 6 years. School board members have served anywhere from 1 year to 19 years, and one board member's tenure has included collaboration with 3 different superintendents.

Pine School District. The Pine School District, also located in the Mid-west is nestled in a much smaller community with a population of over 24,000 people. The racial demographics are as follows:

City of Pine Demographics

Race	Percentage
Caucasian	86.5%
African-American	4.3%
Asian	4.9%
American-Indian	.21%
Native-Hawaiian	-
Mixed Race	2.94%
Other	1.13%
Hispanic	5.3%

Table 2: City of Pine Demographics (Area Vibes, 2015)

The median income in Pine is \$56,609. The unemployment rate is 5.2% and the poverty level is 10.8%. The City of Pine has 11 public schools, 2 private school, with no post-secondary institutions located in the city. 89.3% off residents ages 25 and over have a high school education and 26.4% in the same age bracket have a bachelor's degree or higher (2010-2014).

During the 2012-2013 school year, the Pine School District had enrollment of approximately 6,000 students (Ballotpedia, 2015). The district had a graduation rate of 86.65%, a drop-out rate of 6.9% (k12.niche.com, 2015) and has an operating budget of over \$65 million dollars. The Pine School board is comprised of 7 members, with a term

length of 6 years. School board members have served anywhere from 1 year to over 25 years, also with one board member's tenure a part of 3 different superintendents service.

Maple School District. The Maple School District, is a part of a small village with less than 1,000 residents. The racial demographics are as follows:

City of Maple Demographics

Race	Percentage
Caucasian	95.4%
African-American	.2%
Asian	1.5%
American-Indian	.2%
Native-Hawaiian	-
Mixed Race	1.7%
Other	1%
Hispanic	2.8%

Table 3: City of Maple Demographics (Area Vibes, 2015)

The median income in Maple is \$48,806 (www.citydata.com 2017). The unemployment rate is 8% and the poverty level is 10%. The City of Maple has 2 public schools, no private schools or post-secondary institutions located in the city. 92% off residents ages 25 and over have a high school education and 18% in the same age bracket have a bachelor's degree or higher (2010-2014).

During the 2012-2013 school year, the Maple School District had enrollment of approximately 900 students (Ballotpedia, 2015). The district has a graduation rate of 95%, a drop-out rate of 0% (k12.niche.com, 2015) and has an operating budget of about 7

million dollars. The Pine School board is comprised of 7 members, with a term length of 4 years. School board members have served anywhere from 1 year to over 25 years, also with one board member's tenure a part of 2 different superintendents service.

The following figures present basic demographic information about each school board member, as well as their board tenure and role in the interview phase of my study.

Oak School District

Tenure of Board Members (In Years)	Gender of Members	Role on Board	Participated in Interview?
6	Male	President	
25	Female	Vice-President	X
9	Female	Treasurer	
36	Female	Secretary	
2	Male	Trustee	
7	Female	Trustee	
2	Female	Trustee	
16	Male	Trustee	X
7	Male	Trustee	

Pine School District

Tenure of Board Members (In Years)	Gender of Members	Role on Board	Participated in Interview?
10	Female	President	X
26	Female	Vice-President	X
12	Female	Secretary	
2	Male	Treasurer	
12	Female	Trustee	
2	Female	Trustee	
2	Male	Trustee	

Table 4: Demographic Information for Each School Board Member

Table 4 (cont'd)

Maple School District			
Tenure of Board Members (In Years)	Gender of Member	Role on Board	Participation in Interview?
5	Female	President	
9	Male	Vice- President	
6	Male	Secretary	
6	Male	Treasurer	
4	Male	Treasurer	
27	Male	Trustee	X
1	Female	Trustee	X

Phase 1: Survey Phase

Participants. The potential number of participants for this phase of the study was 23 school board members, that is, all of the members of the three school boards. I had 10 responses to the survey for a 43% response rate. The participants in this survey have served on the school board from one year to over 25 years. Forty percent of survey respondents are male and 60% percent female. Sixty percent of participants are Caucasian, 30% African-American and 10% Hispanic or Latino. Thirty percent of survey respondents are age 60 and over, 20% of participants fall within each of these age ranges: 50-59, 40-49, and 30-39, and 10% of participants are under the age of 30. Fifty percent of the responses indicate these members have children in the same district in which they serve. While 80% of research participants indicated they are not former educators, 10% report that they have served in another district, and 10% have served in the same district in which they serve on the board. All participants that indicated that they are former educators report being part of an educator's union.

Board members were asked to report the reasons they initially ran for a seat on the

school board. They were able to select from a range of reasons that they felt best identified their motivations. All survey participants reported that they ran to ensure that children's schools in their district are the best that they can be. Seventy percent reported that they ran because they felt a sense of civic duty and wanted to give back to their community. Fifty percent indicated that they ran to fix specific issues in their school or district. Thirty percent reported that they were recruited to run for school board and 10% reported that they want to ensure that a different candidate did not get on the board, as well as to represent their constituency in school-related issues. All members responding to the survey were elected versus appointed to their position and 70% of respondents ran for the school board as part of a slate of board candidates running as a group. When asked if board members planned to run again for office after they have completed their current term of office, 50% said no, 30% were undecided at that time, and 20% said yes. School board members spend various amounts of time on board work such as board and committee meetings, individual research, representation to community groups and the like. Thirty percent of respondent's report working 15-24 hours per month, 30% work 25-40% per month, 20% work 7-14 hours per month, 10% work more than 40 hours per month and 10% report working fewer than 7 hours per month.

Survey. Beyond collecting information on the attributes of board members described above, the survey was intended to gauge board members' orientations to using data for decision making (See Appendix C). The survey questions were derived from Victoria Bernhardt's research on data (1994). Questions were adapted to be more relevant to this study.

The survey consisted of questions related to the data-driven decision making practices of school board members and the collective whole. The survey was designed to take a minimal amount of time for research participants to complete.

Survey Participation. An invitation to participate in my online survey was sent to each participant individually via email. Attached to the email invitation was a link that each board member could immediately click on and complete the survey. Each school district received the same invitation, and a reminder was sent out on the 7th day and 14th day of no response. In total, five board members from Oak School District, three board members from Pine School District and two board members from Maple School District completed the online survey. The survey was distributed to all members of the three school boards electronically using Qualtrics, a survey technology available to all graduate students at Michigan State University. As stated previously, a link was sent to each participant as attached to the initial letter of invitation to participate in the research study.

Survey Analysis. Qualtrics provides automatic descriptive analysis of the data and generates graphs. Responses about some survey items have been collapsed, such that strongly agree and agree are considered “percent in agreement” with the statement. Results are in Chapter 4. Great care was taken to ensure proper treatment and management of data.

Phase 2: Observation and Interview Phase

To deepen my level of exploration, I observed two board meetings in each district, one a general or regular public board meeting of the type held monthly. These are the board meetings at which business is actually conducted through public vote. I also observed a work session, a type of meeting where issues are discussed in advance of the

general board meeting. I attended three different kinds of work sessions: a board retreat, a committee meeting attended by a subset of members, and an ordinary work session attended by the full board. The work session in each case was held 3-5 days in advance of the regular public board meeting. I kept detailed notes about what happened at each meeting, the types of data reviewed, and the decisions the board acted on. I was also able to document when decisions were tabled or were delayed by a request for additional information, or when issues were sent to another committee. In addition, these observations provided background information regarding the interpersonal relationships of board members, procedural competence of the board, the degree to which the board defers to the superintendent, specific problems on the agenda, and the degree of community involvement or challenge in addition to how data are utilized during the meeting, and how decisions are reached.

Board Meeting Observation Analysis. A template adapted from Hayes and Singh (2012) was used to collect information at the board meetings. Descriptive field notes (Bodgan and Biklen, 2003), were taken to document details such as, such as behavioral descriptions, and physical setting, and allow for verbatim or summary quotations from the meeting participants. Finally, observational records were kept (Marshall & Rossman, 1999) as a way to organize and highlight information. Immediately following the board meetings, I wrote a detailed analytic memo, following Emerson, Fretz and Shaw's (1995) work on writing up field notes.

Analytically, I utilized the observation as a primary way of documenting at least some of the types of data reviewed by the school board members. Because I did not observe all board meetings, however, there is no way to report on every data source used

in any given time period. The observations were also an important source of triangulation. Observation data is summarized for each meeting following the agenda of the meeting.

Interviewing Protocol and Analysis. Seidman (2006) discusses the research tradition of Phenomenological Interviewing as a way to elicit the lived meaning of experiences that research participants have undergone. This method allows me to analyze the phenomenon across all individuals that are interviewed, by better understanding their decision making practices.

The interviews have three sections. The first question paints a picture of the research participant's overall experience as a board member. The second and third questions seek to gain more detailed information about their experiences with data and with training as it relates to data use. The final set of questions probes how the school board uses data, how board members talk about data and about district supports or constraints for using data.

Interviews were recorded using a traditional recording device, as well as a digital recorder. To keep research participant information organized I used a contact summary sheet (Miles and Huberman, 1994), similar to the chart modeled by Hayes and Singh, 2012. For analysis, phase two interviews were transcribed, coded and analyzed, keeping in mind the survey results and the observation data (triangulation) (Seidman, 2006). I took great care to ensure that participant responses were transcribed very carefully.

Interviews were coded in several stages. First, the interviews were color-coded in order to give each participant a unique color. Next, I labeled each question according to the survey questions and then cut and arranged them by question to identify themes.

Following that, I isolated potential quotes and statements from the interviews and

organized them by potential themes following the model in Brown's (1999) study on interdisciplinary teaming and community building in middle schools.

In discussing my data with my advisor, we noticed that what I observed happening across school boards was very much like what happened in my teacher teams. Each individual teacher brought their own ideas and perspectives regarding the data that was before us. As we sifted through the range of scores and percentages, we took care to combine the information with the external variables to ensure that we could better understand the information within the proper context. As teachers engaged in dialogue with one another, the individual ideas and information began to transform into a collective set of understanding and knowledge, that was then used to better support the needs of our students. As a result, this heightened our central focus to knowledge generation.

The interview data below was organized in such a way as to support a narrative of knowledge generation. In Chapter 4, ideas for this organization come from the knowledge creation theories of Nonaka and Takeuchi (1995) and Dixon (1999).

Sources of Research Participant Information

	Survey	Observation	Board Member Interviews	Superintendent Interviews
1. What are board members' orientations to data use?	X	x	x	X
2. How do boards of education use data to accomplish district goals?		X	x	X
3. How do boards of education use data to create actionable knowledge?		x	x	X

Table 5: Sources of Research Participant Information

Validity of Findings. Selecting the collective case study approach was intended to focus my attention on the phenomenon of data use by school board members both individually and collectively. Validity issues are important, though generally qualitative researchers speak about trustworthiness of the study.

The findings of this study benefit from triangulation as a result of my drawing on survey, observation, and interview data to gain deeper insight into the phenomenon of

using data to make decisions. In addition to collecting data from board members directly, I also observed a range of board meetings and interviewed superintendents. Working with multiple school boards allowed for identification of situations where data use was less observable. However, I am unable to make any claims about the effectiveness of school board data use. There were several occasions where I returned to one of my informants for clarification of the interview data to be sure I had the correct understanding.

I have attempted to report the findings of my research with rich, thick description. I considered how to report school board meeting observations in order to convey the broad range of data board members consider and the contexts within which that consideration occurs. Rather than preparing tables of content and data sources, I decided to summarize board meetings according to the agenda. I have also tried to convey the voices of my participants in the report of their interviews.

Ethical Considerations. In preparation for my research, I completed all of the 100 level courses offered by the Michigan Association of School boards. As a result, I had a general understanding of the roles and responsibilities required by school boards, and I sought to establish courteous and professional rapport with all participants, and treat all information and data collected for this study in a sensitive manner, ensuring that the information was maintained in a confidential manner.

In preparing my survey and interview questions, I discussed themes related to this topic with school officials and administrators who work in a capacity similar to my target research population. Additionally, I met all stipulations of the Institutional Review Board (IRB) at Michigan State University, which is responsible for protecting the rights and welfare of research volunteers and participants.

In presenting the results of my inquiry, I have used a variety of methods to mask the identity of the three districts: use of pseudonyms, mixing up the gender of superintendents and board members, generalizing problematic situations, and eliminating specific details so as to prevent deductive disclosure.

CHAPTER 4: FINDINGS

Data Analysis: Data-based Decision Making

“School boards are charged with the responsibility of making sound administrative decisions that directly affect how school systems operate” (Crum, 2006, p.9).

It is emphasized that decisioning in an organization is not a personal matter, and the effectiveness of decisions is not a product of the quality of decisions of any one person. The decision process is an organizational matter, and the criterion by which an organization may be evaluated is the quality of the decisions which the organization makes plus the efficiency with which the organization puts the decisions into effect (Griffiths, 1959, p.112).

...local school boards provide the means by which all segments of each community, including parents, business leaders, civic leaders, taxpayers and other citizens, have a representative voice in how schools will educate their children... The perspective of the citizen school board member adds a dimension of stewardship to the system that does not occur easily or sustain itself from those who work on a day-to-day basis from within (Resnick, 1999, p.7).

Introduction

The purpose of this chapter is to make visible to the reader the evidence upon which I base my interpretations and conclusions about school board members’ data use and the process by which boards arrive at actionable knowledge used to make decisions. This chapter is divided into several sections to give each data source due attention. This chapter starts with a presentation of results of the survey completed by a subset of members of each school board and two of the three superintendents. I call attention to patterns in the survey responses and interpret these patterns within the context of the larger study. In the next section of this chapter, I present descriptive information about each district, the superintendent, and the three school boards and provide a summary of board data discussions collected in my observations of school board meetings. I also comment on how the data referenced map on to Bernhardt’s categories. Next, I discuss the participant interviews and organize information shared with me by two board members and by the

superintendent. I deliberately depart from a district by district discussion in this section to reduce the possibility of deductive disclosure in identifying participant’s comments. I organize interview data into the following headings: General comments about data use; typical board practices for reviewing data and making decisions; Data rich issues across districts; Communication with the community; and Moving toward actionable knowledge.

Survey Analysis

Goals. I requested that all members of the three school boards and the superintendents complete a survey about data and its use, providing me with an overview of perceptions, preparation, supports, and utilization of data. In some cases, I group together a number of survey questions that align conceptually. The first group, address how responding members and superintendents prioritize school goals related to student learning and achievement. Establishing such goals – and tracking activities related to these goals – depend in large part on student learning data. Particularly since NCLB, utilization of student achievement data to establish direction has been promoted by federal and state education policies.

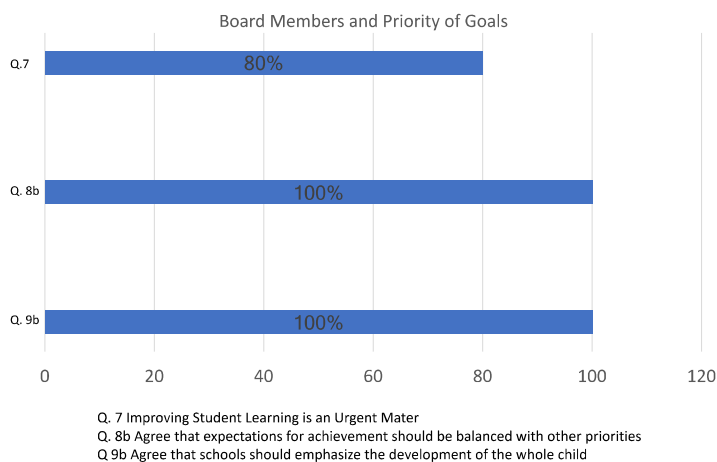


Figure 4: Board Members and Priority of Goals

When school board members establish the mission and vision goals of their district and track to see if they are being met, they prioritize among numerous options. When surveyed, all survey participants viewed student learning to be very or extremely urgent, though all also agreed that achievement expectations need to be balanced with other expectations. Eighty percent indicated that stakeholders should emphasize the development of the whole child rather than infrequent measures of achievement. Together, these results strongly place student academic development at the top of boards' priority goals.

Fears. In the next set of questions, responding school board members and superintendents respond to questions about fears and uncertainties around data usage. Identifying such fears could be helpful in informing others as to how such fears impact data usage.

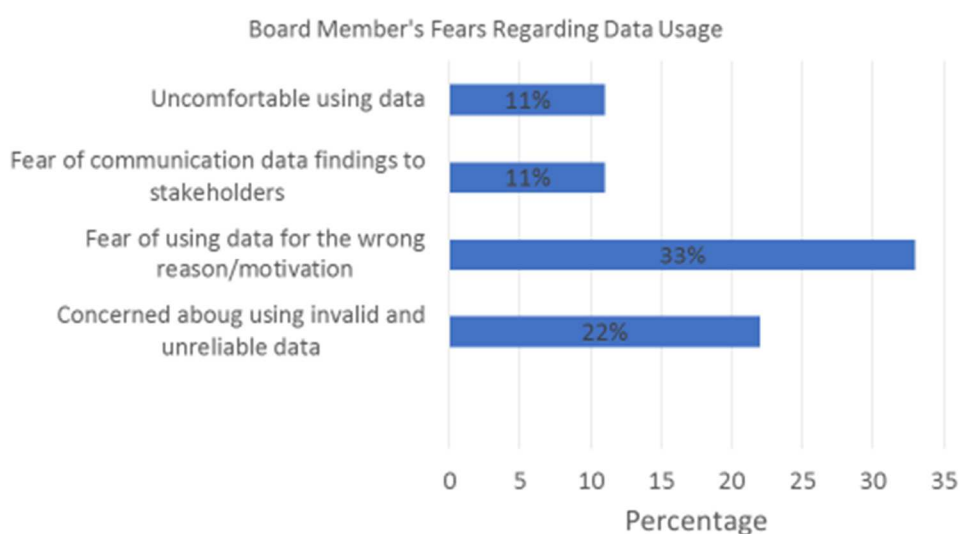


Figure 5: Board Member's Fears Regarding Data Usage

Conscientious board members want to make informed decisions. They pay attention to how they use data and try to account for their decisions. Quite naturally, this may mean

that they may have fears or trepidations about using data. When surveyed, about 22% expressed concerns about using invalid and unreliable data, as well as using data inaccurately. Thirty-three percent indicated that they had fears about using data for the wrong reasons or motivations. Eleven percent cite improper communication of data findings to stakeholders such as schools, community, and government agencies. Eleven percent of participants report that they are comfortable with using data.

Benefits. The next set of questions (Q #16, 17, 15) were clustered together because school board members and superintendents responded to questions that sought to determine the ways in which data is beneficial when setting goals. The first question (Q.16) indicates how and when data is collected and utilized in the goal setting process.

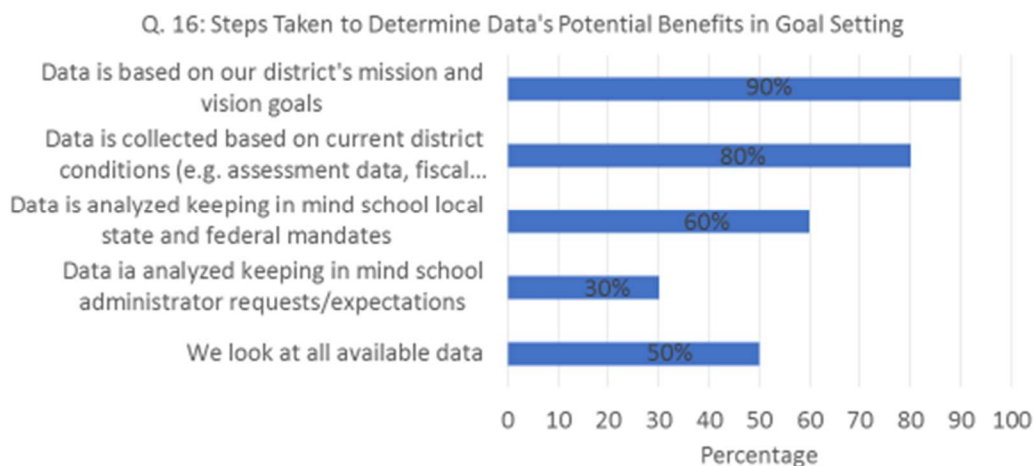


Figure 6: Steps Taken to Determine Data's Potential Benefits in Goal Setting

Survey participants were asked to select from five possible choices that best describe how they determine the ways in which data is selected and viewed as beneficial towards goal setting. They were able to select as many that applied to them.

The way in which data is used will impact its potential benefits towards goal setting. Survey participants were asked what is first and foremost in their minds when analyzing

data. All participants concur that decisions require data use, but they differ in what steps are taken. 90% of the time the districts' missions and vision goals are the focus when analyzing data. 80% of the time the current conditions of the district are considered when analyzing data. This includes assessment data and the fiscal conditions and health of the district. Survey participants reported that 60% of the time the local, state and federal mandates of the district are considered during the analysis process. School administrator request and expectation is part of the analysis process 30% of the time. Participates report that 50% of the time all data steps/areas mentioned above re used when analyzing data.

Motivation. The next question in this section (Q.17) indicated how responding school board members and superintendents are motivated when using data. Each responded selected all of the ways in which they are motivated and were able to select from five possible options.

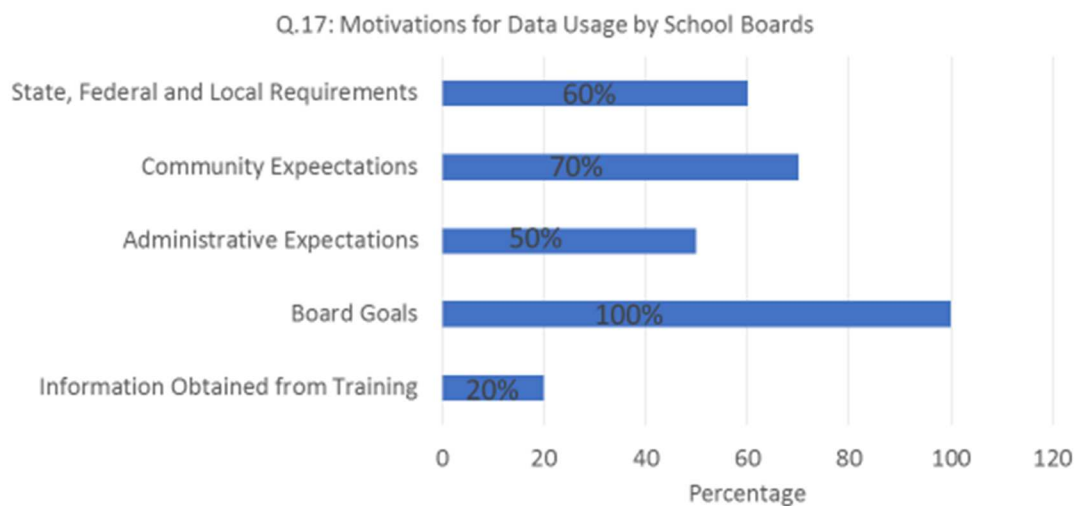


Figure 7: Motivations for Data Usage by School Boards

There are several motivating factors surrounding data use. All survey participants cite board goals as a strong motivating factor, with 70% indicating that community expectations motivate data as well. Sixty percent report that state, federal and local

compliance requirements motivate boards to use data and 50% cite administrative expectations. Only 10% cite information obtained from training as a motivating factor for data use.

Selecting Data. The last question in this section (Q.15) indicated how responding school board members and superintendents go about determining which data to use. As with the previous question, respondents had 5 options to select from and chose all of the ways they use to determine which data to use.

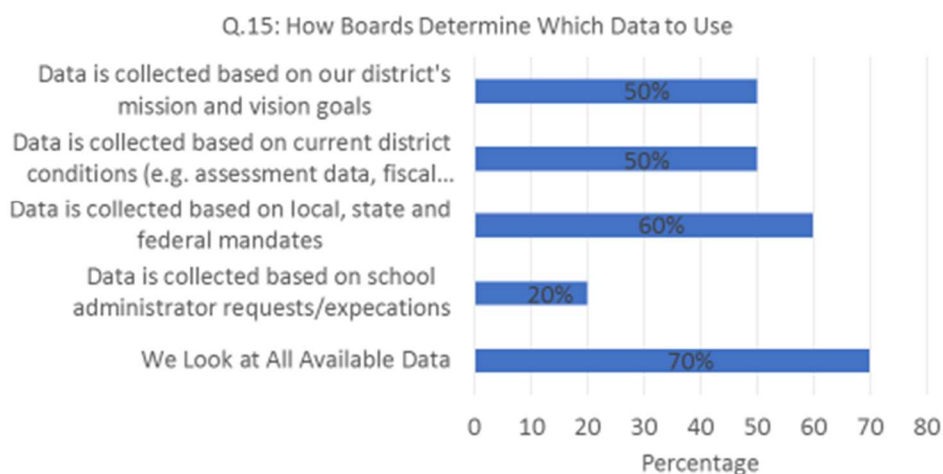


Figure 8: How Boards Determine Which Data to Use

When you consider the large number of data sources, it is helpful for boards to determine which data counts or how they determine which data to collect for decision making purposes. Survey participants were asked how they go about determining which data to collect. Fifty percent report that data is collected based on the vision goals and mission of the district, as well as the current conditions of the district (e.g. assessment data and fiscal conditions). Sixty percent collect data based on local state and federal mandates, while only 20% collect data based on school administrator's requests/expectations (which

is interesting because they help streamline data for them). Seventy percent reported collecting/looking at all available data.

Types of Data Used. In this section (Q #13a, 13b, 13c), survey respondents answer questions that indicate how often they demographic, perception and process data. As is more often the case, several types of data are used when making decisions. Therefore, this section of questions was intended to better identify how often the various types of data are considered and utilized when making decisions.

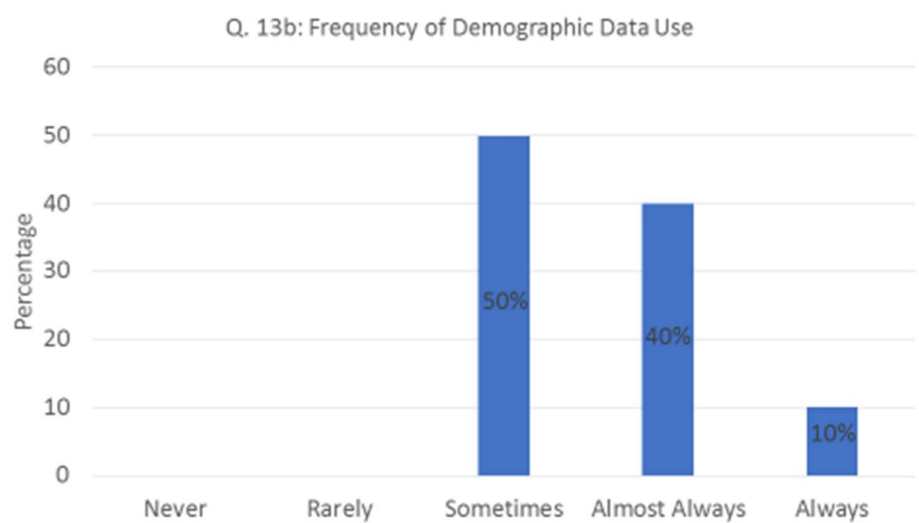


Figure 9: Frequency of Demographic Data Usage

Frequency of Data Use. Research participants were surveyed about the frequency in which the various types of demographic data are used to make decisions. All participants indicated that they use demographic data, but to varying degrees. 50% of participants reported that when making decisions the use demographic data sometimes, while 40% of participants indicated that they almost always use data. 10% reported that demographic data is always used when making decisions.

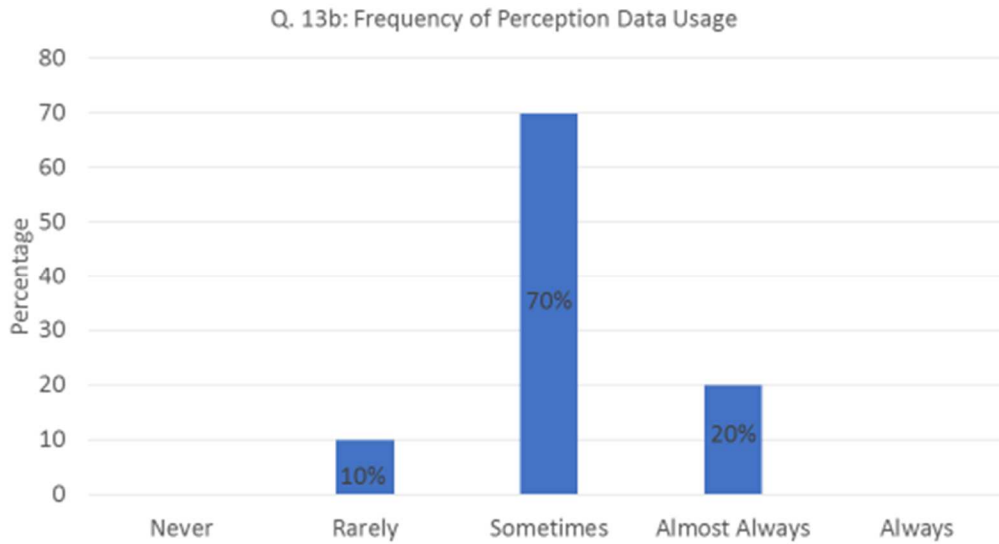


Figure 10: Frequency of Perception Data Usage

Perceptions data is used to varying degrees as reported by survey participants. 70% indicated that perceptions data is sometimes used when making decisions and 20% almost always use perceptions data. Finally, the results indicate a difference in data usage trends. While demographic, school process and academic data is always present and used in varying degrees, 10% of participants report rarely using perceptions data when making decisions.

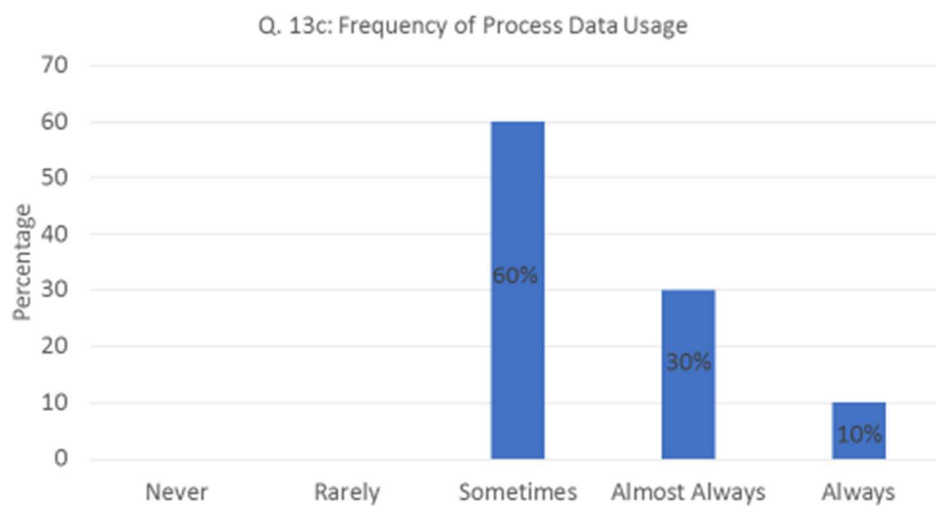


Figure 11: Frequency of Process Data Usage

School process data was also indicated by participants to be used to varying degrees. 60% indicated that school process data sometimes informs their decisions and 30% almost always consider school process data when making decisions. 10% of research participants always use data when making decisions.

Student achievement data is often the first type of data that comes to mind when thinking of decision making. The final question in this section asks responding school board members and superintendents to report how often they use student learning data to when making decisions.

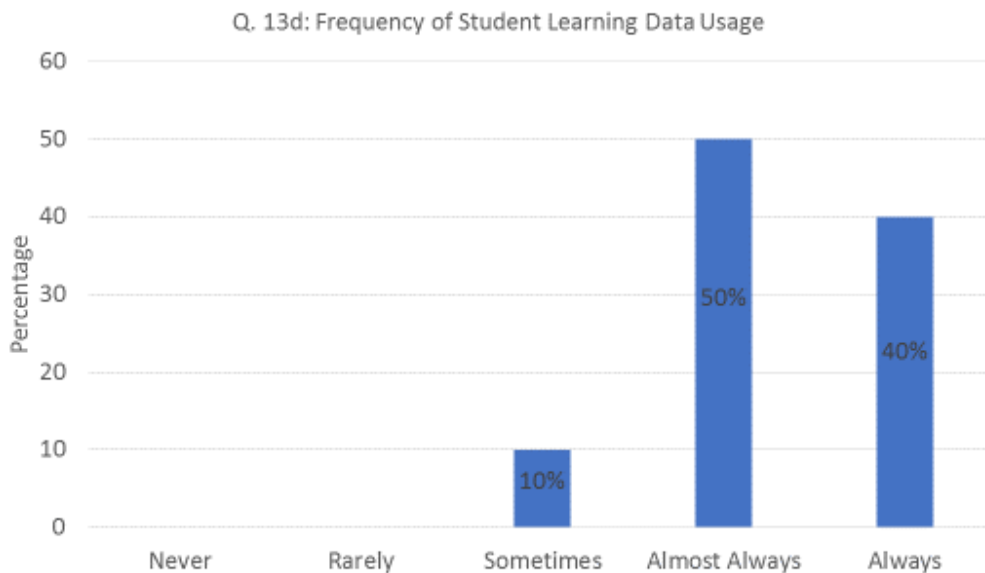


Figure 12: Frequency of Student Learning Data Usage

Student learning data drives many, if not all of the decisions that school board members make. As student learning data represents the state or health of a school district, the results of such data will help members decide how funds will be allocated and what programs will be supported to best serves students. When participants were asked how often student data is used, 90% of participants indicated that they always or almost always

use student learning data, while only 10% report using this kind of data only sometimes as part of the decision making process.

Community Involvement. Community involvement is an important part of the decision making process. It would seem that a logical progress of collaboration and shared decision making would follow. The figure below indicates the ways in which responding school board members and superintendents involve the community when making decision.

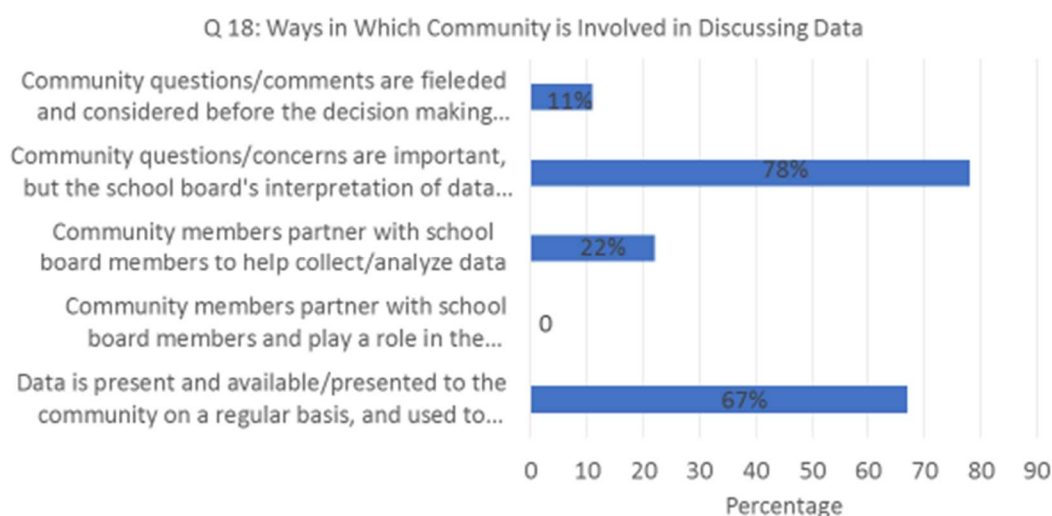


Figure 13: Ways in Which Community is Involved in Discussing Data

When interviewing participants, community perception was viewed as important as well as transparency in decision making. However, when participants were surveyed and asked about community involvement in data discussions (e.g. test results, school safety, reports and teacher quality ratings) the results vary. Survey participants were asked to select from five possible choices that best describe their opinion of community involvement. They were able to select as many that applied to them. Eleven percent report that they field questions and comments before making decisions and 78% acknowledge the importance of community involvement and admit that school board interpretation of data

drives decision making. Twenty-two percent report that they partner with community members to help collect and analyze data, but non-reported allowing community members a role in decision making. Finally, 67% report that data is available and present regularly, but only for the purpose of explaining and justifying potential decisions.

Training. There are a host of issues that board members encounter, most of which will require data to help them justify or come to a decision (Q #20c, 20d, 20f). Consequently, board members will have a need to understand how to interpret and analyze data accurately. When asked to describe any training on key aspects of board governance, three areas were of note. The results were very informative.

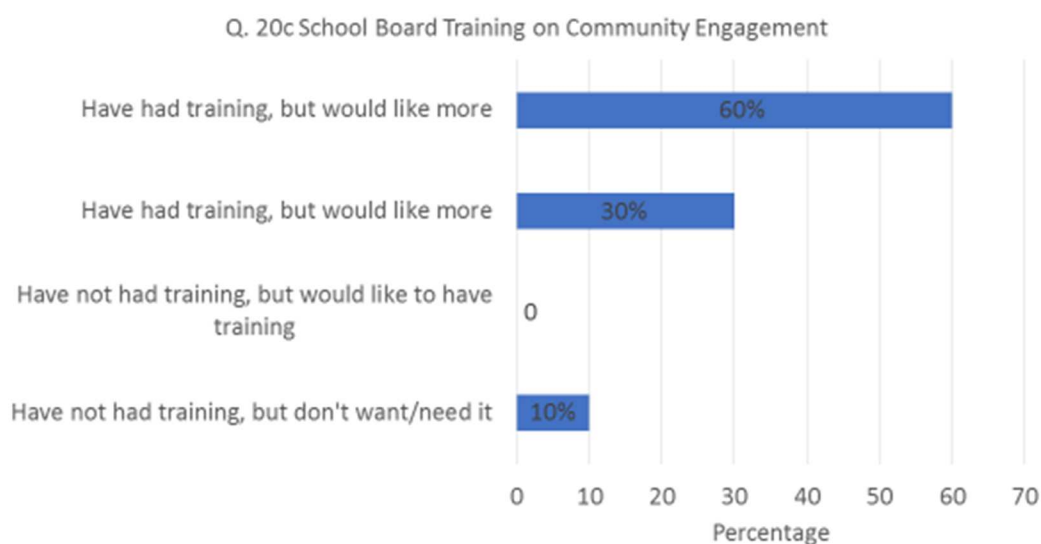


Figure 14: School Board Training on Community Engagement

The first, training in relation to community engagement, 60% of the participants surveyed indicated that they have had training and 30% have had training, but would like more. 10% have not had training and expressed no desire for training in the future.

The second, training in relation to student achievement, all participants indicated that they have had training, and approximately 45% would like more training on matters relating to student achievement.

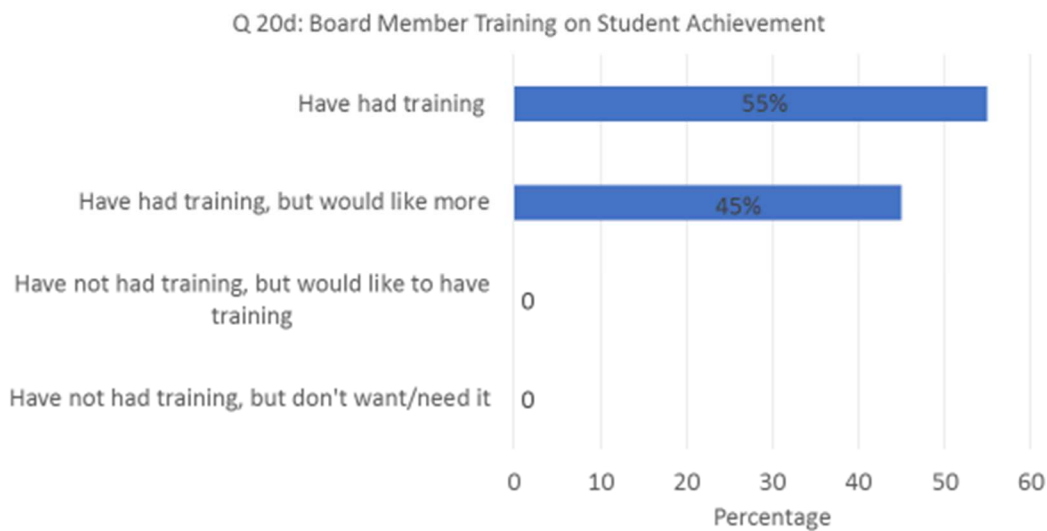


Figure 15: Board Member Training on Student Achievement

The last area, training in relation to funding and budget yielded similar results. All participants reported having training, and nearly 50% indicated they would like more training.

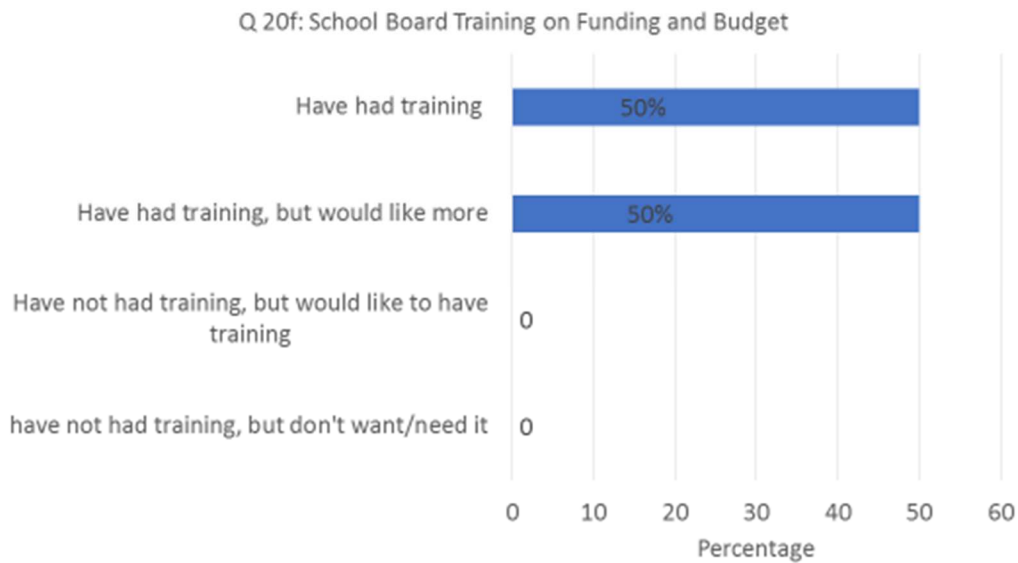


Figure 16: School Board Training on Funding and Budget

The final section of my survey sought to find out the number of Michigan Association of School Board's courses that have been taken by board members.

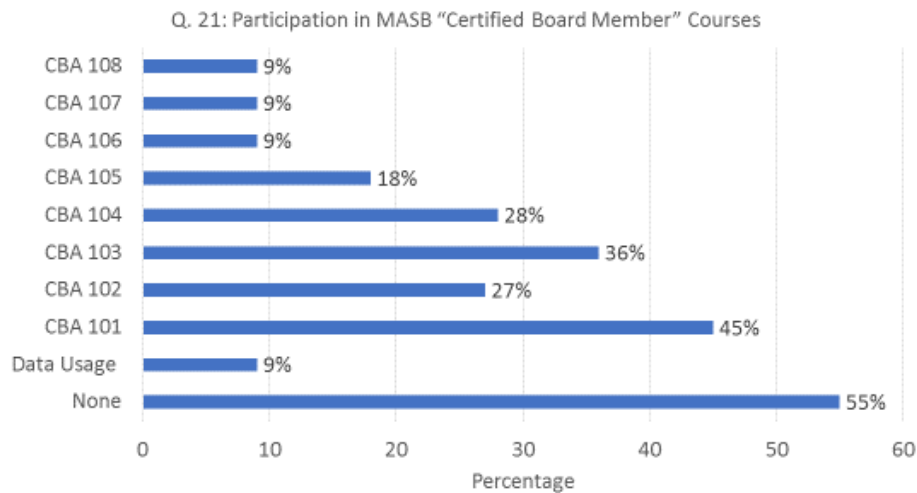


Figure 17: Participation in MASB "Certified Board Member" Courses

Data use is critical. Survey results indicate that 55% have taken none or some of the courses. Forty-five percent of participants have taken CBA 101 "Intro to Board Services," 27% have taken CBA 120 "Policy," 36% have taken CBA 103 "School Finance & School Budget," 27% have taken CBA 104 "Basic School Law," 18% have taken CBA 105 "Curriculum & Instruction," 9% have taken CBA 106 "Community Relations Leadership," 9% have taken CBA 107 "Labor Relations," and 9% have taken "Board Governance for Data Informed Decision Making."

Factors that impact the extent of course participation could include access or convenience, financial considerations, and board requirements. What is interesting is that the data course that were taken the most was the course title, Introduction to Board Services. Survey items inquired about types of data respondents report using, as conceptualized by Bernhardt (2001). Research participants indicate that they use all

sources of data, but to varying degrees. Table 6, below, shows the frequency with which school board members reported using demographic, perception, school process and student learning data.

Types of Data Used to Inform Decision Making (Q #12a-12d)

Demographic Data	Frequency Reported by Board Members
Attendance	90%
Drop-out Rate	100%
Enrollment	100%
Ethnicity	40%
Gender	30%
Grade Level	80%
Perceptions Data	
Attitudes	44%
Observations	78%
Perceptions of Learning Environment	78%
Values and Beliefs	56%
School Processes Data (including fiscal)	
Description of School Programs	100%
Descriptions of School Processes	78%
Resource Allocation	100%
Student Learning Data	
Authentic Assessment	60%
Non-Criterion-Referenced Tests	40%
Teacher Observation of Abilities	50%
Standardized Tests	100%

Table 6: Types of Data Used to Inform Decision Making (Q #12a-12d)

Bernhardt (2000) has long criticized schools and districts for not utilizing data effectively because they do not fully see the value in the practice. She argues that because people tend to gather information from a more anecdotal approach, many don't value or understand data's purpose. This notion has shifted greatly as state and federal agencies have ushered in the age of accountability where schools and districts are not forced to rely on a more systematic measure of tracking student achievement and fiscal responsibility.

Bernhardt also cites low data use due to the lack of training on data. When she first began this discussion, she referred to a lack of organization of data, as well as a lack of technological resources for teachers and subsequent training on the devices to aid them in organizing and analyzing data (2000). Times have changed, however, in that organizations such as the Michigan Association of School Boards (MASB) and the National School Board Association (NSBA) provide training for school board members on various data-related topics. In addition, several electronic data storehouses are available for schools to invest in as a way to manage large amounts of data.

Another reason mentioned by Bernhardt is that many fear using data in the possibility that unfavorable scores and results indicate an inability or lack of effectiveness. Often, data is used to justify punitive measures, thus, many are hesitant to rely on data alone to measure the effectiveness of professional staff (2000). This challenge has intensified with the push for value-added measurement in parallel critiques about fair use of test scores, particularly standardized test. Also, many practicing teachers are uncertain about fully implementing data collection and analysis into their daily practices.

A final topic that Bernhardt raises is the notion of single sources of data versus data intersection when making decisions. As indicated in the survey results above, responding board members and superintendents indicated that they look at all sources of available data more than often than not. Considering all of the goals and objectives of school boards, it would be difficult to take individual types of data to make large scale and impactful decisions that would yield optimal results.

Bernhardt (1998) discussed the phenomenon of data intersection when combining two, three or even 4 types of data together for analysis. One measure alone can give important information, but without using this data within the proper context of other types of data, you could miss the opportunity to gather information that is more complete and accurate. For instance, student achievement data is increasingly being collected systematically at the school level, for instance, with Aims-Web as integral to a multi-tiered system of support.

Intersecting two types of data, according to Bernhardt, is good in that trends can be identified and relationships can be examined between data sources. When analyzing three types of data, a deeper level of analysis can take place, such as how trends identified and relationships examined between data sources can inform instructional practices for students (1998). Bernhardt, speaking about school level analysis, believes that demographic, perceptions, student learning and school processes data have to be analyzed together in order to deepen the level of analysis, which could positively impact decision making. For the school board, these data types are likely to be generalized to the school or district level. Even so, it is critical that school boards bring different types of data into interaction. As I show later in this chapter, fiscal data is likely to be included in most

decisions. Bernhardt argues that this level of analysis best helps answer the questions as to whether or not the course of action that has been chosen by schools and districts meets the needs of all students as well as meeting other school board goals for the district (1998).

In examining the survey responses of the board members and superintendents we can see Bernhardt's theory in action in that responding board members and superintendents reported using multiple sources of data when making decisions. In addition, they have channeled their fears or concerns about data usage into carefully looking at data sources and its benefits when setting goals and making decisions.

Board members and superintendents also reported several motivations for using data, which indicate an understanding of data's cultural relevance and expectations at the local, state and federal levels. Respondents also show clear evidence of accessing all four types of data when making decisions. Finally training also appears to be an important factor or desire amongst school board members in an effort to make sound and evidenced based decisions.

Observations of School Board Meetings

The following narratives result from observations of each school board selected for study. Participants' names have been changed, although gender identification has been preserved. Most other narrative details have been generalized to provide as much anonymity as possible for participants and their boards.

Following a brief explanation of my observation of the school district, each narrative is divided into five sections a) city description and information b) school district information and performance, c) school board make up and characteristics, d) general board interactions and practices, and e) data usage when making decisions.

Oak School District

In order to better understand the school board practices of Oak School District, I attended three board meetings; the first a board retreat, the second a workshop with school principals on culturally relevant positive behavior supports, and the third a general board meeting. For more consistency across cases, I report here on the first work session and the general board meeting.

Community and District

Oak School district is located in a Midwestern city with a population over 110,000 people. The racial make-up of the city is described in the table below:

Race	Percentage
Caucasian	61.77%
African-American	22.45%
Asian	4.23%
Hispanic-Latino	12.46%
American-Indian	.57%
Native-American	.10%
Mixed Race	7.47%
Other	3.42%

Table 7: City of Oak Racial Demographics (Area Vibes, 2015)

The median income of the Oak community is \$37,128, the poverty rate is 27.1%, and the unemployment rate is 9.4%. The City of Oak has 59 public schools, 23 private schools and 4 post-secondary institutions. The population density of the city is 2,939 people per square mile. In terms of education, 86.8% of the population aged 25 and over have a high

school education and 25.1% of the population over age 25 hold a bachelor's degree or higher (U.S. Census, 2010-2014). During the 2012-2013 school year, the Oak School District had the 12th largest enrollment in the state, serving approximately 12,500 students in 27 schools (Ballotpedia, 2015). In 2015, the district posted a graduation rate of 51.6% and a drop-out rate of 21% (www.mlive.com, 2015). The district has an operating budget of over \$150 million dollars.

School Board

The Oak School board is comprised of nine members, elected for six year terms. Current school board members have served anywhere from 1 year to 19 years; one board member's tenure has included collaboration with three different superintendents. The board includes three Hispanic members, three Latino members and three African-American members.

Four individuals are male and five are female.

Observed Board Procedures and Data Usage

I attended three Oak School Board Meetings. The first meeting was termed a board retreat; the second was a work session; the third was a regular public business meeting. The board retreat and work session did not include public attendees. The third board meeting was a regular public business meeting. Eight out of nine board members and the superintendent was present at each meeting. For purposes of this study, the first and third meeting is described below.

Meeting #1: Board Retreat. Eight members were present for the day long board retreat (one member out of town) and everyone engaged in small talk as they enjoyed breakfast. Before the meeting began, board members appeared very relaxed and social with one another. Members adopted more formal demeanor once the meeting began, but interactions among members remained friendly and respectful for the most part. The superintendent's arrival did not appear to change the mood in the room or shift the comfortable dialogue among the board members. I observed a noteworthy easiness between the superintendent and the board and a natural back and forth of questions and answers, in contrast to what I had been told were strained relationships between the school board and previous superintendents.

Community relations appear to be very important to this board and the first discussion item introduced dealt with public criticism of the superintendent's failure to inform the community about a public health concern in the district. Immediately after, the board began reviewing their success as a body due to strong relationships and ability to work together. Two members reviewed board progress: that they had already reached consensus on the budget, were happy with ongoing policy review, and sensed that they are at peace with the community. They affirmed the importance of good relationships since they are elected to represent students and their families. This first part of the retreat seemed to be an important component for maintaining the cohesiveness of the board.

Even so, board members shared their desires for some more effective board practices, expressing discontent with the way officer meetings are conducted. First, there was a desire for information to be streamlined more before it reaches them. Finally, they want better reporting of what happens in officer meetings to other members, as required in

the by-laws. This improvement would make decision making generally more effective. The board president reinforced the importance of addressing the above concerns in the interest of transparency.

The primary agenda item for the retreat was the review of action for the 2014-2019 District Strategic Plan. I summarize discussion of each of the five goals, which provides insight into the types of data under review by the Oak School District Board of Education. Multiple documents were utilized during this meeting, including summarized (processed) data of many types and narrative reports, often with discrete data embedded within. Board members did, however, express a need to have better alignment and integration of the separate documents in order to improve shared understanding of the material.

Goal 1: All students will achieve or exceed state performance targets and graduate career and college ready. Members reviewed ACT data for recent graduation classes and updates specifically on student performance in priority schools. They received updates on reported effectiveness of pacing guides. They read summaries of site visits to programs for English Language Learners and refugee students. Where successes were noted, they engaged in discussion of how these could be replicated. During this review, the board requested a glossary of acronyms and key terms indexed to the grades and schools to which they apply.

Goal 2: District will provide a safe and nurturing learning environment. Board members reviewed most recent summary data of school climate collected with a district walkthrough tool, to determine what is happening and what is changing by comparison with previous data. They considered reports of a mobile tour of district facilities to be improved through an upcoming bond issue. They examined partnership lists aligned to

different focal topics (or pathways) for existing magnet schools. They reviewed protocols for reducing suspensions and current data. They explored various professional development options for improving staff culturally relevant training.

Goal 3: Strong relationships with the city's diverse communities. Board members viewed update reports on the Communities in School program and community partnerships and the board president reflected on one partnership that he believed was rushed in its implementation. Magnet school grant applications were reviewed, accompanied by a broader discussion of ways for sustaining funding. Members discussed the role of principal as community leader, along with marketing materials and cultural survey (walkthrough) to support this role. An update on the district wide communications plan was presented. The strategy for the upcoming bond is to “stay on message” to counter any negative community attitudes. The board members also noted being cognizant of “infighting” at the local paper and in a neighboring district relative to the bond vote.

Goal 4: Identify, improve and implement effective and efficient support systems. Expressing commitment to staff attendance incentives for another year, members reviewed staff data showing results of the program for the current year. They read a transportation update, including hub locations and bus routes. They received updates on the human resources restructure plan, including details of staffing changes relative to programs. They also reviewed comprehensive HR documents including protocols for hiring, employee placement, dismissal decisions, benefits, and the various bargaining unit agreements.

Goal 5: Monitor and adjust resources in order to maintain financial stability. Because more students equal more funds for operations, most of the discussion revolved around recruitment and retention of students. The board reviewed enrollment trends and

wondered why they have reductions in kindergarten. The discussed how magnet pathways should contribute to stabilizing and growing enrollment and they strategized ways of working with local charters to mediate transitions of students to Oak for middle school and high school. Finally, the board considered whether and how they can sustain grant funded programs.

As a final point of discussion, the board reviewed more immediate plans for the next 6 months, including the decision to renew (or not) a large service contract, maintenance schedule for facilities, progress on policy review and adoption, and board training for proper messaging on the bond.

Meeting #3: With this meeting being more general in nature, the meeting began with updates from school organizations and school initiatives. The Junior Board, comprised of student members, was in attendance and reported on an anti-bullying campaign at two schools. To increase student understanding of the need for the upcoming bond vote, the superintendent explained the articulation of the magnet schools from elementary to middle to high school. The choir from the district alternative school performed. There was no public comment at this meeting.

The superintendent's report provided an update on the bond issue to the community. One of the board members gave the current status of the local Promise scholarship including the total number of scholars to date, the total amount of scholarship, and the number of students who have persisted in the regional state university and the local community college. He also announced the number of new scholarships for 6th graders who would be honored at an upcoming ceremony. The consent docket included approval of the minutes, the personnel report, the treasurer's report, and a resolution

authorizing refunding of bonds. An explanation of the bond refunding was given to the public as a discussion item. Refunding refers to a bond repricing resulting from the district proving certain conditions with data, a move that saved the taxpayers about 12%. The meeting did not have any noteworthy public comment and was adjourned.

In summary, Oak school board members are pleased with the progress in the district and the board's ability to maintain a good level of cohesiveness amongst one another. The district has committed to adjusting where necessary in order to remain fiscally stable and healthy. The board strives to better understand and receive feedback on the community's perception of the changes that have been implemented and what areas are identified as areas for growth. The board has a very clear and strategic plan that sets the trajectory of the district and they will work together regularly assess progress and adjust accordingly by reviewing a multitude of data, as evidence by the twice yearly annual review toward district goals. Oak strives to create a culture and climate that is conducive for all levels and styles of learning and productivity for both students and staff. They recognize that staff morale has a direct impact on the instruction that students receive and they recognize the need to support students at all stages of behavior development. Parent and community engagement is vital to accomplishing these goals and they are always looking for ways to improve upon these relationships.

Pine School District

Community and District

The Pine School District, also located in the Mid-West, is nestled in a much smaller community with a population of over 24,000 people. The racial demographics are as follows:

Race	Percentage
Caucasian	86.5%
African-American	4.3%
Asian	4.9%
Hispanic	5.3%
American-Indian	.21%
Native-Hawaiian	-
Mixed Race	2.94%
Other	1.13%

Table 8: City of Pine Racial Demographics (Area Vibes, 2015)

The median income in Pine is \$56,609. The unemployment rate is 5.2% and the poverty level is 10.8%. The City of Pine has 11 public schools, 2 private schools, with no post-secondary institutions located in the city. Of residents ages 25 and over, 89.3% have a high school education and 26.4% in the same age bracket have a bachelor's degree or higher (2010-2014).

During the 2012-2013 school year, the Pine School District had enrollment of approximately 6,000 students (Ballotpedia, 2015). The district had a graduation rate of

86.65%, a drop-out rate of 6.9% (k12.niche.com, 2015) and reported an operating budget of over \$65 million dollars.

School Board

The Pine School board is comprised of 7 members, with a term length of 6 years. School board members have served anywhere from 1 year to over 25 years, with one board member's tenure overlapping the service of 3 different superintendents. Gender and race?

Observed Board Procedures and Data Usage

The first meeting of the Pine School Board that I attended was a finance committee meeting, with the topic being the mid-year budget analysis. Four members were present, as well as the superintendent, district curriculum director and district finance director. The second board meeting was a monthly public meeting, which began with a call to order, roll call, changes to the agenda, and approval of minutes from the previous regular board meeting. All of the board members were present, as well as the superintendent. At both meetings, relationships among members of the board and the superintendent were cordial and business-like.

Meeting #1. Several types of data were reviewed or referred to in this meeting. The board members listened intently as the finance director began the meeting by reviewing the status of the district budget explained how the State of Michigan continues to reduce fiscal resources to schools and how much of their funding hinges on the state foundation amount.

The superintendent introduced a primary topic of conversation for the meeting, primarily specific ways in which student enrollment intersects with school fiscal resources. He began by expressing concern about the enrollment gap created by the number of

students entering kindergarten and the number graduating each year, which was documented for the board. Along with this, the superintendent posed the question as to whether the district benefitted from the school of choice policy, or if they lost students overall due to school of choice. The superintendent was waiting for accurate data updates to answer the question, drawn from state provided data about where students are enrolled. The superintendent indicated that over 200 students left the district since schools of choice has been tracked. However, he reported uncertainty as to the number of students who attend another public school, private schools, or are home schooled.

An additional concern was documented by data about specific instructional programming, that also intersects with enrollment and fiscal data. The superintendent indicated that over 100 students were lost to cyber-academies, online alternative schools for students who had left the district as a result of drop-out, expulsion, or other situations making it undesirable to attend a district school. The superintendent recalled how the district offered a similar program in the past, but it was closed as one of a number of decisions made to prevent teacher layoffs. Faced with the reality that more and more students are choosing this option, the superintendent asked whether or not bringing a cyber-academy back to the Pine School District this would be a viable option of the school district.

At this point, the superintendent departed from more technical discussions and talked about his desire to build stronger relationships with students and families in the community with the intention of attracting them to and retaining enrollment in the Pine School District. He offered potential reasons or speculations that people are leaving Pine, and that he is actively seeking to test, such as: 1) Poor community ties and connection with

schools of choice families, 2) Stigma of school of choice students being problematic, 3) Discipline higher among minorities (i.e., African-American boys), 4) Teacher cultural bias, 5) Perceived barriers to participation in athletics (i.e., qualifying grade point average), and 6) Displeasure with academic programs. In addition to these perceived factors that push students out, the superintendent reported that other districts have factors such as new incentives that pull students and families to a district.

The final data discussion was led by the financial director relative to specific program data intersecting with revenue and expenditure data: reduced revenue from childcare, preschool, and special education reductions, and allocations supporting district programs. Referencing negative rumors circulating in the district, the financial director presented data documenting that the Great Start early childhood classrooms were full and add positive revenue and value. The director presented fiscal reviews showing where money has been saved or expenditures reduced, through moves such as retirements and building allocations and presented specific costs for MSPERS (retirement), mathematics and literacy programming, special education programming, salaries, health care liability, and facilities (with particular attention to factors that put stress on the budget). She indicated sources of increased revenue, such as community education. Finally, she reminded committee members that the school board (as a whole) wants more money invested in technology and that the current fund balance was near 9%. The meeting ended with a review of the 2016-2017 speculative budget, including numerous staffing and compensation assumptions, utilities and facilities projections, transportation needs, and technology investments.

Meeting #2. In the course of this meeting, board members presented summarized details of district processes and programs, as well as resources to support these programs. Committee members from the transportation and safety subcommittee speak on student reinstatements with all students being approved for return. The minutes from the finance meeting were approved. The technology subcommittee provided a recap of a meeting held three days previously where they discussed upgrades needed for technology, reviewing the 5-year replacement plan, including comments on phones, new personnel, and chrome book investment. Additional reporting from the technology committee referenced a range of topics from the earlier meeting including desirability of offering unique programming, along with state legislation related to substitute teacher costs, responses to professional staff walk outs, possible added stress on state aid as a result of state restructuring of Detroit schools, and a gag order restricting advertising school levies within 60 days of the vote. None of the committee reports included actual data shared with the public.

As with the Oak School District Public Board Meeting, Pine included a section in their meeting for district presentations and for delegations reporting school and community projects and activities deserving distinction. At this meeting, distinction was given to students raising money to purchase bottled water for Flint school children and to a group organizing activities to increase students' pride for the district. In this section of the meeting, additionally, the superintendent made a presentation about his plans to conduct regular perception surveys of stakeholders and he asked for time monthly to present his results. He described a schedule of surveys for senior parents and school staff located at the senior campus, and a schedule of focus groups for seniors and freshmen. He also presented information focused at helping the community maintain safety as district campuses, with

detailed discussion of how schools respond to threat situations including determining who is involved, how due process is followed, and how responsible groups arrive at specific consequences, including legal charges. In sum, this section of the meeting allowed the superintendent to share plans to collect perception data and report survey results regularly and to give very specific information about processes in place to deal with emergencies in order to educate the community.

The public comment part of the meeting included parents concerned about safety of students dropped off by buses before the designated time and students walking to school along roads with no sidewalks. A parent reported efforts at one school to help develop student empathy toward other students with chronic disease. A student with a disability read a letter asking the school not to tell elementary students who are physically challenged that they won't do well. A daycare owner asked that the facility receive lockdown information immediately. Finally, the a Student Advocacy Center presented information about their programming to protect students in the process of suspension or expulsion and encouraged the district to be transparent with these students and their families. Though informally, all stakeholders speaking at this part of the meeting offered perceptions about district processes.

The next section of the meeting dealt with general correspondence and information points, including, at this meeting, efforts to promote a safe prom and to stop underage drinking, and information about resignations and retirements of district personnel.

A dedicated section of this boards' meetings is given to financial reports, and these were lengthy, following immediately on the mid-year review in the committee. The district fiscal officer reviewed all sources of income with slides, including the state aid allocation,

special education, categorical funds, retire cost offset, federal grants, property taxes, and child care, Medicaid fee for service, extracurricular pay to participate, and local grants. She accounted for funds accompanying incoming transfers and exiting students, reconciling data from a number of sources, commenting that home schooled children in the district are always unknown. Slides were prepared to show that the state and county populations over two years had reduced 12% and 13% respectively, but that the district student enrollment had dropped only 3%. Even so, the district official indicated that the district is actively gathering information about school choice and virtual academies in advance of shaping student recruitment and retention efforts. A final report of the financial section began conversation about the speculative budget, very much in flux due to uncertainty about state per pupil aid.

Final sections of the meeting concerned ratification of the district agreement with para-educators (with a 17-15 vote), explanation of upcoming calendar events, and new business discussion about the mid-year evaluation process for the superintendent. A recommendation for evaluation tool and training for the board will be secured from Michigan Association of School Boards (MASB). The meeting was adjourned.

In summary, Pine is preparing for the worst-case scenario in that they are trying to place the district in a situation where they have options if per pupil funding is low and if enrollment is low. They foresee a large push to bring back and keep students, while other school districts are appearing to recruit students. A lot of things are in the air for Pine, but they feel prepared. The financial director has been clear with the district's projections for years, so there don't appear to be many surprises, if any.

Maple School District

Maple is a quite different school district in that the community is small and most of the residents have known each other for years, with generations of family members attending the school district. I attended two board meetings, one a work session and one a regular public meeting. At each meeting all board members were present, as well as the superintendent.

Community and District

The Maple School District, is a part of a small village with fewer than 1,000 residents. The racial demographics are as follows:

Race	Percentage
Caucasian	95.4%
African-American	.2%
Asian	1.5%
American-Indian	.2%
Native-Hawaiian	-
Mixed Race	1.7%
Other	1%
Hispanic	2.8%

Table 9: City of Maple Racial Demographics (Area Vibes, 2015)

The median income in Maple is \$48,806 (www.citydata.com, 2017). The unemployment rate is 8% and the poverty level is 10%. The City of Maple has 2 public schools, no private schools or post-secondary institutions located in the city. Ninety-two

percent of residents ages 25 and over have a high school education and 18% in the same age bracket have a bachelor's degree or higher (2010-2014).

During the 2012-2013 school year, the Maple School District had enrollment of approximately 900 students (Ballotpedia, 2015). The district has a graduation rate of 95%, a drop-out rate of 0% (k12.niche.com, 2015) and has an operating budget of about 7 million dollars.

School Board

The Maple School Board is comprised of 7 members, with a term length of 4 years. School board members have served anywhere from 1 year to over 25 years, with one board member's tenure a part of 2 different superintendents service.

School Board Practices and Data Usage

Meeting #1. The work session was attended by the entire board. It began with a concern about the laws regarding child safety when children are being picked up by the school busses. Many students are being picked up on major highways and the board inquired as what the laws are pertaining to vehicles passing the busses. A defined system is in place, with buses using yellow hazard lights with 4-way flashers, but members take time to compare the equipment used by neighboring district school. The school board is concerned that not enough is being done by local officials to ensure the safety of the students and reference the prosecuting attorney and a state trooper assigned to the district who was subsequently removed. The board decided to reach out to Michigan Department of Transportation.

The other main topic of the meeting concerned facility upgrades and how these items will be funded. The board president gave a facility walk-through update, with

reference to renovation work already underway, including the parking lot lighting project, the high school drinking fountain/tile project, and the high school carpet project. The walk-through sheet totaled costs for these projects and recently completed tasks (cement replacement). Discussion added referenced projects coming up in near future, such as a school roof and furnace, railing, benches, and handicap access for the football field. Much of the subsequent discussion revolved around funding the projects and the timing of the projects as the board considered funding for facilities remaining in the current budget year, funding in the next year's budget, funding through the sinking fund, or a possible bond. Two of the board members were designated to meet with the superintendent to discuss these options.

Meeting #2. The second board meeting, three days later, was a regular public board meeting. It began with an approval of minutes of previous meeting, a message of condolence, and a report of correspondence about the basketball program. The major portion of the public meeting involved bringing forward the discussion from the work session about transportation safety and facility upgrades. A question was posed by a board member as to whether or not funds are available to complete the projects on schedule and as planned and whether or not the list of repairs and upgrades is prioritized. Another board member posed the question as to whether or not the district's sinking fund could be used to pay for some of the upgrades. The superintendent said a comprehensive plan will be presented in two months after a team of board members secure estimates and competitive bids, negotiate rebates, and gain clear details about funding options. He noted, however, that the list is prioritized and that there are things on the list that can be accomplished right away. At the end of this conversation, there was common agreement that some small

tasks would be completed soon using in-district employees and that the money that needs to be expended in the current budget is just a start for funding of necessary investment.

A brief comment was made about the safety for kids being picked for school, which was discussed at the previous board meeting. The board had secured information that the state does not have strict guidelines for how buses should signal that children are crossing the street. However, flashing yellow lights mean that oncoming traffic does not stop. The superintendent agrees to refer this topic to the district safety committee.

During the section of the meeting when visitors are introduced, the mayor of a neighboring town spoke briefly about a community based program that might be beneficial to schools and community members. The meeting then shifted to action items, beginning with the approval of financial reports from the previous meeting. Other action items include approval of substitute bus driver rate at \$14.50, a rate that puts Maple ahead of neighboring districts. Approval was also given to purchase tractors for the agricultural program, salaries for supplementary positions, state waivers for instruction alternatives (dual enrollment, online, independent study, and seat time) and the resignation of a junior high football coach.

In summary, Maple appears to be less affected by the major issues facing Oak and Pine, particularly the fluctuations in enrollment. The school board did consider the financial ramifications that decisions such as facilities upgrades and resources for agricultural programs could have on the budget. Great care was taken in both meetings to consider options for action and the superintendent committed to further study and analysis of financial data sources in order to determine a potential decision in the future. Student safety and community concern was evident as with Oak and Pine, and Maple

demonstrated a commitment to students by analyzing current laws and mandates regarding traffic safety. Although it may appear that Maple utilized less data in written form and gave attention to informal reports of what neighboring districts were doing as important information. It appeared that in this small community, the board was influenced at times by anecdotal and word of mouth information, experience and witness statements. Some could view this anecdotal information as unreliable, but the nature of the community is such that people are closely knit and rely greatly on each other for data that could help facilitate decision making.

Interview Analysis

Through the voices of the interview participants, this section of Chapter 4 describes the experiences, circumstances, and environment of board members as they strive to make data-informed decisions in, what they say, is the best interest of the students they serve. Because superintendents are to large extent the gatekeepers for the data that board members review and because superintendents are critical in motivating a culture of data use (or a culture of little data use), I include interviews with the superintendents of the three sample districts.

Motivation for Data Use

The survey results presented at the start of Chapter 4 summarize many general concerns and experiences responding board members and superintendents reported. All of the respondents in this study are predisposed to using data and want to do it well. According to the participants interviewed here, the task of accounting for decisions made are heavily dependent upon responsible and meaningful data use. Comments were often made by board respondents that they need to base decisions on evidence and not make

arbitrary decisions based on personal preference or constituent demands. They are particularly driven to use data when costs are associated, as one board member from the Maple School District noted:

If you are just making a decision because you think it would be a good idea and you don't have anything to back it up, then you can't justify how you are spending money. But if you're just using data then you have a way of justifying it and a way of seeing if this is really making a difference. So, that's why I think data is important (BM-1R-Q1a.R1).

Consider the comments by Oak's superintendent as he expresses enthusiasm for making decisions through data-based processes:

It's not necessarily the data will make the decision, but it will inform us about decisions. If we go this way this is what's going to happen based on data and if we go this way this is what will happen based on data. So it is not like data makes the decision for you, but it informs you of your options for decision making (S-3T-Q2d.R3).

Pine's superintendent provided insight into why data needs to be utilized appropriately:

In education, we can get caught flying at the next bright light an awful lot unless we have a system to help us make decisions and make data-driven decisions. Districts get caught up in going to the next best thing, but it doesn't always fit well. If it did, we'd all be doing the same thing (S-1G-R4d.R5).

Similarly, a member of Maple offered the near unanimous comment that basing decisions on data is the only way forward:

In absence of data you are making a decision based on emotion, because there's really nothing else to really to make it on. So that kind of solidifies to me why data is important because otherwise you have no basis other than emotion for coming to a decision (BM-20-Q7. R6).

Other respondents, both board members and superintendent from Pine's School District, drew particular importance to the objectivity that data use brings. Comments follow from their district's board president and superintendent, on the topic of subjectivity

vs objectivity. The board president projects perhaps an inflated perception that data equals science, and that equals truth:

I think that anytime you are dealing with education, children, setting policy or trying to make good solid decisions, a lot of that is subjective. You try to make good judgment, you rely on experience, but if you can quantify something, whether its test scores or financial, now you can make really difficult decisions based on objective hard numbers that actually can correlate, rather than on assumptions and experience and be able to make scientific decisions. The only way you can do that is with data. (BP-1F-Q1a.R4)

The superintendent adds another idea to the idea of objectivity, and that is political protection:

It's really important for us to have data to take the subjectivity out, to mitigate against subjectivity that is always involved in decisions around people's future.... We're a community of people that know each other and so it's tough to make a decision when you're saying, "Close this program," and half of the people in the program are friends of yours. You know, you've known them for years. So you need to have some really good evidence...especially in the district where we've had a lot of financial problems.... we've had to make really big decisions with the board by privatizing several areas of school operations, and by making decisions about teacher layoffs or contract decisions. If we didn't have really hard good data to use for those decisions, I think it would be kind of based on the most powerful voice in the room. You know that opinion is the one that would carry the vote and I don't think that's the right way to do that (S-3T-Q1a.R5).

Even with common agreement that using data is necessary, there is high variability in terms of experience with data and the source of knowledge and skills relative to data. For instance, one interviewee had just completed a master's degree that required reviews of research and interpretation of basic research. On most boards, one or more members held a doctoral degree or were in active pursuit of the same. One board member worked at the Michigan Department of Education, where analysis of data was a significant part of her professional responsibilities. Other board members referenced taking some MASB training, though these references were relatively rare, as indicated on the survey

responses. Without the kind of training just mentioned, members needed to depend on assistance of other board members, of the superintendent, or of district staff to understand both how to read data and interpret it. Over time and through discussion and interaction on the board, they could begin to understand nuances of their district data. Maple's superintendent shares her reflective thought on training:

I would say the biggest training would come from learning on the job. I would say having predecessors, previous administrators that were big into data. I think we're good at collecting data analyzing and implementing that data and help with revision. Those would be the two biggest areas; I think putting pressure on oneself to get better at that process because is not easy process with the amount of data that educators get these days. I think you really need to learn as you go (S-20-Q6a.R7).

In addition, one long time board member from Maple recognized that training in his district could be improved:

It used to be you learned by the hard knocks you figured out what works and what didn't. But as a board we don't have, we don't utilize MASB for training for the younger board members as much as we should. Now we let them know that they are there, but we don't actually require that they go and take it. That would have been a next step that we have to discuss, ok, from now on board members need to go and get certification. We are definitely lacking at that, I would say (BM-2P-Q6a.R6).

Appropriate use of data by school boards and superintendents is highly desired, and viewed as an important factor in moving from decisions based on sentiment, to decisions based on information that can be quantified or verified. The procedures and processes school board members undertake when using data as part of decision making is also an important factor to be considered.

To summarize, the Oak School District's superintendent and school board had a lot to share regarding their motivations surrounding data use. Data is considered very helpful in terms of justifying decisions and assessing the result of said decisions. Data helps to

inform board members of all of the possible options available to them, which can be helpful in helping those that disapprove of decisions to better understand board member's reasonings and motivations. Board members and the superintendent from the Pine School District feel that have several benefits. For example, the superintendent mentioned how he likes how data has the ability to keep you focused. A board member discussed their feelings that data is helpful in quantifying decisions and reduces introspective and emotional setbacks from others, but also offers an important reminder that data can be constructed to tell you what you want it to. Maple's board and superintendent feel that data helps prevent decisions being made based solely on emotions. They also remind us that people have a tendency to question data, when the data is really designed to tell the story.

Board Practices for Using Data in Decision Making

For each district, data in this study come from at least two observations of board meetings, interviews with two board members, and interviews with the superintendents. All of these data points occurred within a span of 6 weeks, so I was well informed of the topics each board was dealing with at the time. It was very clear that all three boards followed a process by which topics were introduced as discussion items (generally on the suggestion of the superintendent), data was collected, organized, and shared with the board (typically by district staff), preliminary discussion took place at a committee meeting, data reports were disseminated again, and formal decisions were made in a public board meeting. Sometimes, these steps moved along from week to week to week. Other times, data collection took months or discussion was tabled. Oak's superintendent shared some background on this process:

We have board officers' meetings once a month and so I meet with the board officers separately from the whole board to talk about all kinds of things that I need to bring to the board over the course of the next month. I meet with board officers but when we go to the whole board they already know that this is what we're going to bring up. They have a system; you may have noticed. They have a system: you can discuss it, but you can't vote on it the same day you discuss. This has taken several years to figure this out, to develop this process. It can be a discussion item on one meeting and then they will not vote on it until the next meeting. So, it gives them time to think about it, to ask questions, to you know talk to their constituents. Major decisions, they don't like to make them the same day. It's very wise (S-3T-Q3. R3).

District staff prepare data reports for officer's meetings and committee meetings.

Minutes of these meetings are shared with the whole board along with revised data. Before meetings of the whole board, members receive the board packet, the term for official information required to prepare board members for action. Typically, board members receive these packets 7-10 days before the general public meeting. Materials can be delivered in paper or made available on a secure website. Older, more veteran board members seemed to indicate a preference for paper documents. All members are expected to thoroughly review the materials early enough that they can request further information well in advance of the public meeting. By the meeting date, they are expected to come ready to vote, unless the discussion at the meeting opens up new questions. Board respondents indicated some irritation when members aren't prepared and indicated that there are "repeat offenders."

I asked a board member from the Oak School District if the board president needed to be the one to request additional information and received this overview:

It doesn't really matter. Anyone can. What we're trying to prevent happening is not asking that question ahead of time and then get into the board meeting asking, "Why you don't have this information to share?" But if you had asked, at least like two hours before, that data could have been there so we can review.

We get our data packets the Friday before the meetings. We have from Friday to Thursday to review the entire information packet so if you haven't looked at the material before we get to the meeting, then that's your fault. You can look at the agenda. We set the agenda almost a month in advance and then we get that information packet, a week in advance. There's been times where I've looked at it and said, "You've given me this, and this, and this information. I still can't answer this question because I need this information." Anyone of us can contact the superintendent and say that I am missing this information to answer this question.

[The superintendent] typically assumes that if you have that question, somebody else probably does too. So the superintendent will email and copy the whole board back and say, "I'm just answering this question because...." You can't get into a discussion the email because it's an open meetings violation, but you can get the information. Then superintendent will say at the board meeting, "I'm updating the packet because someone asked for this information at 4:00."

There have been times when we've delayed decisions. It seems arbitrary now, but it was over abatement of the fuel tanks and the physical plant and the administration team came to us and told us what company they were going to use and gave us the finances and the past history, but the board members asked, "Why this company? Did you do an environmental scan? What are they going to do with this? Did you put it out for bid?" They didn't ask those questions ahead of time so we kicked it back. We said, "We want all this information before we can make a decision." We will kick it back if there are too many questions.

Some respondents indicated that they have served during situations where board relations or board relations with the superintendent weren't very good, and this can be a source of gamesmanship. A board member from Oak's School District shares her insight on board member interactions:

But there are also times where the discussion [at the public board meeting] will lead you to ask another question. Sometimes you don't think about it until you get there. We're really trying to avoid that, but if it happens naturally, it just happens naturally. I think there was a trend previously to our board, specifically, to wait to set up the administration to give them "Gotcha" questions and make them look dumb and that was a point of contention between the administration and the board because the superintendent was flat out like, "I'm not going to be disrespected on camera because you want to make a point." It would be different if in that situation you would ask 10 times for information and they wouldn't answer you. Well then, now I'm going to call you out because I asked you ten times. But if I asked at 6:00 and the meeting is at 6:30, don't come to the meeting and say, "Well, I asked you, the superintendent, but you didn't provide it. You did ask me. You asked me at 6:00;

when you had the packet a week ago. So, we are trying to avoid that because it doesn't make us look like we have it together (BV-3M-Q3a.R8)

A related idea has to do with the reporting hierarchy within a school district. As the superintendent from Pine explains,

So, if we have a bus accident, it's my job to share that. The board president would find out about it first, I would then share with the remaining members of the board, and then share it with our public or... Excuse me, I should say, then our faculty and staff and then our public. So, that there's a roadmap to go through. But I do I do speak to the board president depending on the day could be several times a day, but certainly a minimum three days a week (S-1G-Q3a.R5).

The level of collaboration and relationship is important. Most of my respondents report good intentions about others but some, such as a board member from Pine, recognize that members sometimes have specific agendas:

I think when people chose to be on the board because they've made a commitment to change something -- and that doesn't happen -- they're probably more frustrated than when they come on the board to just serve the community. I've always seen being on the board as community service, giving back to the community, serving students and making students my first objective, and always thinking about students and what I can do for the community and what I can do for the students. But from what I've seen, I don't see that from a couple of other board members. I've been on the board long enough to see when somebody has some other objective in mind. And I could be wrong. I've been wrong before, but I just think that's their objective (BM-1G-Q5c.R1).

A specific incident from several years prior was brought up by a member of a Pine's board. Three old board members were upset by newcomers who ran together against an initiative of the district.

So now, I wouldn't say we have a split board by any means, we have three new people on the board. I think part of the reason that they ran is because they didn't agree with that particular decision. But now they are fully ingrained and realize- we get board packets and materials, we have to do our homework and study -- that these decisions are data driven. Our budget, a 58-million-dollar budget, is data driven. Trust me, we have elaborate types of data; everything from state funding to grant money to title money. So they understand now that it was not an arbitrary decision. The board makes thoughtful decisions. Even so, some of us may disagree still with some decisions (BP-1F-Q2f.R4).

Sometimes relationships among board members have sources of disagreement other than a specific decision. A board member from Maple reported feeling marginalized by others on the board, which constrains her full participation.

Well, I'm not originally from this area. I grew up nearby, right next door. I grew up and went to college and then left the state. I lived out of state for six months and then eventually moved into this district because their ACT scores were so high and I like the community. But we do feel like outsiders, truly because we're not born and raised here. People graduate, go to college and return back home. It's a close-knit community and even on the school board I'm viewed as an outsider because I'm not originally from here. Sometimes people on the board will say, "Oh, you're from another district", like it's less than where I graduated from. I'm like, "Seriously? Who cares?" It's no big deal (BM-2L-Q1b.R2)

Understanding the process by school board members undertake when analyzing data and making decisions is important in that it helps us better understand the level of analysis and sense making that precedes decision making.

To summarize, Oak's superintendent gave a description of an important protocol that he and the board follow. He holds monthly meetings with the board officers and discuss matters at great length before they come together as a full board. This enables the superintendent and the officers to iron out and important details, as well as organizing the data in a more efficient and organized manner. Another important comment made by a board member was how practices have improved in terms of allowing the superintendent an appropriate amount of time to respond to board questions and obtaining the additional information they are requesting. Pine's superintendent expressed the importance of the way information is shared with the community. He described how important information, such as safety issues, are communicated. This information is helpful because it sheds some light into some aspects of the superintendent and school board relationship. People have various reasons for running for a board seat. Getting acclimated to the role and decision

making process is helpful, but it still may not lead to an agreement or consensus on previous decisions. According to Oak's superintendent, complex issues and matters that have a direct impact on the livelihood of people require the board to be on one accord. There are times, however, when votes can be split. Pine's school board describes how their willingness to adjust and adapt to new members. They also work very hard by being available to support school and community events. One board member from Maple expresses feeling of isolation at times.

Data-rich Issues Across Districts

In my interactions with districts and school boards during the period of data collection for this study, I identified five dominant issues for which board members reviewed significant data to support their decision making: 1) student achievement; 2) instructional program restructuring; 3) enrollment; 4) personnel; and 5) facilities. Rather than include finance as a separate category, I will address ways in which finance is integrated with each of these. From the perspective of Bernhardt's categories, all but achievement and enrollment would fall into the "program" category, because they address the instructional program being delivered, the personnel delivering it, and the facilities within which it is housed.

1. Student Achievement

At the top of everyone's list about achievement is standardized testing, as it has been for the past decade and a half. The board member from Pine commented about this reality:

Well, because we use data so much; obviously standardized testing, so much is riding on standardized testing now. It's not my favorite thing, I don't think we should gauge a child's learning ability or achievements based on standardized testing but unfortunately the environment we live in, where everything from funding, etc. is tied to performance and we're getting into teacher evaluations administrator evaluations and test scores and M-step. The world revolves around those kinds of things ((BP-1F-Q1b.R4).

Interview respondents from all three districts indicate that state and federal mandates are an important factor when making decisions, but the assessment results, for example, that are a result of these mandates may not always truly represent the academic progress of students accurately. The superintendent from Pine commented:

Well so we have internal data and external data. The only thing that gets in the newspaper is external data and unfortunately that would be a standardized test of one form of another. So, theoretically, internal data should be telling the narrative that the external data is confirming. M-Step is too young to know if it marries well with Aims Web (a web-based assessment system used at the local level) and Go Math and Reading Street (adopted curricula). So, in time I should be able to say I predict we're going to be way above average on standardized tests or we're going to be about average or be below average based on our internal data. At this point, I'm not able to say that (S-1G-Q1b.R5).

Board members from Oak are also paying attention to a range of student progress indicators:

I'm not necessarily picky about which.... That can be graduation rates, that could be attrition rates, mobility rates, so anything that shows us how well children are completing their grades and passing (BV-3B-Q1b.R8).

Respondents from Maple realize that they have a way to go to better use achievement data:

I think with our district we are emerging as a district that uses data more. I think we need to get more defined and have a better system in place for measuring student growth achievement. I think relying on state standardized tests that fluctuate in content and results and rigor definitely lend some variances. I would like to get more of a strategic plan when we analyze student achievement growth (S-20-Q7.R7).

Other complaints about state reporting of standardized tests were offered by interview respondents, specifically that the timing or arrival of state data often delays decision making or forces boards to make decisions based on limited information. Local, more frequent assessment data helps smooth things out.

We're looking at a diagnostic tool for K-8. We're looking at different vendors from NWA to Aims Web, from Dibbles to Star. Looking at a formative assessment rather than a summative because we want to look at the progression for students. So right now we have a committee shaped up of nine teachers and three administrators that are researching the best tool for our district. So right now that's one process that are looking into (S-20-Q.2.R7)

Whether from board members or superintendents, interview respondents indicated that internal data appears to be what really drives instruction and decision making at the building level. However, board members indicate that they understand the important ramifications of state testing results as it relates to community perception and additional funding, as a key reputational indicator. At the district level, achievement data help boards make decisions about where fiscal resources are directed differentially to support the instructional program.

2. Instructional Program Restructuring

One school board was highly involved in a campaign to restructure schools for a seamless educational alignment from infant through post-secondary. Several ideas – and accompanying data – came together in the plan, including expanding the Balanced Calendar (year-round schools), providing early childhood learning classrooms, concern about

attrition of students during transition to high school and up to senior year, and the relatively low rate of college-going and the cost of college or university. Each of these aspects of the larger decision required different data, some generated during the regular course of operation or provided from the state and some collected specifically to inform the eventual decision.

Pine's School district began with a review of data collected by an existing school with Balanced Calendar and a proposal to add another school:

So, collecting a different kind of data, starting first with the building level teachers, your principal sends out a survey asking how you feel about balanced calendar, is that something that you would like? Here is the data that supports how it reduces the summer slide, so here is the scholastic academic data that says it is working, we are keeping our kids in school. We have intercession, so now instead of 180 days maybe we're getting 200 days of school that can either be remediation or acceleration. Well, all of the academic supports are there, but we need a second type of data which is what is your feedback, what is your opinion? What happened at one school was that overwhelmingly, probably 95% of them said "yes then very slowly we rolled that out. We talked to our families. So a lot of strategic information and data gathering. More informal data- survey data, questionnaire data, but it's still data. Its' not making an arbitrary decision without data. It got to a point where 70% of the survey participants said "yes" (BP-1F-Q2. R4).

There was another elementary school slated for closure due to enrollment, but the district opted to utilize it differently as an early learning center. The most contentious aspect of the restructuring had to do with shifting a separate 9th grade campus to a separate 12th grade campus so that students can complete college coursework as a matter of course during the senior year. The 9th graders would be better able to integrate with the 10th and 11th graders thus, become more engaged in high school. An overarching goal is that the high school would be more efficient, fiscally. A board member from Pine summarized:

So, we've got this 6 week old to post graduation, we will have a 13th year eventually, and early college kids walk out with associates degree someday and that's our

grandiose plan. They are going to graduate because we aren't losing 200 of them somewhere between 9th grade and 11th grade. But we had to start somewhere 9 (BP-1F-Q2. R4).

Due to strong parent disagreement with the plan, the superintendent has an extensive qualitative study of perceptions underway during this first year of implementation. Surveys will be administered to 12th grade students, teachers on the 12th grade campus, and parents of 12th grade students three times during the year. He reported that baseline and midyear data indicate that students love the new configuration, teachers support it, and parents still don't like it.

So the data we're collecting will inform the board at some point. After I collected all information in the fall, we had a curriculum subcommittee meeting which brought in subcommittee members from the Board of Education. We presented in detail all of our findings and then I presented to the full board meeting later. I will do that again after we get all of our data collected, but that should help inform the board in making a decision moving forward. "Are we going to continue our configuration right now or do we need to move in a direction where we're changing some of the configuration?" But we're collecting data to hopefully help the board better understand the strengths and limitations of this major change (BM-2L-Q.2.R5)

The superintendent of another district talked about a significant restructuring in the district as the first mandate from the school board after her hire four years previously. The restructuring involved shifting grade levels at many school buildings and closing some. The most challenging move was the decision to house 7th and 8th graders in a separate wing of the high school to gain efficiency. Importantly, the superintendent marshalled a range of instructional data and research to promote the plan as the best way to improve instructional outcomes. In this case, the board gave a mandate to the superintendent. Members were less interested in making individual data-based decisions. They wanted the superintendent to fix the problems and approved, as a package, the recommendations made.

As board members consider changes in instructional programs and procedures, data is beneficial in helping boards assess current practices and justify any new practices or procedures being considered.

3. Enrollment

Enrollment and associated topics were the most frequently mentioned type of data for respondents in my study. In Michigan, state funding of schools is dependent on the number of students attending based on two count days, one in the fall and one in the spring. Schools receive a specific foundation allowance from the state for each student attending. Oak's foundation allowance is currently \$7,770, Pine's allowance is \$7,828 and Maple's foundation allowance is \$7,687 (<http://www.senate.michigan.gov> , 2017).

While mentioned by nearly every respondent, Pine's superintendent ran through a complicated way of thinking about enrollment:

From our perspective we do student counts. That's a big data point. We have our count day in the fall and we look at that data to see what our enrollment count is, if we lost or gained kids. It's unheard of not to lose students between fall and February. Kids that move, kids that don't come back for 2nd semester- all those kinds of things. So we pounce on that. What is it? Then we can say, if we lost 100 kids between October and February, where did they go? We'd like to know. Did their family move out of Michigan? That's the problem that we have with school finance in Michigan. Not only is the per pupil being cut, but it's also a double whammy because we have fewer students. So, if we take a per student cut and we take a reduction in the number of students, that's a double whammy of budget cuts. So, where did these students go? Did they go to a neighboring district? Did their family move for economic reasons? Another thing that we look at in terms of student numbers: if we have a graduating class of 300 but we bring in 250 kindergartners, the kids just aren't being born. So, that's where a triple complicating factor is. We're not just necessarily losing but we just aren't getting more kids. So all these data things, every day of my life I am looking at these kinds of things. (BP-1F-Q3b.R4)

Depending on how many students the district anticipates, they can then plan how to expend their resources.

Well we look at enrollment data whenever we're looking at teacher placement, hiring and the amount of open positions we post for. When we look at school configurations we look at how many kids are coming into kindergarten, we look at how many kids are in the 5th grade, how many kids are in the 6th grade, how many kids we are expecting? We look at ninth graders, how many kids we expect to graduate. That's why we look at this data.

School choice was indicated as a choice of frustration for some respondents. There is a perception that there is more of an investment in students in the district versus school of choice kids. In addition, some feel that neighboring districts find ways to advertise, despite agreements to only do so if a district has a unique program to offer to students.

Board members from Maple were very vocal about their opinion on school choice:

With school of choice, some people on the board say that they are only concerned with the students in our district; and that school of choice doesn't matter. My thoughts are that we have a responsibility for any and all students that walks in our building and I don't care if their school of choice, and I don't care if they live...I mean, we live in the community, we are not school of choice; we live here and you know; I think I have the same responsibility for the kids that live next door as I do for the kids driving from another district. I think that we have the same responsibility to these children (BM-2L-Q1b.R2).

We have an agreement between all the districts within our ISD that we won't go out and try to get school of choice kids, and that's basically to protect some districts. Because they keep losing kids and we don't want to appear to pilfer these districts more than they already are. That was the agreement-even though these districts are advertising now.

Well, I think people recruit behind the scenes verbally, you know? But you don't put TV ads out and you can put an ad in the paper that says we have these many available school of choice slots, but as far as running ads and sending out postcards because we don't have agreements with these districts. (BM-2L-Q3b.R2).

We think we are doing really good, but how are we doing like someone that is at least our size, or demographic? However, you want to, there's a whole bunch of different ways you can the matrix on it. From there, I guess, you at least now what we're competing with. Especially when we're schools of choice. I mean it's nice to know about schools with schools of choice students because we do get a lot of kids from adjacent district and a lot of it is based on test scores and parents are looking at that for sure. So it's important that we know that too.

Because if we aren't ahead of everyone else in the area, that's like a double-edged sword. Right now they are coming. If we don't maintain our level then or continue

they are going to go where it is. I can't blame them. I would do the same thing if it were my kids. I want them to go to the best place they can go to get their education (BM-2P-Q1e.R6).

Data analysis of enrollment trends has a major impact on board decisions. Without it, it could be difficult to make decisions such as staffing and school restructuring. As school funding has a direct correlation to student enrollment numbers, this issue is further complicated by delay and changes in state funding.

4. Personnel and Related Issues

School boards have responsibility to manage the district budget according to policy. Setting fiscal policy requires finely detailed data, down "to the penny" as one board member said. Personnel issues intersect with financial concerns. For instance, school boards have the obligation to lay off staff when the financial situation call for it. Boards might decide to manage numbers of employees by offering "buy outs" or incentives to retire, so that positions can be eliminated or filled with lower cost individuals. One board member from Maple recounted taking such an approach to encourage a low performing administrator to leave.

We've asked him to take on more responsibility in the high school. He's in a stagnant place of, and he keeps saying, "Next year's my last year, next year's my last year" but it's not. He's not performing and then we say, you need to do more and he's not, and so my thoughts are, ok, then let's cut our ties; this isn't effective and its wasting resources.... I'm on the personnel committee, and the superintendent had given us some options. We [thought about] offering this early out and [thought about what if] this person, and this person, and this person took it, what would we do and what that would look like and how could we combine different things? We've been looking at the financial data for that. So, the way that that ended was, yes go and offer the early outs to these administrators and then come back to us at the next board meeting and let us know who's interested and who's not (BM-2L-Q.2.R2).

Other participants mentioned using teacher evaluation data to determine which teachers to lay off or release. Oak's board established policy by which metrics were established to tighten up evaluations. As the superintendent explains,

A couple years ago we modified the Danielson model and assigned points to each one of those rubric categories. Because of the state law with regards to discipline, attendance, professional conduct, things like that, we assigned other kinds of points to that system. We worked with the union on developing the system. So when we got to the layoff part we had to do last year and the probationary teacher termination because they were ineffective, we needed to have data and data is much easier to analyze when it's numeric. [Instead of] having a principal come in and say "Well they were a good teacher because I observed them doing this or that." The numeric value of an ineffective teacher rating was data that we need to produce in order to terminate a couple of probationary teachers that really needed to go. They needed to find a new career. And when we did layoffs we knew how many teachers we needed to lay off, and so we started at zero, we started at who's got the lowest evaluation point value and chose as many teachers as we needed. It was very important for us in determining those layoffs to have that the evaluation system quantified (S-3T-Q.2.R3).

One district outsourced some of their ancillary services and the board used employment and financial data to consider what the move might mean for their personnel. They had a group of senior staff that wanted to maintain enrollment in the Michigan retirement system, but shifting these 25- to 30-year veterans to a private company would end their seniority. In the shift, they kept the existing arrangements for this small number of employees.

The data maintained by districts is not always sufficient when considering teacher employment conditions, particularly, being adequately prepared to compensate according to the negotiated contract. One very veteran board member from Maple recounted the annual challenge of guessing what their funding from the state will be:

That data from the states is important so we know what we can plan for teacher contracts. In schools, 85% of the money is people, right? So you really do need that information and you need it early enough to make decisions. At least we know normally by June or July. In the past

administration, that was a disaster, we wouldn't even have the numbers until we are starting the school year, and then they wonder why school are failing. Teachers are all back, everything is like it was the year before, and you find out that they've cut funding and they did something different and you can't do anything about it.

The same board member noted that he had years earlier initiated a board policy that required the district to maintain at least 15% fund balance. He complained that the state does not allocate payments on time, which cause the district to borrow about \$20,000 each year to pay teachers in those gap periods. But the decision to put the fund balance percentage into policy has been a good thing, particularly with negotiations.

And I've always been in negotiations and the way I've always felt in negotiations is that I'm not here to punish the teachers because the teachers teach my kids. Our grandkids now. So, I want to be fair with them, but it has to be fair with the district. So I came up with a number. I felt that 15% for our district was the number that we needed to have to make sure that we had money so that if something happened we will not be going bankrupt basically as a district. At the time I was doing it some thought that the state would always step and not let us fail. Well, I'm responsible for this district and for me, I'm not going to just go on a hope and a prayer....So now in negotiations, since that has been put in place and the teachers now see what is going around, all the district around us and what happens when they don't have any funds, now they come in and actually say, "No, we want you to have 15% (BM-2P-Q.2a.R6).

Evaluation data can often be used to justify changes in personnel such as layoffs and in the form of incentivizing retirement for employees who are poor performing. It is also helpful in streamlining and consolidating various services and programs. Care has to be taken, however as high-level decisions such as these can have a major impact on the personal lives of employees.

5. Facilities and Financing Maintenance and Upgrades.

At the time of the study, Oak's School district was in the final stages of preparation for a bond vote, to raise fiscal resources to adequately support the restructuring plan put in place earlier, including renovation and construction in a number of buildings. The

superintendent provided the scope of the project, with associated data review:

Under the financial piece, when we decided to go out for a bond which we're going to know do on voting day, we had to know for all of the projects how much each was going to cost. There are multiple projects in this bond. We need to know ... what it was going to cost in terms of numeric quantified data in terms of money and qualitatively what is it going to do when it is finished.... I mean weeks and months of getting our data straight so we could make a proposal to the board. And you know, they wrestled back and forth and asked really great questions. Are you sure that's what it is going to cost (S-3T-Q.2.R3).

At a smaller scale, a board member from Holt strategized ways of gaining approval for facilities:

For example, we've got this campaign coming out. The data that we're using relates to the number of households in the district and what that would look like to collect the money. But we aren't putting all the data out there (relating to facility upgrades). We have all that information, we have a facilities report that is about three inches thick, but we use that data to narrow it down to make it more palpable (BM-3B-Q.4E.R8).

Even with more modest needs for regular maintenance and modest upgrades, boards need to strategize how to spread the costs over time, negotiate with vendors, and do what they can in house, and for that they need accurate accounts.

To summarize, Board members in Oak vary in terms of what they pay attention to in terms of student achievement. One member in particular looks for any area possible to identify student progress. Oak's superintendent values data when making important staffing decisions. He takes into consideration how these decisions will impact people and describes a systematic process in which they assess and evaluate teachers. Knowing what to say and how much to share when making upgrades and changes to facilities is important to Oak's superintendent. Equally important in information sharing is the way in which the information is presented. One board member desires to make any information presented

user-friendly, but does not want people to think that the board trying to suppress any information.

Pine's school board members acknowledge that external and high-stakes is what a lot of decisions are based on. Pine's superintendent discusses how external data is often what people see, and feels that internal data holds much more value and gives a more accurate picture of what is happening in schools. Using data to make decision is important to Pine's board members and superintendent, especially in the midst of making major changes. Pine's board president explains data on school count helps to identify why the student population fluctuates and how that impacts their budget.

Maple's school board and communicated their understanding that the reliance on standardized testing is risky. They desire a better plan to analyze student achievement data and are looking for a new internal diagnostic tool to accomplish this. Maple school board members discuss school choice and have varying opinions on its impact on their school district. Regardless, all children need to be educated in an equitable manner. In terms of personnel issues, Maple's decision to terminate a staff member led to community outrage, which would have been unlikely to have occurred in Oak or Pine's districts. This topic will be discussed in more detail later in this paper.

Communication with the Community

The final theme present across the districts regards the manner in which the school board uses data when communicating with the community. As elected board members, each of my board respondents recognized their responsibility to represent community constituents honestly and to communicate the reasons for the decisions they make. Data play a large part in that communication, and takes a substantial amount of time. Board

members and superintendent from Maple and Oak discussed their efforts at length, as does this board member about the plan to restructure the district schools:

Some of the community will tell you that we didn't do any studying or collect any data, but we did. We had several community meetings for two years in a row. We went to PTO's, we met with several community groups, we advertised it (and maybe the way we advertised it wasn't clear enough) but... (pause)...how can I explain it? You will find that people are so busy, that, until something absolutely (and I've been on the board, this is my 26th year) so until something absolutely, positively, affects them, they let it go. And you may say, "We're having a meeting to discuss this," and they say, "I don't have time to deal with that, so I'm not attending that meeting." But when it finally gets to the point where we say, "We're implementing this because we've gone out to the community for two years, and nobody said that they have a problem with this." All of a sudden, you know, "Oh, you can't do this!" You know? And we've been planning and planning.

Once we had voted to implement it, then they started saying things, you know, but it, this was like in April and we're rolling it out in September. So, the board just decided, we think in this instance, this will save us money, it's good for kids, it's something that we have to do and we're going to do it (BM-2L-Q.2.R2)

Recall that the superintendent of the other restructured district did not seek community input for that move and operated only with the agreement of the board. The superintendent from Oak, however, had a different communication story when it came to the bond necessary to fund continuation of the new instructional programs.

Well...all of the bond stuff went to the community before it ever went to the board meeting. We took it out to focus groups. We had community forums. I did bring anything to the board that we didn't have feedback on. Now that we're 9-0 approval of the bond, now we are going back out to the community and sharing what that's all about. On big stuff like that, I think you have to go the community first before you go to the board; they would say, "Have you gone to the community about this?" (S-3T-Q.2e.R3)

The superintendent continued narrating the story, saying that a number of simultaneous events indicated that the community was ready to support the bond; members of the community came together around a scholarship event. The superintendent could tell that support for the school district was there, for the first time in a long time.

Even so, it was important that the board vote was 9-0, that there was consensus on an issue that would influence so many people's lives. Until that vote was reached, the district did not move forward.

At least one individual from each board referenced the failure of the board to always communicate sufficiently. Perhaps they didn't take enough steps to gather sufficient data from their constituents. Perhaps they didn't report data accurately or in enough detail. Sometimes, confidentiality rules prevent communication desired by members of the community, such as with personnel issues. Here is a relatively new board member from Maple expressing regret:

We had a really tough issue. The elementary secretary was let go in September of 2014, right at the beginning of the school year. The whole community was up in arms about it and nothing was ever issued about it from the school district about what happened. An internal investigation going on and nobody knew anything. So I think there was a lack of communication, and I wasn't on the school board at that time. I was on the ballot in November but didn't take office until January. So this was still ongoing and I take office. In January the superintendent explained what was happening. In retrospect I think that there should have been more from the school district even if it could be very generalized, "This is what is happening". There were people that posted signs up right outside school property where people pull into the parking lot. It's private property there and people would put signs there that said, "Bring Molly back" and all this other stuff (BM-2L-Q.2e.R2).

Such conflicts about revealing information are likely part of a board member's life since certain data cannot be shared with the public. Even so, this board member lamented missed opportunities to strengthen trust with the community through better communication, when often what happens is a reduction in trust when things fall off the table. She recounted an instance when a letter had been prepared about an increase in the size of the 6th grade class. The intent of the school board was to give the letter to the parents whose children would be in the class at an open house held before school opened for the year. Somehow that intent was miscommunicated to the principal and the teachers,

who handed the letter only to parents who asked for it. The board member said, “No one ever came to the board and complained, but I think it was just a missed opportunity.”

Communicating what is involved in board membership was also mentioned as part of the transparency boards should cultivate, as a board member from Pine reports:

Its common thought that all board members do is show up every month and make decisions based on that meeting. There are times when we literally put 10-20 hours a week into planning. When we get to the big meeting to make a decision, they just see the decision and argue that the board never talked about it before voting-even though we talked about it for over a month in committees. We should tell them.

He continued:

We have to make decisions more visible. Every decision we make is substantiated in one way or another by data. There are no more arbitrary decisions made anywhere. If you don’t share, then it looks like you made the decision on a whim. That’s not good management (S-20-Q7. R4).

A final example of communication relates to whether or not board members shy away in public when they have the ability to control the community narrative. This is a board member from Holt recounting a recent community gathering where he corrected someone with hard data:

I was in a meeting yesterday and we’re trying to come up with this community initiative and one person said, “We really need to push on getting kids college ready. They need to be college and career ready because if we get kids college ready and they stay in the city, the city will prosper.” That sounds great, right? But someone else said, “Why are you trying to do career and college prep when the School District’s graduation rate is 50%? They are not even graduating. Why don’t we help them graduate first because we have to get them to graduation before we can prep them to do anything?”

I was like, “For your information, the district’s graduation rate is 62% and the state average is only like 76%.” If you look at other [benchmark] districts we’re at the top end. We had one high school that had a graduation rate 4% lower than the state. So, that kind of stuff drives me nuts when assumptions are made. That anecdotal stuff drives me nuts. Graduation rates, that’s data that is measurable, it’s specific, and don’t say it’s around 50% when it’s 62%. That’s a significant difference. So, in that case, I did use data. (BV-3M-Q4e.R8).

Community perception and input is an important factor as boards consider the potential impact of decisions they desire to make. In addition, care must be made to control and summarize information as a way to reduce the amount of miscommunication and concerns regarding the school board's motives and intentions when making decisions.

In summary, Oak's superintendent expresses a high value of importance to sharing information with the community, as well as obtaining the viewpoint on perspectives on important matters. Data, in his opinion, helps this process as it can potentially correct misperceptions that people may hold. Pine's school board values transparency when communicating the decision making process and desire to make that more visible.

Summary: Moving Toward Actionable Knowledge

Chapter 4 includes a presentation of the findings from three data collection methods: survey, observation, and interviews. The survey results shared board members' perspectives on data use; the meeting observations present a concrete depiction of the types of data boards reviewed during the time of my study; and the interview findings shared the reflections of board members and superintendents that situates data use in the specific context of the districts, its problems, and its goals and strategies.

In summary, I consider findings of this inquiry that map on to a set of conditions identified by Nonaka and Takeuchi (1995) to enable knowledge generation. In essence, the more these conditions exist, the more likely it is that the organization has the capacity for collecting data and organizing it into information and then utilizing that information for the purpose of collectively learning and generating knowledge. Considering these criteria across three school boards and across the data sets provides a set of findings about the

knowledge generation process. These criteria include: intention, autonomy, fluctuation or creative chaos, redundancy or overlapping, and requisite variety.

1. Intention

This activity involves having a clear vision or direction for your organization, including long term objectives and standards. This involves the frequent broad use of data (Nonaka & Takeuchi, 1995). Oak School District's strategic plan and objectives demonstrate a detailed and data-driven set of goals that as well as measurable standards or benchmarks to assess their progress towards objectives and goals. In the case of Pine School District, their district goal is to establish a learning environment for children from 6 months old to post-secondary. This is evidenced by the restructuring plan implemented that re-arranged the educational setting to accommodate this goal. In addition, they work hard to collect current data on this restructuring by surveying students as to how they feel about the changes in the district. While I did not identify any overarching or big initiatives when studying Maple's School Board, I did observe a board very invested in the efficiency of the district. A lot of discussion took place regarding facilities upgrades, safety of students arriving and departing schools, and careful analysis of how they fare academically in comparison to neighboring district. It should be noted that Maple's 15% fund balance could indicate an insulation from a lot of the external pressures that Oak and Pine face.

2. Autonomy

Effective knowledge creation can take place when the people that are part of an organization feel that they have the freedom to share their ideas, give input, obtain

information and the like; with the intention of presenting information that will be beneficial to the organization (Nonaka & Takeuchi, 1995). In the case of all three board, members feel empowered to act as they search for new information. The members of two boards referred to wanting to know where students go when they leave their district. One of the districts has taken specific steps to track students by collecting data from various sources, while the other board expressed their desire to begin the process of data tracking on student departure from their district. All boards demonstrated an openness to reconsider their initial positions or viewpoints on a topic. They also indicate a comfortability in asking the superintendent for more information or postponing votes to better inform their decisions. Pine's school board made reference to Detroit's financial condition and how it impacts their ability to budget and plan for the upcoming school year. At a time when the state is advocating for the cost of paying Detroit's debts, Pine discussed their concerns about how the costs would be distributed to their district. Oak discussed ways in which potential budget deficits could be solved by absorbing positions that have been opened due to retirements, layoffs and resignations.

3. Fluctuation and creative chaos

Organizations such as school boards generate knowledge when an external stimulus presents itself that requires board members to reevaluate their current thinking and position on an idea. Such is the case with the community's vocalized expression of Pine's decision to implement a district wide balanced calendar. The amount of displeasure and contention in the community prompted the board to table the discussion for a later time. In the case of Oak, a detailed and systematic

plan of outreach and interaction on the part of the superintendent was initiated and the decision to move forward with an important initiative was made based on those interactions.

4. Redundancy

Knowledge is generated when organizations such as school boards have continuous or “several passes” at information in such a way that members have an opportunity to move beyond traditional boundaries as they provide information from various perspectives (Nonaka & Takeuchi, 1995). Board members tend to rely on superintendents to bring the initial information to them, usually in the form of board packets (online or paper). As the initial discussion and analysis of data begins, school board members make the decision as to how to proceed. This information could be discussed at a later date in a committee meeting, work session or general meeting. At any point in the process board members may ask for additional information, causing more data or ideas to be injected into the knowledge process. This can go on indefinitely, requiring more meetings and learning sessions until the board decides enough information has been gathered for all members to come to a collective understanding. Pine’s school board discussed how they took an entire year and restructured one of their committee groups to help new board members become well versed in improving community relations.

All of us, not only are we on the board but we are at least on three committees. From time to time an adhoc committee comes up, for instance, during this reconfiguration, when our board reconvened we had new people on our board and we formed a communication committee, a 1-year communication committee because as a board in august at our retreat we really targeted communication in our community relations goal. We need to do something about communication.

People don't understand the inner workings of the board, how the decisions are made, where the data is coming from. They didn't understand that, so we made that a special committee to say that we need a communication plan and likewise we were hiring a new superintendent that embraced that idea and we and we have a full blown 28-page communication plan and the superintendent developed it and made it his own and ran with it. To do that we formed an individual committee just for that purpose.

Now that we have our new superintendent, the committee does not meet anymore, it is absolved. So, all of those kinds of things happen. We also as board members try to be involved as much as possible. From sporting events to band events to volunteering, DI, visiting schools, to being visible, doing all those kinds of things. So, we are as busy as we want to be and some of us like being busy. I forget that sometimes I have a day job, because I would do this even more (BP-1F-Q4b.R4).

In the case of Oak, when they wanted to garner community support for an important initiative, it was determined that all board members needed to vote unanimously in favor of the initiative in order to present a strong united front.

Last year we privatized a particular department, the vote was going to be 5 to 4 in favor and the vice president of the board at the time said to me, "You've got your five votes," and I looked at her I said, "Do me a favor, table this vote." When you outsource like that you need more than five people, you need six; it's got to be a mandate. The board cannot be split on important decisions like that, and the board has to be 9-0 on the bond it can't be 5-4 on the bond. Everyone's got to be on point with what you're recommending. That's big.

Now, if I'm recommending putting a new roof on a building and it's 5-4, I don't care; 5-4 that's fine, but when you're recommending a bond when you're recommending seven through 12 instead of 9 to 12, you're recommending the closing of the school year, anything that has impact that's larger than a single place in a single building ... oh my gosh you got to have the board lined up (S-3T-Q2dR3).

5. Requisite variety

For effective knowledge generation, organizations such as school boards should be assured of the "fastest access" to a broad range of information. As school board members are a representation of the community, it is important that they are an effective representation of the community's desires and needs. Board members recognize that they must be careful how they regularly restructure their operations

to bring the community voice to the forefront. Opportunities are provided for community members to speak freely during regular board meeting. Perception surveys are given to the community and board members regularly go out into the community to share information and interact with the community. One board member expressed her pleasure in how her board currently operates and how it appears that the community is pleased with their progress and performance.

When I first got on the board I felt like we were hemorrhaging money so we have to put a band aid here and a band aid there, and now we can finally breathe. We are adding to our fund balance and we can finally look at numbers that we don't like and address them. We can finally do that. I feel like other boards might have that ability to take that time out, but we are finally getting to that point where every board meeting is not a crisis. We can tell by the number of people we have in the audience. Nobody is mad at us today, nobody here for public comment (BV-3M-Q4d.R8).

In Chapter 5, I take up each of the research questions and provide more focused answers to each. Additionally, I pay detailed attention to the process of knowledge generation demonstrated by the school boards in my study.

CHAPTER 5: DISCUSSION

Actionable knowledge can inform different types of decisions such as goal setting, assessing progress toward attaining them, addressing individual or group needs, evaluating effectiveness of practices, assessing whether the needs of students and other stakeholders are being met, reallocating resources, or improving processes to improve outcomes...Once the decision to act has been made, new data can be collected to begin assessing the effectiveness of those actions, leading to a continuous cycle of collection, organization, and synthesis of data in support of decision making (Rand, p.3).

I always remember this: statistics can be construed to tell you what you want. So always keep that in mind (BM-1R-Q6f.R1).

I do believe we have people in our organization and in our community that question the data we collect and the validity and reliability of that data so and it shouldn't be that way. The data should tell the story. It shouldn't be how I feel or how you feel. What is the data telling us? (S-1G-Q6q.R5).

The research and analysis presented here illuminates the way in which school board members utilize data when making decisions. It also brings into focus how organizations such as these learn about data and put this knowledge into action in the form of decision making. This chapter begins with answers to each of the research questions posed at the beginning of this study. I also discuss the decision making models that were evident when studying each board. Next, we discuss the limitations of this study and implications for future study on school board use of data when making decisions.

RQ 1: What are board members' orientations to data use?

The school board members who participated in this study have clear and identifiable positions on data use. All board members acknowledged the use of data and how it is an important factor in making sound decisions. Many participants reported their belief that data can take the subjectivity out of decision making and help to justify a board's rationale for decisions to stakeholders and community allies. Board members who agreed to interviews gave reasons why data are an important "back up" to their decision making,

including “justifying how you are spending money.” Additionally, board members referenced the idea that data give you a way of seeing if board decisions are really making a difference. As one board member indicated, “Sometimes the way we use the data to evaluate is even more important than the data we use in the first place.”

1 – a: What are their perceptions about data?

Board members recognize the importance of using of good, quality data to make sound decisions. Without such information, there is the perception that the decisions made are based on incomplete information or misguided assumptions. As one said, “In the absence of data you are making a decision based on emotion, because there’s really nothing else to really to make it on.” Because community viewpoints and ideologies can be overpowering at times, board members rely on data to help balance these viewpoints with information and data. A member indicated, “If we didn’t have really hard good data to use for those decisions, I think it would be kind of based on the most powerful voice in the room, you know that opinion is the one that would carry the vote.” Every indication of data use in my study, including survey responses, observations, and interview showed me this balance in action.

1 – b: What are their concerns when using data?

Board members identified many areas in which they have concerns about data. One of most significant is the time and work to make sense of it and I heard numerous times how important it is to have district assistance to streamline and organize data into information. The board packet is a critical tool in the conduct of school board practice, and every member needs to be prepared for each meeting and each decision, having read the materials and trying to understand. Everyone doesn’t always do that work.

One board member discussed his frustrations regarding the timeliness of state data, particularly notification of how much funding to anticipate so that boards can make critical budgeting and personnel decisions. This is much like the complaints of teachers and school administrators about the slowness of receiving achievement data.

Another area where board members expressed concerns is regarding the need to make decision making more transparent to the community, or to advertise the kinds of data that go into a decision. One board member recalled the amount of planning and study that went into an initiative that the board was considering. Her concern was that people rarely invest in the planning process and often wait until it is time to vote on an idea before they express their viewpoint. She struggled with the idea of how to become more transparent as a board in an effort to get more people involved. A similar concern came from a member of a different board about how decisions in the current context are becoming more visible and the importance of making sure to substantiate decisions made by the use of data. Care is made to ensure that information is shared so it does not look like the board members “made the decision on a whim.” School board members also grapple with the misperceptions they all do is push for kids to score high on standardized testing. One board member took time to reinforce the idea that there are so many issues to deal with and that the conversations they take part in are always centered around data. Despite that, the board member acknowledged that it is still a challenge to help the community understand some of the decisions made by them.

1 – c: What are their priorities when using data?

There are many variables and circumstances that impact how school board members prioritize when using data. Board members agree that student achievement and

fiscal responsibility are often driving forces when using data. Beyond that, however, school board members describe several contexts in which data use is applicable. A board member discussed budget decisions surrounding the fluctuation on enrollment numbers. She indicated that although data is present to help them plan around this issue, board members sometimes selected data based on how long they have been on the board and by how much experience they have had interaction with certain types of data. She indicated that the board understands that low birth rates and transfers to other districts account for the fluctuation in number, however, the way in which individual board members approach the data differs by board tenure and experience.

When asked if improving student learning was first and foremost on the mind of a board member, one member reported that while student learning is important, there are often other issues more pressing, such as the health of a student or other family issues that impede their progress at school. One superintendent indicated that it is a common understanding among schools and districts that outcome data and state achievement scores are very important, but as a district the board and superintendent like to focus more on the process, or how to “prepare ourselves more effectively and more strategically as a district”. Waiting until results are given is not an acceptable practice, and they desire to be better informed prior to going into the testing season, by encouraging schools to be very systematic in their instructional practices and progress monitoring.

Board members also admit that there are times when data does not have to be present in order to make low-level decisions, such as facility rentals and after school activities.

RQ2: How do boards of education use data to accomplish district goals?

Data use is important for board members in that it helps drive the steps they take to meet certain goals. Board members feel a great sense of accountability in that they want to be able to justify to community members and others how their actions relate to the goals that have set and initiatives they want to push forward. Members recognize that it is important to have an open mind and be willing to listen during goal setting and data analysis. They also acknowledge that there are times when people remain committed to their personal ideologies, which sometimes causes split decisions when voting. There are also times when decisions have such an over-arching impact on the district as a whole that decisions and votes may have to be delayed because split decisions would not be appropriate and possibly indicate that the decision was not thoroughly investigated.

The biggest factor, however, is that once that decision has been made, the board must be supportive and be unified in the decision, even if the vote did not go the way an individual member would have liked. Interviewees also caution against members holding grudges and impulses to retaliate when things don't go their way because it weakens their bond as an effective board. The key is to ensure that members have the right motives and intentions for being on their respective boards.

Data is helpful for school boards in that it helps them to give more thought to decisions they make. It appears that each Oak has established indicators for each strategic goal that includes strategic planning and a review every six months. They stress the importance of following up and evaluating decisions that were made. Board members also report policies where they do not vote on an idea the same day that it is presented. This gives them time

to process the information and seek out any additional resources to better inform the board and help make effective data-based decisions.

RQ 3: How do boards of education use data to create actionable knowledge?

Dixon (1999) discusses the steps involved in an organization's learning cycle and how collective learning is transformed into actionable knowledge. She defines organizational learning as:

The intentional use of learning processes at the individual, group and system level to continuously transform the organization in a direction that is increasingly satisfying to its stakeholders (Dixon, p.67).

As is the nature of most organizations, when the steps or processes taken by various parts of an organization are disconnected or unclear, it makes it difficult for the learning to take place collectively (Dixon, 1999). Dixon continues by explaining that there is a learning cycle that organizations take part in, but when the cycle is not accessible or inclusive of all members, then the learning process is stifled or incomplete (Dixon, p.65) and may hinder a full interpretation of data and other information. Collective learning, according to Dixon, does not occur when the steps of the organization's learning cycle don't include everyone. In addition, the way in which organizations take part in the learning cycle must be completed in a systematic and functional manner.

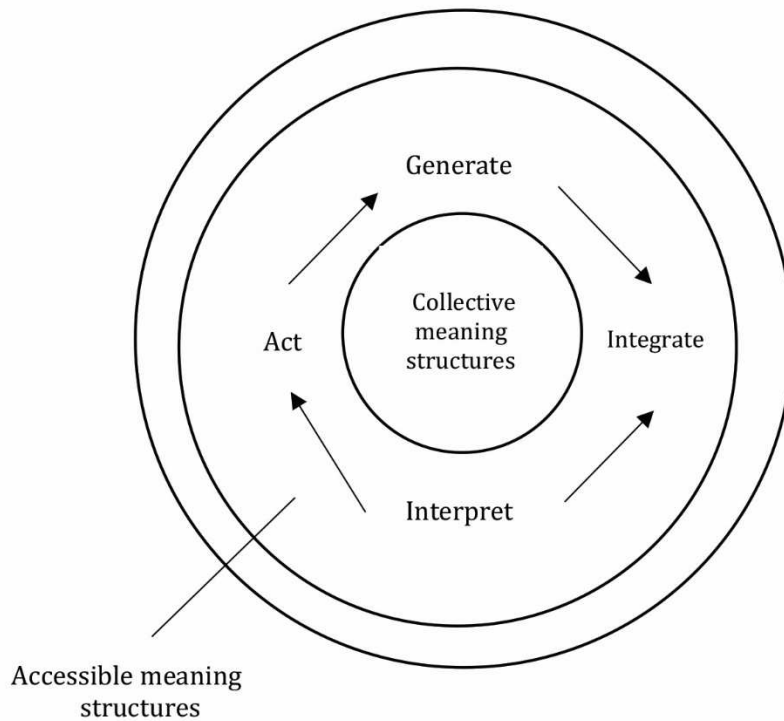


Figure 18: The Organizational Learning Cycle (Dixon, 1999)

The organizational learning cycle (Figure 18) is comprised of four iterative steps. The first step involves generating information in a comprehensive way and disseminating to everyone who will consider it. In the case of my study, data come from many sources and are provided to all members of the board of education. The second step is integrating new or local information into proper context of the organization. All data under review become information when organized and situated in a particular context, in my study, situated in each district, its schools, and community.

The third step is where participants engage in a collective interpretation of the information, in a supportive context or accessible meaning structure. The boards of education in my study gave evidence of a critical process whereby they reach collective understanding. The process involves: data of multiple sorts, views of experts and community, sense making by board members, and multiple opportunities to review,

question, and come to conclusions. They have multiple opportunities to consider the same information and each opportunity also gives occasion for new questions and for additional data to be added to, or intersected, into what they had in place. Board members arrive at a point where they can take a vote and then move to the last step, taking action.

The fourth step is the authority to take action responsibly based on how the information has been interpreted (Dixon, 1999). Because boards of education set policy through their decisions, they depend on the superintendent to actually put policy plans into action. Once the fourth step takes place, it takes the new information gathered and starts the learning cycle all over again.

In order for organization learning to occur, participants must take part in all stages of the learning cycle (Dixon, p.65). There has to be a successful transfer of individual knowledge into the collective pool of information, supported by an accessible knowledge structure. The structured process by which boards operates provides the context within which multiple perspectives and ideas to be cultivated and molded into one consensus or thought of understanding.

Dixon (1999) develops this theory of collective knowledge generation by building on Kolb's Experiential Learning Cycle. Kolb (1984) contends that "learning is the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 38). The process starts when an individual learner takes part in an activity or experience, such as a board member's first glance at a source of data. Next, the individual learner takes the time to reflect on this knowledge and determines what is notable or important. Moving forward, the learner formulates theories or ideas as to what has been observed or

analyzed. Finally, the learner attempts to test their ideas theories or ideas to assess for accuracy and relevance (Kolb, 1984).

When engaging in a collective learning experience, everyone must be included when initially gathering data and they must work together to translate this into new information. As they work together, they must all have the same information so that it can be translated into knowledge that is contextually relevant to their organization. As they move to the interpretation phase, it is vital that this takes place collectively because everyone that is part of the process has different and unique perspectives that foster learning as an organization. Once the information has been collectively interpreted, it must be acted on and tested. This in turn will generate new knowledge, and this enable the cycle to start again (Dixon, 1999).

How this collective learning plays out in the generation of actionable knowledge drawing on data from my study is depicted in Figure 3. The learning cycle for school boards begin as they come into contact with a widespread generation of information. Externally, this information is collected by accountability agents such as schools and superintendents and comes from multiple sources. This information is steadily available and collected regularly. It can be used in a variety of ways for establishing baseline data or establishing benchmarks to refer to at a later date. Internally, data is also collected on a regular basis and helps the boards to better analyze areas of success and areas for improvement.

As this knowledge is collected, it has to be integrated or merged into the pre-existing information to ensure that it correctly placed within the context of the organization. It is important the information that is disseminated or shared is accurate and

timely and it is preferable that the information that is given is accurate. This information will then be translated and restructured for use.

Once the information is collected and integrated, school boards can now begin the collective process of interpreting the information. During this process, one would expect to see dialogue that show evidence of the ability to process multiple perspectives of the information before them. There may be multiple opportunities to interact with this information and all members should feel that they have an equal opportunity to share their ideas and offer unique ways of interpreting the information.

When school board members feel that they have carefully analyzed and discussed the information, they move forward with their delegated authority to take responsible action on the shared meaning of the information. Policies are established, goals are set and they move forward collectively as they make their recommendations for action to the superintendent. Once this has taken place, the cycle will repeat itself again as they gather new information for interpretation.

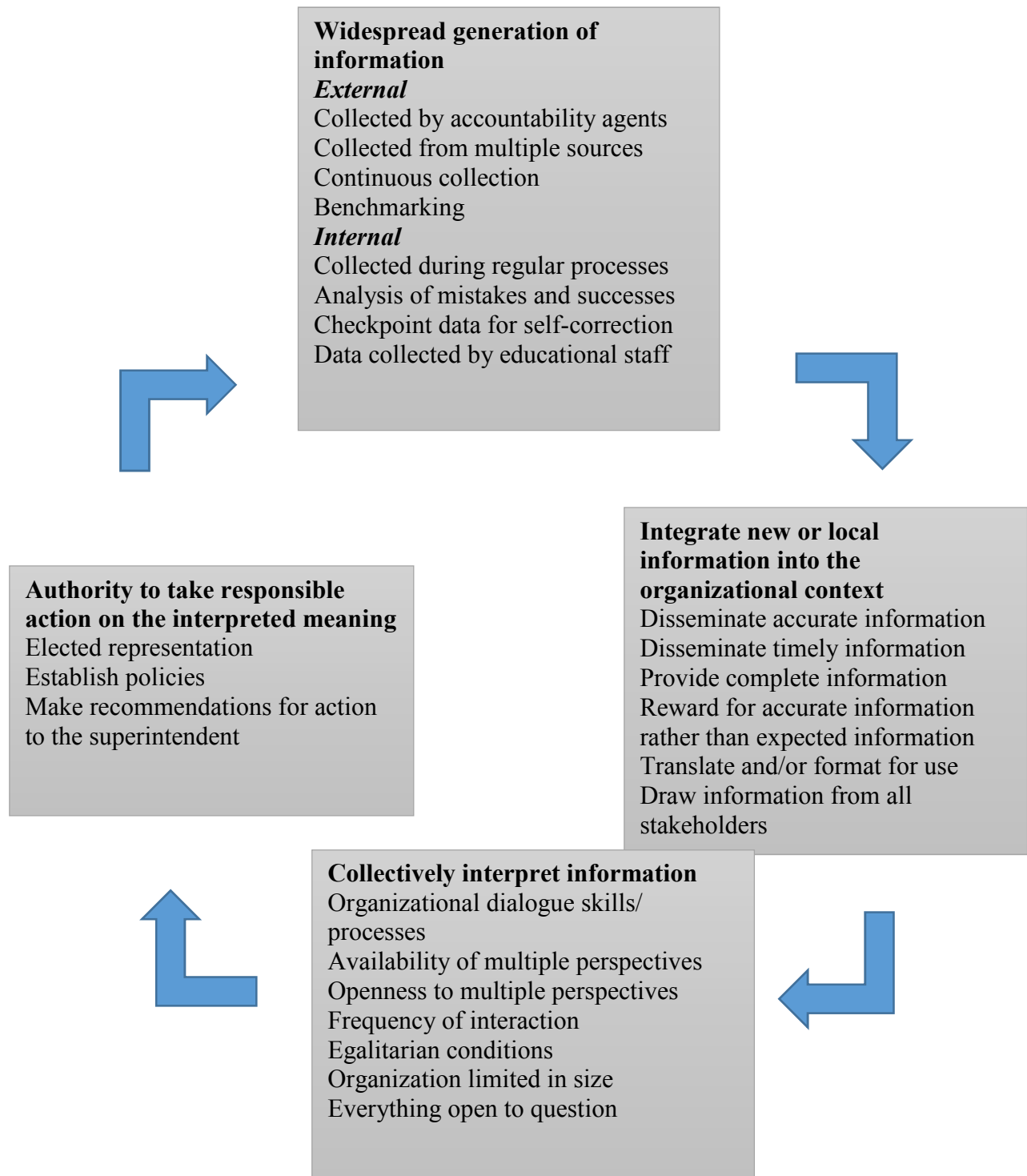


Figure 19: Elements of Organizational Learning (Dixon, 1999)

Decision Making Models

Oak and Pine's decision making practices were similar to the Classical Model of decision making in that they demonstrated a practice of investigating all outcomes and scenarios before making a decision. When Oak desired to see the fruition of a major district initiative, multiple levels of information gathering and sharing took place. The superintendent and the board engaged in a systematic way of gauging the level of community support by sending out perception surveys, mingling with the community at social events and by completing a thorough and exhaustive analysis of data. It should be noted, however, that it was intuitive data on the part of the superintendent that helped the district realize that the community was ready to move forward with the initiative. This may appear to contradict the classical model in that human intellect is not usually considered as a part of this decision making model. However, the detailed and multi-faceted analysis that took place prior to that is what helped the superintendent feel confident to trust her intuition in this matter. This is very different from someone making a decision simply because it just "feels" right.

Pine conducted its knowledge process in a similar way. When they sought to restructure the educational setting of the district that would provide educational opportunities from 6 months to post-secondary, they took over two years to attend community meetings, conduct surveys and gather data on how a decision such as this could benefit the community. This data allowed the board and the superintendent to see how this restructuring could increase student achievement and enrollment numbers as well. Again, once the board and superintendent took part in converting data into information, it resulted in a collective knowledge or understanding of this change would be in the best

interest of their student clientele. After the restricting had taken place, the superintendent began to make a regular practice of surveying the students to get their perceptions as to whether or not to determine if this change has been successful and beneficial to the personal educational experience.

Maple's decision making practices were similar to the Administrative Model of decision making in that they were open to different ways of solving the issues presented to them at the board meetings. When discussing how to complete important facilities upgrades, the board and the superintendent talked through several options and considered which option could work. Board members were comfortable allowing the superintendent to conduct more research and find ways to acquire the funding to see the upgrades come to pass.

Summary

Through multiples lenses, this study sought to examine factors that impact decision making among school board members. Through observations, field notes and analysis of anecdotal records I was able to gain insight into board practices. Participant interviews offered their retrospective views on board governance, while the survey yielded important demographic and practical information that shed some light on the various board members selected for study.

The data presented for this study has provided me insight into how school boards use data as part of their decision making process. Although the information was thought provoking and insightful, the findings presented here can only be used to draw tentative conclusions. The results reveal a high need to further investigation and the questions still remains, however, as to whether or not these findings bring us closer to understanding

how boards operate. In all three cases studied, leaders indicated that they would like to see more training opportunities for board members. This study indicates that board members and superintendents work hard to hear all sides of a matter prior to decision making. This study also indicates that school boards gather data in meaningful ways and transparency is seen as a very important part of the decision making process.

The nature of school boards is such that there is a heavy contextual influence on how data is used, as well as how it shapes the message presented. As they work hard to make sound, data-driven and rational decisions, it is important to point out that as much as they'd like to try, it is impossible for individual board members to completely take the "emotion" or their own "experience" out of decision making. Further, social interactions are a large part of the decision making process, thereby creating the contextual situations upon which decisions are made. When working together on important topics, board members may struggle to set aside personal convictions or motivations that influence how they will vote on a matter. They may have family members that attend school in their district, may have attended the district, or may know individuals with business ventures that would directly be impacted by a decision. It would be hard for a member to set aside their feelings completely and be objective enough to vote in the interest of everyone, despite that being one of their main role requirements -- to do just that. Depending on the level of influence that member may have on the board, votes could possibly sway in the direction to support their goals. School board members may also feel pressure from stakeholders to present ideas or develop a plan of action based on how they think stakeholders would like them, weighing those thoughts against public, ostensibly objective data.

Limitations

The scope of this study is such that it is only a snapshot of a set of individuals on three school boards and is in no way generalizable. Due to sampling of each board, it is possible that inclusion of other board members might have led to a different picture in each board's case. Further, different information might have emerged from a different set of questions in the interviews. As it is, the participant's responses were limited to their retrospective experiences in utilizing data as part of their decision making practices. The data collected for this study describing school boards use of data was not used to evaluate the effectiveness of school board decision making practices and effective knowledge generation. In addition, the study presented here was limited to three districts. Overall factors included the amount of time available to attend board meetings, as well as limited time to survey and interview participants from the districts.

Implications for Practice and Research

School board members have various motivations for participating on boards. They yield powerful influence from community members and work to balance the social, emotional and political environment that is part of school board governance. Board members work hard to dispute the notion that decisions are ill-advised and made in haste. They struggle with ways in which they can better convey the knowledge process to the communities they serve. They desire for others to recognize their efforts as evidenced by number of hours each member puts in to weekly planning. The community is often unaware of the research, data collection and analysis that has taken place prior to making a decision. A key practical implication of the research is to consider ways in which boards can communicate the reality of the decision process with their communities in a

straightforward and efficient way. Ways for doing this might be determined through additional research. A suggested focus of research might be to determine how individuals not on the board could be incorporated in knowledge generation more directly. Another area could include a more in-depth study of the knowledge generation process of school boards that would include a larger research sample and a longer phase of data collection, observation and analysis. Specific attention to what members actually say, as well as whether or not documents cause shifts or convergences in thinking, would be revealing. A practical implication might be a response to my findings by developing a learning or training program required of board members to help members better appreciate the variables and factors that must be considered when making data-based decisions. While this study was a snapshot into board practices, it will be helpful in giving insight into areas for further study.

Conclusion and Final Thoughts

The purpose of this study was to better understand the ways in which school boards use data to make decision. Of particular interest was the way in which they transform data into information, which results in a collective set of knowledge that can be utilized to make quality decisions for the school districts in which they serve. Strong board members are cognizant of the need to separate the cognitive from the political.

In terms of decision making practices, there is a lot more than meets the eye. One has to consider the nuances and influences that influence decision making. It is important to understand that all that we hope to learn about school board is not quantifiable. Much that we know is qualifiable and just as important. Consider thinking of board members and superintendents as people engineers. Not only do they need a solid educational base, but

they must have a knowledge of how to analyze data, and an understanding of what data to use and when. They also need to know how to present and talk about data, as well as knowledge of when to present data. As they understand the context in which data is useful, they are able to make important decisions, often by utilizing the unspoken subtleties and connections they've obtained from learning the social, cognitive and political landscape under which they serve. The superintendents in this study exhibited evidence of the ability to anticipate the pitfalls and challenges that may stand in the way of their mission and vision. Strong leaders, such as those examined as part of this study, are able to orchestrate problems and pitfalls into positive opportunities for their district.

School boards are under increased scrutiny as to whether or not they are still a relevant factor or change agent for schools. Seen by many as merely a symbol of a democratic society, there is the concern that they are not adequately equipped to handle the complex issue facing American schools, and for some, they never were really designed to do so. In addition, there exists some question that members serve merely to further their personal and career aspirations. Further, most members have not been trained on standard practice and procedures as there are few courses to help them receive instruction on how to conduct their role. Consequently, they often rely on the experiences and practices of their fellow board members. Despite the rhetoric, school boards currently play a role in the setting the course for school districts across the county. For now, they are the ones tasked with the responsibility of managing the districts they serve and overseeing its overall operations. Having a better understanding of how they operate and generate knowledge could be helpful in reevaluating their role future role in school districts.

APPENDICES

APPENDIX A

Potential Districts for Study

A purposeful sample of three school boards was chosen. I selected specific districts to achieve variation (e.g. size, location, average student achievement, % free/reduced lunch, college going rate or AP enrollment).

District	Oak	Maple	Pine
District Accountability Scorecard (2013-2014)	Red	Lime	Yellow
Graduation Rate (2013-14)	56.1%	96.49%	86.65%
K-12 Enrollment (2014-2015)	11,695	914	5,716
% Economically Disadvantaged (2014-2015)	60.4%	24.4%	39.0%
% Students with Disabilities (2014-2015)	17.3%	4.6%	11.3%
Pupil: Teacher Ratio (2013-2014)	25:1	24:1	24:1
Number of Teachers (2013-2014)	739	50	330
Foundation Allowance (per pupil) (2013-2014)	\$7,368	\$7,026	7,299
Revenues (per pupil) (2013-2014)	\$11,970	\$7,938	9,786

Table 10: Potential Districts for Study (MI School Data, 2015; www.munetrix.com, 2015; transparency reporting from each school district: www.fhps.net, www.lansingschools.net, <http://www.newlothrop.k12.mi.us/pages/NLAPS>).

Table 10 (cont'd)

Instructional Expenditures (2013-2014)	\$5,795	\$5,529	5,939
Fund Balance as % of Revenues (June 2015)	8.8%	21.6%	9.3%
Student Race/Ethnicity Breakdown (2014-2015)	*American Indian/Alaskan Native 92 (.79%) *African American- 4,587 (39.22%) *Asian-698 (5.97%) *Hispanic/Latino- 2,201 (18.82%) *Two or More Races- 940 (8.04%) *White- 3,172 (27.12%)	White-100%	*American Indian or Alaska Native 13 (.23%) *African American-542 (9.48%) *Asian-172 (3.01%) *Hispanic/Latino- 712 (12.46%) * Native Hawaiian or Other 4 (.07%) *Two or More Races- 467 (8.17%) *White-3,803 (66.59%)

APPENDIX B

Information Letter and Consent Form for Participants

Dear Research Participant,

I am a doctoral candidate in the Department of Educational Administration at Michigan State University. We are collecting data for the purpose of writing my doctoral dissertation. You are being asked to participate in this study because of your role as superintendent and board member. We are studying the ways in which school boards use data as part of their decision making process. Your school board is one of 3 boards of education selected to participate in the survey portion of this study. Individual board members remain anonymous.

In this email you will find a link to an anonymous online survey that we are asking you to complete at your earliest convenience for our research on school boards. Because you possess knowledge about school board governance, we are interested in examining your thoughts about how you utilize the variety of data at your disposal as part of your decision making process.

This survey is voluntary. We expect that it will take no more than 20 minutes of your time. By completing the survey, you agree that we may include the anonymous results in our study. An executive study of the research findings is available to you by clicking on the google form at the end of this survey and providing your contact information. In addition, you will receive a \$20 e-gift card that will be sent to you the email address provided within 2-3 weeks after completion of the survey. Participation in the second phase of this study will be based on the survey results. Members of your board might be invited to participate in individual interviews. This would take about an hour of your time. Thank you for your time and assistance in helping us understand the impact of training on school board governance. By continuing with this survey, you indicate your agreement to participate. Sincerely,

Susan Printy, Ph.D.
sprinty@msu.edu
517-355-4508

Nicole Robin Beard
campbe27@msu.edu
517-410-7337

APPENDIX C

Survey: School Board Data Use in Decision Making

My preference was to select districts that have variance in their school achievement results. Targeting 3 school boards, I aimed for a comparative sample of districts for which they serve. The school boards had some variability in the extent to which members have taken any or some training, such as conferences and workshops.

Survey

On the survey, the questions were to gauge how boards use data and why data is used for decision making, I obtained a survey of these conditions from school boards, which also provided a basis for comparison with prior research.

The survey was divided into two parts. The first part consisted of information regarding demographics such as age, occupation, tenure, etc. The second part of the survey consisted of questions related to the data-driven decision making practices of school board members and the collective whole. The survey was designed to take a minimal amount of time for research participants to complete.

Q1a What is your gender?

- Male (1)
- Female (2)

Q1b What is your race/ethnicity?

- African-American or Black (1)
- White (2)
- Hispanic or Latino(a) (3)
- Asian (4)
- Native Hawaiian or other Pacific Islander (5)
- Native Indian or Alaska Native (6)
- Other (7)

Q1c What is your age?

- Under 30 (1)
- 30-39 (2)
- 40-49 (3)
- 50-59 (4)
- 60 or over (5)

Q2 Do you currently have any children in school?

- Yes, in the same district in which I serve on the board (1)
- Yes, in another district (2)
- No (3)

Q3a Are you a current or former educator?

- Yes, in the same district which I serve on the board (1)
- Yes, in another district (2)
- No (3)

Q3b Are you a current or former member of an educators' union?

- Yes, in the same district in which I serve on the board (1)
- Yes, in another district (2)
- no (3)

Q4a Check the statement that best describes the main reason/s you initially ran for the board? Select all that apply.

- To fix specific issues in the schools/district (1)
- To give back to my community (civic duty) (2)
- To represent my constituency in school-related issues (3)
- To develop my role as a public leader in my community (4)
- To ensure that our children's schools are the best they can be (5)
- To ensure that a different candidate did not get on the board (6)
- I was recruited (7)
- I was appointed (8)

Q4b Were you elected or appointed the board?

- Elected (1)
- Appointed (2)

Q4c If you were elected, did you run for the school board as part of a slate of board candidates running for the school board as a group?

- yes (1)
- no (2)

Q5 Do you plan to pursue another term on the board after you complete your current term of office?

- Yes (1)
- No (2)
- Undecided (3)

Q6 In a typical month, how many hours do you spend on board work? (Include board and committee meeting, individual research, representation to community groups, less formal board communications or communications with constituents, etc.)

- More than 40 hours per month (1)
- 25-40 hours per month (2)
- 15-24 hours per month (3)
- 7-14 hours per month (4)
- fewer than 7 hours per month (5)

Q7 In your view, improving student learning across the board is...

- Not at all urgent (1)
- Somewhat urgent (2)
- Moderately urgent (3)
- Very urgent (4)
- Extremely urgent (5)

Q8a Agree or disagree: Our board needs to celebrate our teachers rather than debating about topics such as common core, and provide them with more support to do their work.

- Strongly agree (1)
- Inclined to agree (2)
- Neither (3)
- Inclined to disagree (4)
- Disagree (5)

Q8b Agree or disagree: Students in our community face many challenges; we need to ensure that we don't place unreasonable expectations for student achievement in our schools.

- Strongly agree (1)
- Inclined to agree (2)
- Neither (3)
- Inclined to disagree (4)
- Disagree (5)

Q9a Agree or disagree: The current state of student achievement is unacceptable. We must make dramatic and rapid improvements in student learning.

- Strongly agree (1)
- Inclined to agree (2)
- Neither (3)
- Inclined to disagree (4)
- Disagree (5)

Q9b Agree or disagree: Defining success only in terms of student achievement is narrow and shortsighted; we need to emphasize the development of the whole child.

- Strongly agree (1)
- Inclined to agree (2)
- Neither (3)
- Inclined to disagree (4)
- Disagree (5)

Q10a What is the primary function for which data is used? Please rank in order of importance.

_____ To measure academic progress (1)

_____ To measure effectiveness of district's vision and mission (2)

_____ To assess effectiveness of instruction (3)

_____ To guide curriculum development (4)

_____ To allocate resources wisely (5)

_____ To promote accountability (6)

_____ To report progress and other information to the community (7)

_____ To meet local, state, and federal reporting requirements (8)

_____ To show trends (9)

Q10b What problems has your board dealt with in the last three years where data has been a key factor in making decisions?

Q11 What is your greatest fear about using data?

- Using invalid and unreliable data (1)
- Using data inaccurately (2)
- Using data for the wrong reasons/motivations (3)
- Improper communication of data findings to stakeholders (i.e. schools, community, local/state/federal agencies (4)
- I am comfortable with using data (5)

Q12a What types of demographic data are used to inform decision making? Select all that apply.

- Attendance (1)
- Drop-out rate (2)
- Enrollment (3)
- Ethnicity (4)
- Gender (5)
- Grade level (6)
- I don't know (7)

Q12b What types of perceptions data are used to inform decision making? Select all that apply.

- Attitudes (1)
- Observations (2)
- Perceptions of learning environment (3)
- Values and beliefs (4)
- I don't know (5)

Q12c What types of School Processes Data are used to inform decision making? Select all that apply.

- Description of school programs (1)
- Descriptions of school processes (2)
- I don't know (3)

Q12d What types of student learning data are used to inform decision making? Select all that apply.

- Authentic assessment (1)
- Norm-Criterion-referenced tests (2)
- Teacher observations of abilities (3)
- Standardized tests (4)
- I don't know (5)

Q13a How often do you use demographic data?

- Always (1)
- Almost Always (2)
- Sometimes (3)
- Rarely (4)
- Never (5)

Q13b How often do you use perceptions data?

- Always (1)
- Almost Always (2)
- Sometimes (3)
- Rarely (4)
- Never (5)

Q13c How often do you use school process data?

- Always (1)
- Almost Always (2)
- Sometimes (3)
- Rarely (4)
- Never (5)

Q13d How often do you use student learning data?

- Always (1)
- Almost Always (2)
- Sometimes (3)
- Rarely (4)
- Never (5)

Q14 What factors affect/inform data use when making decisions? Select all that apply.

- Access (1)
- Quality (2)
- Motivation or reason (3)
- Timelines (4)
- Staff capacity & support (5)
- Curriculum pacing pressures (6)
- Lack of time (7)
- Lack of experience (8)

Q15 How do you go about determining which data to collect? Select all that apply.

- Data is collected based on our district's mission and vision goals (1)
- Data is collected based on current district conditions (e.g. assessment data, fiscal conditions). (2)
- Data is collected based on local, state and federal mandates (3)
- Data is collected based on school administrator requests/expectations (4)
- We look at all available data (5)

Q16 When analyzing data, what steps are taken to determine how it will be beneficial in goal setting? Select all that apply.

- Data is analyzed keeping in mind our district's mission and vision goals (1)
- Data is analyzed keeping in mind our current district conditions (e.g. assessment data, fiscal conditions) (2)
- Data is analyzed keeping in mind local, state and federal mandates (3)
- Data is analyzed keeping in mind school administrator requests/expectations (4)
- We look at all available data (5)

Q17 What motivates your school board to use data? Select all that apply.

- State, federal and local compliance requirements (1)
- Community expectations (2)
- Administrative expectations (3)
- Board goals (4)
- Information obtained from training (5)

Q18 In what way is the community involved in discussing data, such as test results, school safety reports, and teacher quality ratings? Select all that apply.

- Community questions/comments are fielded and considered before the decision making process begins (1)
- Community questions/concerns are important, but the school boards interpretation of data drives decision making (2)
- Data is present and available/presented to the community on a regular basis, and is used to explain/justify potential decisions (3)

Q19 What kinds of supports are available to help with data use? Select all that apply.

- Training from conferences (1)
- Professional development provided by school district (2)
- Training provided by associations such as the MASB or NSBA (3)
- Training is not provided (4)
- Peer Support (5)
- No support needed. I am comfortable with how to use data effectively. (6)

Q20a Describe the board training you have had in relation to board roles, responsibilities and operations.

- Have had training (1)
- Have had training, but would like more (2)
- Have not had training, but would like to have training (3)
- Have not had training, but don't want/need it (4)

Q20b Describe the board training you have had in relation to leadership skills.

- Have had training (1)
- Have had training, but would like more (2)
- Have not had training, but would like to have training (3)
- Have not had training, but don't want/need it (4)

Q20c Describe the board training you have had in relation community engagement.

- Have had training (1)
- Have had training, but would like more (2)
- Have not had training, but would like to have training (3)
- Have not had training, but don't want/need it (4)

Q20d Describe the board training you have had in relation to student achievement issues.

- Have had training (1)
- Have had training, but would like more (2)
- Have not had training, but would like to have training (3)
- Have not had training, but don't want/need it (4)

Q20e Describe the board training you have had in relation to legal policy issues.

- Have had training (1)
- Have had training, but would like more (2)
- Have not had training, but would like to have training (3)
- Have not had training, but don't want/need it (4)

Q20f Describe the board training you have had in relation to funding and budget.

- Have had training (1)
- Have had training, but would like more (2)
- Have not had training, but would like to have training (3)
- Have not had training, but don't want/need it (4)

Q21 Please indicate which of the "Certified Board Member Award" courses you have completed from the Michigan Association of School Boards.

- CBA 101 - Intro to School Board Service (1)
- CBA 102 - Policy (2)
- CBA 103 - School Finance & School Budget (3)
- CBA 104- Basic School Law (4)
- CBA 105 - Curriculum & Instruction (5)
- CBA 106 - Community Relations Leadership (6)
- CBA 107 - Labor Relations (7)
- CBA 108 - Navigating the Legislative Process (8)
- Board Governance for Data Informed Decision Making (9)
- I have not taken any of the courses (10)

Thank you for your participation! Please provide your contact information on the google form below if you would like to receive an executive summary of this study. Providing contact information is voluntary. Click here: <http://goo.gl/forms/fHW2XfRtzX>

APPENDIX D

Observation Protocol Instrument

Instrumentation:

Observation Protocol Instrument:

School Board Meeting Observation Notes

School District: _____ Date of School Board Meeting: _____

Starting Time: _____ Ending time of Meeting: _____ board member's present _____

of People in attendance: _____ Who was in attendance?

Meeting Protocol:

List items discussed on the agenda:

1.

2.

3.

4.

Main focus of the meeting?

Were there any public comments?

Important outcome/s?

Reflective Summary:

APPENDIX E

Board Meeting Template

Policy Issue	Facts and Details in the Field Site	Observer Comments
School Finance		
Teacher Pay		
Collective Bargaining		
Class Size		
Academic Focus		
Plural Focus		
Data Usage		

Other		

(Table adapted from Hays & Singh, 2012)

APPENDIX F

Informed Consent Form

Michigan State University Informed Consent Form

Title of Research Study: School Board Capacity and the Perceived Benefits of Training by the Michigan Association of School Boards

Protocol Number: 15-831

Principal Investigator: Susan Printy, Ph.D., Associate Professor, Michigan State University
Department of Educational Administration, 405 Erickson Hall, East Lansing, MI 48824

P: (517) 355-4508/ email: sprinty@msu.edu

Co-investigator: Nicole Robin Beard, 4200 Bond Ave. Holt, MI 48842

P: (517) 410-7337/email: campbe27@msu.edu

Emergency Contact: Nicole Robin Beard, 4200 Bond Ave. Holt, MI 48842

P: (517) 410-7337/email: campbe27@msu.edu

Request for Interview

You are being asked to participate in **Phase 2** of our study of the ways in which training alters or improves the governance practices of school board members. For **Phase 1** one of this study, you completed an online survey that we are that examined your retrospective thoughts about the content and value of training.

Study Purpose

In addition to studying the perceived impact of training, this study seeks to determine whether and how the core knowledge of board procedures and practices held by the Michigan Association of School Boards and transmitted to board members through its training program subsequently changes the ways in which board members engage in school governance. As a particular condition of this inquiry, school boards selected for Phase 2 of the study will be comprised of members who have all completed the 100- level basic training classes offered by the MASB. Finally, this study will hone in on board engagement in data driven governance practices.

This study is being conducted to fulfill the dissertation requirement for a PhD in Educational Administration from the College of Education from Michigan State University. Your participation is voluntary.

Your Role as Participant

You are being asked to participate in this study because of your role as board member or a superintendent. In this role you possess knowledge about school board governance and training for school board members.

For the three school boards selected, I will conduct face to face interviews with the superintendent, board president and two additional members of each board. Interviews

will be held at your local school districts or a convenient location of your choice. I will also interview one course facilitator from the Michigan Association of School Boards.

Confidentiality

The research team will make every effort to keep all the information you tell us during the study strictly confidential. The Institutional Review Board (IRB) at Michigan State University is responsible for protecting the rights and welfare of research volunteers like you, and has access to study information. All documents will be kept confidential at the conclusion of the study and will be stored in a locked file cabinet in the office of my advisor, Dr. Susan Printy.

Incentive for Participants

Participants in **Phase 2** study will receive a twenty dollar (\$20) Visa gift card at the time of the interview.

By signing this document, you are agreeing to take part in this research study. If you have any questions, please contact the co-investigator Nicole Robin Beard, at 517-410-7337. Your signature also indicates your agreement to be audiotaped. Taping the interview allows me to concentrate on your responses and aids in assuring that I fairly represent your comments.

Signature of Subject: _____

Initials indicating consent for audiotape. _____

Print Name of Subject:

Email Address:

Date:

APPENDIX G

100-level courses from the Michigan Association of School Boards

- Michigan Association of School Boards. *CBA 109: Board governance for data-informed decision making*. MASB Leadership Services Certified Board Member Award Program, Lansing, MI.
- Michigan Association of School Boards. *CBA 101: Introduction to school board service*. MASB Leadership Services Certified Board Member Award Program. Lansing, MI.
- Michigan Association of School Boards. *CBA 102: Policy*. MASB Leadership Services Certified Board Member Award Program. Lansing, MI.
- Boards, M. A. o. S. *CBA 104: School law*. MASB Leadership Services Certified Board Member Award Program. Lansing, MI.
- Michigan Association of School Boards. *CBA 105: Curriculum and instruction*. MASB Leadership Services Certified Board Member Award Program. Lansing, MI.
- Boards, M. A. o. S. *CBA 106: Community relations leadership*. MASB Leadership Services Certified Board Member Award Program. Lansing, MI.
- Michigan Association of School Boards. *CBA 107: Labor relations*. MASB Leadership Services Certified Board Member Award Program. Lansing, MI.
- Michigan Association of School Boards. *CBA 108: Navigating the legislative process*. MASB Leadership Services Certified Board Member Award Program. Lansing, MI.
- Michigan Association of School Boards. *CBA: 103 School budgeting and finance*. MASB Leadership Services Certified Board Member Award Program. Lansing, MI.

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