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Using Assessment Data for Informed Decision-Making in Catholic High Schools

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Using Assessment Data for Informed Decision-Making in Catholic High Schools

by

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Using Assessment Data for Informed

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School leaders and principals have an obligation to use every tool at their disposal to maximize student achievement. All students deserve the best use of data to inform the decision-making of those entrusted to deliver the finest education available to them. The purpose of this study was to ascertain the perceptions of principals in Los Angeles Archdiocesan high schools about the use of assessment data in their schools by finding how they were using assessment data to inform curricular and pedagogical decisions, and then determining what factors affect the use of assessment data to inform their curricular decision-making.

This study was a mixed-method investigation using a quantitative survey to find processes in Archdiocesan high schools that capture and utilize assessment data to inform decision-making, as well as to determine the principals' perceptions of the benefits and challenges related to assessment data usage. The qualitative aspect of this study consisted of interviews of Archdiocesan high school principals meant to expand upon the findings of the survey. The findings of the study, viewed through the lens of a conceptual framework, suggest a breakdown in the use of data from the very beginning of the process. Standardized assessment data are the information used to drive curricular decisions while data from formative assessments

and curriculum maps, are utilized less frequently. The study also found that, while principals feel that their teachers valued the use of data, there was room for growth in the protocols enlisted to analyze assessment data, and in the cultivation of a culture of collaboration and learning.

CHAPTER 1

BACKGROUND OF THE STUDY

Background

As a high school principal in the Archdiocese of Los Angeles for the past 18 years, and as a Visiting Committee Chair of 17 Western Catholic Educational Association (WCEA) and Western Association of Schools and Colleges (WASC) accreditations, I have witnessed Catholic high schools struggle to describe how they disaggregate and use assessment data to inform curricular decisions. Compiling and disaggregating formative and summative assessment data, and using these data effectively to inform quality decision-making and curricular change can seem like a search for the Holy Grail (Reeves & Burt, 2006). Indeed, compiling and understanding assessment data—and using those data to determine where students are in the learning process and where a school would like them to be—take skill and experience.

While these are challenges that Catholic educators share with their public-school colleagues, Catholic schools face specific challenges, such as the acquisition, disaggregation, and use of assessment data to inform curricula. Catholic high schools do not use high-stakes testing to determine funding, and therefore do not have mandated, publicly available results of Average Yearly Progress (AYP) or California Standards Tests (STAR) assessments to drive curricular decision-making. In addition, unlike public schools, there is a lack of research regarding the use of assessment data to drive curricular growth in Catholic high schools. Assessment instruments and the process of their disaggregation and use to inform curricular decision-making are the result of decisions by the administrations of each Archdiocesan high school.

According to Stiggins and Chappuis (2012), assessment is defined as "the process of gathering evidence of student learning to inform instructional decisions" (p. 3). There is a variety

of assessment data available to Catholic and public schools. Formative assessment is part of the day-to-day, planned method of evaluating student learning needs during a lesson or unit, so that teachers can modify their teaching or students can modify their learning approach (Popham, 2010). Assessment can be as simple as classroom questioning and discussion with students that indicate their understanding of the material. Peer- and self-assessment can also serve a formative purpose by enlisting students as controllers of their own learning, while giving the teacher important assessment data regarding comprehension of student learning (Black & William, 2009). Practice during class might offer an opportunity for formative assessment by providing evidence of achievement that can be interpreted by teachers to inform immediate decision-making regarding the next or future steps in learning.

Summative assessment is a familiar kind of evaluation, usually at the end of a unit or, lesson, or course, to determine what students have learned (Chappuis & Stiggens, 2016). Often, for individual students, the result is a grade or scored test. For school leaders, the advantage of summative assessment is that data can be broken down or disaggregated into critical and categorical information that can inform decision-making. This information can enhance student learning by determining the direction of the curriculum and instruction. For example, a disaggregated summative assessment might show that a large number of students needs work in sentence structure, while showing that their mastery of vocabulary meets or exceeds state averages. In the public school sector, summative assessment data are also often used for district, school, and teacher accountability. This is what is meant by the term “high-stakes” testing (Mandinach, 2012).

Often, the use of assessment data supplied by a living curriculum map (Jacobs, 2004) is a crucial piece of the curriculum driving effort, and helps to complete the circle of informed

curricular decision-making. A curriculum map (Jacobs, 2004) is a crucial piece in the use of assessment data, because it provides information about what a teacher is actually teaching. Without knowing this, curricular growth cannot be informed. A school's curriculum cannot grow efficiently if the school does not know the point from which it is growing (Jacobs, 2004). Paper-based curriculum maps require a tremendous amount of effort on the part of department personnel, and are often employed as much from a desire to satisfy school administrators and accreditation teams as they are a purposeful effort to fully describe the taught curriculum and to aid in its growth. Often they require a large amount of time, become obsolete quickly, and are not utilized extensively until the next accreditation or district review. Aligning a curriculum map with what is *really* taught on a unit-by-unit, week-to-week basis is rarely done and, because these produce large amounts of assessment data, often there is not enough time to disaggregate the data, which may be a factor that hinders the use of assessment data to inform curricular decision-making. To faculty without a fully informed and committed administration, it can seem like a crushing amount of information to push around in an effort to find a way forward through the labyrinth of effective curricular growth (Marsh & Farrell, 2014). With the emphasis overwhelmingly placed on summative assessment results, other assessment data sources, such as curricular mapping, are often overlooked or performed in a manner that is not as helpful as it might be.

Additionally, the advent of new classroom technologies such as 1:1 laptop or iPad classrooms has provided our best teachers with real-time assessment data that give the instructors information allowing the daily curriculum in their classrooms to turn on a dime. According to Mandinach (2012), faculty indicate that they want more assessment data that will allow them to decide exactly what they need to do the next day and how they will teach it. They see the power

in quick data acquisition, disaggregation, and use that can make the passionate teacher more effective almost immediately. Once factors that may hinder the use of assessment data are identified and nullified to the greatest extent possible, caring, motivated, and dedicated educators may find their effectiveness greatly increased.

School Leaders

School leaders must make numerous decisions in order to keep their schools operating successfully. Results from assessment data assist with curricular, instructional, and even evaluative decisions that school leaders face (Popham, 2010). School administrators have an obligation to address the academic needs of students; to do so, research indicates they must provide teachers and department chairs with the tools and encouragement they need to collaborate and change the learning culture of the school (Marzano, 2003). In that way, school leaders set the culture of the school, especially as it relates to the use of assessment data.

Catholic school leaders also have an obligation to live the mission of their school while raising the academic abilities of students. Leaders are responsible for preparing students academically and spiritually for post-secondary education and life. Yet the process of using assessment data to inform curricular decisions without a governmental mandate for high-stakes assessment appears tricky at best within Catholic schools. Other factors may hinder the use of assessment data as well. To the extent that they exist, it is important to move beyond challenges that may be hindering curricular decision-making by principals, curriculum directors, department chairs, and individual faculty members (Lachat & Smith, 2005). To address these challenges, school leaders responsible for making curricular decisions must be engaged to uncover the process they use to compile and disaggregate formative and summative assessment data. School leaders must then place the data into the hands of those departments and instructors in an

understandable way. Presenting and comparing assessment data in a defined and accessible way, with a clear awareness at the departmental level of what is taught in each classroom every week, can provide opportunities for teachers to work toward a living curriculum through collaboration.

Leaders in modern Catholic schools must find new ways to oversee the acquisition, disaggregation, and use of assessment data, while stimulating and nurturing departmental faculty to take on the role of informed curricular decision-makers. Building a culture of trust and collaboration between faculty, department chairs, and administrators is dependent on an honest and non-threatening approach to the use of assessment data.

Statement of the Problem

Catholic high schools, unlike the public school system, which adheres to a different process, are not required to make assessment data public. Nor are Catholic high schools typically required to adhere to a specifically set curriculum in content areas other than religion. Taken together, there is a lack of research describing how Catholic high schools utilize assessment data to drive curricular decisions. With only a few exceptions (such as the Entry Level Mathematics (ELM) and the English Placement (EPT) tests), Catholic school assessment data are not made public to anyone other than school leaders. Because of this culture among Catholic high schools, it is difficult to know how data are used to drive curricular decisions, which ultimately affects what students are learning.

As a Catholic school leader, I am interested in exploring this issue to contribute to the body of research on the use of assessment data for Catholic high school curricular decision-making. In my lived experience as both a principal and chair of numerous accreditation visits, I have witnessed principals and administrators often claim academic success via the use of assessment data to inform decision-making in their academic departments. Out of the seven basic

concepts of the WCEA/WASC accreditation protocol (Western Catholic Educational Association, 2013), two concepts deal with assessment and disaggregation, asking specifically the extent to which assessment data are collected, disaggregated, and analyzed. The protocol further asks if the assessment data are analyzed and used as a basis for student-learning decisions (Western Catholic Educational Association, 2013). When asked about how those data specifically informed decisions, and how assessment data are accessed, disaggregated, and acted upon in a systematic way, the WCEA/WASC accreditation conversation often turns to a general description of the use of assessment data. Based on my extensive accreditation experiences, I conclude that there is a problem or a breakdown in the use of assessment data in Catholic schools. While principals tend to indicate that they view the data as important, they appear to be unsure how to use the data to inform curricular change with regard to the culture of the school, and hence the current study attempts to study this problem through a systematic inquiry of Catholic school principals. While I have noticed these things in my own experience as a Catholic school leader, the reality is that public schools also suffer from similar issues related to assessment data. According to Reeves and Burt (2006), standardized test scores are typically utilized in a general way, and often content-specific data are neither disaggregated nor aligned to curricular growth. As such, all school leaders face the problem of using assessment data in ways that inform curricular decisions.

A lack of research of how Catholic schools utilize assessment data to inform curricular decisions is a problem for schools, because without this knowledge Catholic schools cannot learn from one another about utilizing assessment data to make decisions to improve student achievement. Accurate and targeted assessment data, when fully acquired and disaggregated, are tools that Catholic schools have to improve instruction in a fully informed and directional

process. The goal of such an endeavor is to lead to improved student achievement. The problem, in many cases, is that data assessment, while collected locally and nationally, is often not used efficiently. The current study intends to uncover some of the factors that hinder the use of assessment data, which may include any number of obstacles facing principals and academic personnel. Some principals in public schools complain that they just do not have the time, personnel, and often, knowledge, to fully make use of the data they have (Firestone & González, 2007). Principals express concerns that they do not have the training necessary to effectively use data, and are afraid that assessment data analysis will require math skills that they do not have or analysis skills that they have not acquired (Reeves & Burt, 2006). While there are most likely numerous similarities, the isolation of possible factors facing Catholic school principals should be addressed.

An additional problem facing Catholic school leaders is, along with formative and summative assessment data and other forms of measurement, a tremendous range of data available to schools. Despite the very best of intentions, often principals and faculties who want to use assessment data for informed decision-making did not know where to begin, what data to use, or how to put the data together into cohesive, understandable pieces (Lachat & Smith, 2005). During informal conversations with principals at accreditation visits, I found that, while professional, they were often defensive when faced with the realities of assessment data use at their schools, and often dismissive about the importance of doing more with the data they had. It is rare that they admitted that they and their staff did not really have enough experience to break down and use data from summative or formative assessment sources. While they submitted that they were using assessment data well, their descriptions brought forth a less-than-complete use of what they had. Other studies found that principals often assumed that assessment data were

distracting and less than important in their efforts to grow academically (Kowalski & Lasley, 2009). As such, another issue facing schools may be personal resistance to engaging the data to make decisions.

While each school culture was unique, many may have combined—to different degrees, two types of cultures that may have affected the use of assessment data. These are cultures of accountability and cultures of organizational learning. Many teachers feared that they were working in a culture of accountability, and that data were used primarily to evaluate their job performance (Knapp, Swinnerton, Copland, & Monpas-Huber, 2006). A school leader who promotes an exploration of student achievement through a non-threatening use of assessment data in a culture of learning, may overcome this (Firestone & González, 2007). Of the many potential factors facing Catholic school leaders who wish to facilitate the use of assessment data to inform their schools' curricular decision-making, a culture of organizational learning over accountability may be easier to accomplish in a Catholic school without the burden of high-stakes testing.

Research Question

By interviewing and surveying school leaders about their use of data, this study asked the following research question: What are the perceptions of principals in Catholic high schools about the use of assessment data in their schools? This over-arching research question was specifically addressed by looking closely at the following two subquestions:

1. How are Catholic Archdiocesan principals in Los Angeles currently using assessment data in their schools to inform curricular and pedagogical decisions?
2. What are the factors that affect the use of assessment data to inform curricular decision-making in Catholic high schools?

For the purpose of this dissertation, assessment data were operationalized to refer to any data that a Catholic high school might use to measure student learning of specific content standards. Examples include formative and summative assessments, such as teacher-created tests or quizzes, or standardized tests, such as the PSAT. Isolating the current use of assessment data, along with factors that may hinder an informed data decision-making process, are the first steps in a process that may allow administrators and faculty to make progress, leading to improved student achievement.

Method

To address the research questions, this mixed-method study focused on the school leaders of all of the Catholic high schools owned and operated by the Archdiocese of Los Angeles. The study utilized a quantitative survey to gather information designed to measure perceptions of Catholic high school principals in the Archdiocese of Los Angeles. Specifically, the survey attempted to capture processes utilized in high schools to use assessment data for informed decision-making, along with perceptions of the benefits and challenges related to the use of assessment data. Subsequent interviews of principals working in Catholic high schools owned and operated by the Los Angeles Archdiocese constituted the qualitative aspect of this study. The qualitative data served to illuminate the patterns found by the survey related to the current use of data and the factors associated with using data. Principals were purposefully selected from varying school sizes, to provide demographic variety about how different schools might have different processes related to using assessment data.

Purpose of the Study

The purpose of this study was to identify the perceptions of principals about the use of assessment data, by determining what Catholic high school principals are currently doing with

data at their schools. An additional purpose of the study was to uncover the factors that affect the use of assessment data to inform curricular decision-making in Catholic schools in the Archdiocese of Los Angeles. In line with the research emphasizing the essential role of the school leader, the focus of the current study is on the perceptions of the principals of the Archdiocesan high schools. Using assessment data in ways that lead to good academic decision-making must be performed in a school culture that values assessment data. For this to happen, research highlights that it is crucial that the principal creates an environment that values data and the practice of using the assessment data (Darling-Hammond & Friedlander, 2008).

Principals in today's Archdiocesan high schools are challenged by a variety of nonacademic tasks, such as marketing and fundraising, to run a successful school. Yet, quality curricular decision-making requires a clear understanding of the skills necessary to analyze and interpret data so those decisions are fully informed (Reeves & Burt, 2006). For assessment data to be as functional as possible and lead to improved student achievement, they must be relevant and used by principals who have the ability to leverage the best use of that data by teachers (Ackley, 2001).

Conceptual Framework

Marzano, Waters, and McNulty (2005) isolated 21 responsibilities, or "categories of behaviors" of principals that are associated with raising student achievement in a meta-analysis. They detailed responsibilities, describing the successful principal as a change agent, collaborator, and visible presence driving student achievement. Research over the past few decades overwhelmingly has shown that effective schools, led by effective leaders, have such a tremendous impact on student achievement that they can overcome the effects of the personal backgrounds of their students (Marzano, 2003).

While such qualities in a leader are clearly linked to student achievement, a framework outlining how leaders can encourage the use of assessment data to drive decisions in schools may be helpful to encourage actual changes in practice. Borrowing from literature in the business world about effective leaders, Mandinach, Honey and Light (2006) refined a framework detailing the process of data-informed decision-making.

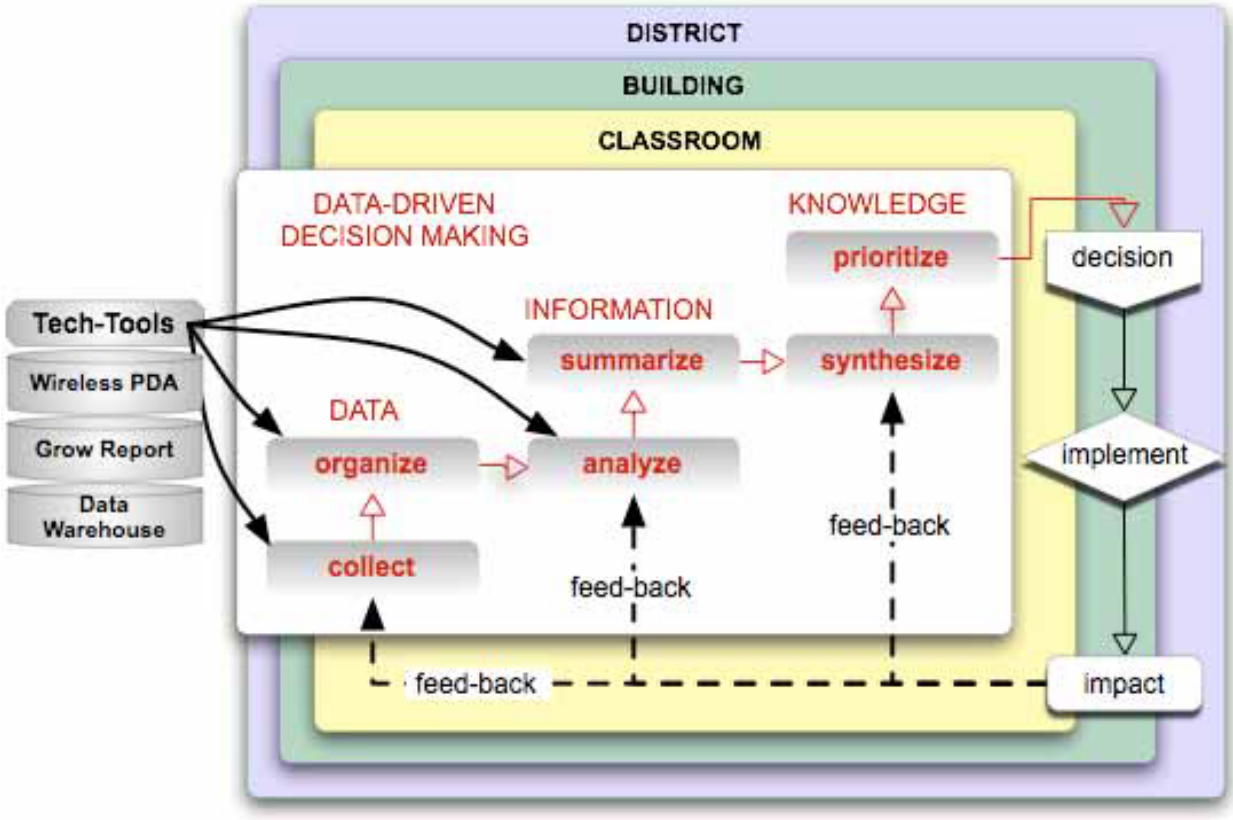

Figure 1. Mandinach's Framework for data-driven decision-making.

This framework has been refined over the years, and was originally based on the work of Ackoff (1989), and then Drucker (1989), and then further refined in 2006 by Mandinach, Honey, and Light (see Figure 1), who applied the framework to educational data. While the key steps of the framework have remained consistent from its inception nearly 30 years ago, I updated the data sources to reflect what is currently available in schools today. The framework in Figure 2 uses examples of data sources based on current-day technology, which were adjusted for the

purposes of this study. While adapted from Mandinach et al., this framework includes today's sources of data available to Catholic high schools (i.e., assessment, curriculum map, classroom data, and Learning Management System data). The process stages of the framework remain the same in Figure 2 (i.e., data, information, knowledge), and are the key aspects of Mandinach's original framework, where any data source can be applied.

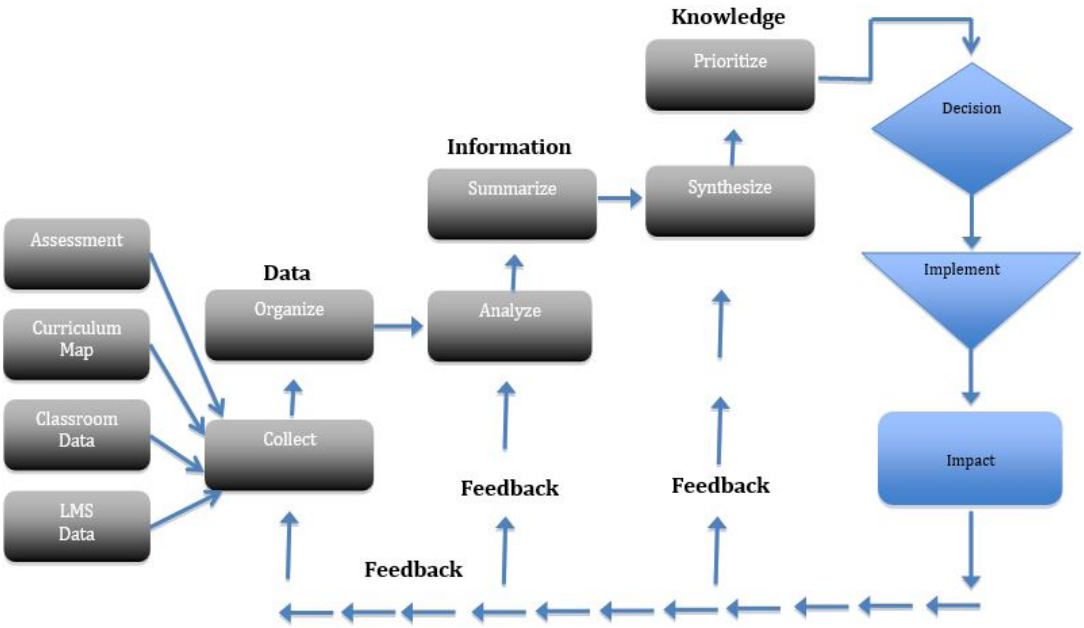

Figure 2. Adapted Theoretical Framework for the use of assessment data.

This conceptual framework, which explains a process for data-informed decision-making, is appropriate for the current study because it provides a lens to view a school's approach to curricular decision-making using technologically appropriate data sources. Examples of data sources in this adapted framework are "Assessment," "Curriculum Map," "Classroom Data," and "Learning Management System" ("LMS"). There are, of course, any number of sources of data that could appropriately be used.

In this framework, data sources available to schools leading to informed decision-making constitute a continuum in which *data*, which have no meaning in and of themselves, are given

meaning and become *information* by connecting to a context, allowing administrators and teachers to comprehend and organize those data. This information does not inform or imply curricular direction, but as the information that is considered important is collected, it becomes *knowledge* and is used to inform future action. In this framework, the ability of school leaders to link assessment data with concurrent instruction, and then decide upon action (i.e., future teaching techniques and content) is viewed as the result of a logical progression from raw data that evolves into usable knowledge (Mandinach et al, 2006). As such, this framework is helpful for Catholic high school principals to review the data processes in their schools.

Specifically, the framework was applied to the current study and informed the items that were included in the survey to measure the current processes in Catholic high schools related to utilizing assessment data. For example, several survey items ask about Learning Management Systems, curriculum maps, and the analysis of data, which are all highlighted in the framework. The interview items were also informed by the framework. Specifically, principals were asked to share how their schools used data to make decisions, essentially describing their processes as well as their perceptions of the benefits and challenges associated with those processes. Finally, the framework offers a clear way to examine the findings from the survey and interviews, identifying places where breakdowns might be occurring in the process of making meaning out of data.

Limitations and Delimitations

While the current study has the potential to alleviate the lack of research on the use of assessment data in Catholic high schools, there are limitations to consider. The number of principals invited to complete the survey in this study was delimited to principals of Archdiocesan high schools in Los Angeles. As such, findings do not generalize to principals of

other Catholic high schools in the Los Angeles area, nor to schools outside of the Los Angeles area. Rather, findings are limited to how data are used in Los Angeles Catholic Archdiocesan high schools. To assist with the range of experiences that are likely to be present within this singular context, interviewed principals were purposefully selected to represent a large school, a medium-sized school, and a smaller school, to maximize representation from different school contexts within Los Angeles Archdiocesan schools.

Another limiting factor is that principals may have been tempted to alter their responses, in particular by placing the most favorable light on their individual schools or their schools' practices with regard to assessment data. I am a fellow principal of an Archdiocesan high school and personally know all of the respondents. As such, my dual role as researcher and fellow practitioner may have affected the honesty of responses obtained by participants. Additionally, given the nature of Catholic schools and competition for enrollment, if other principals view my school as a competitor, they may have been hesitant to be completely forthcoming. To mitigate these limitations, the survey was completely anonymous. Additionally, to address this concern, I purposefully selected principals whom I knew would be willing to speak openly with me about their schools and the use of assessment data for the interviews.

Positionality and Assumptions

I have served as a high school principal in the Archdiocese of Los Angeles for the past 18 years. I have also been very active in serving as a Visiting Committee Chair of 17 WCEA and WASC accreditations. As such, my lengthy professional experience has contributed to my positionality, and I hold several assumptions about the factors that affect the use of assessment data in Catholic schools. I have witnessed Catholic high schools struggle to describe how they disaggregate and use assessment data to inform curricular decisions, and my assumptions are that

there are more negative factors affecting the use of assessment data than positive ones. The wording of the study implies that there are negative factors that hinder rather than facilitate the use of data. To attempt to compensate for this limitation, I included items in the survey that spoke about the benefits of using data. I also attempted to ask open-ended questions in the interviews to allow principals to describe freely their processes of using assessment data in their schools.

Significance of the Study

Because there is a lack of research on the use of assessment data in Catholic schools, the current study's findings may provide information for Catholic schools in the Archdiocese of Los Angeles and elsewhere. Teachers may also benefit from the findings by addressing curricular and pedagogical decisions through the lens of data, ultimately benefiting students. Taken together, this study is significant in that it is a call to action for Catholic high school principals to engage in accountability and leadership for social justice.

Catholic Schools in Los Angeles

This study provides additional information to the field of Catholic education in the Archdiocese of Los Angeles by determining factors affecting the use of assessment data to inform curricular decision-making by Archdiocesan high schools. Research is clear that high school departments require a well-defined process of data acquisition, disaggregation, and use to fully meet student academic needs (Kowalski & Lasley, 2009). With principals and departments using a distinct process of data-centered methods, schools may be provided with a clearly defined and effective path to successful academic growth (Bambrick-Santoyo, 2010).

Faculty

Taking the assessment data, breaking it down, and then using it to inform curricular and instructional decision-making take a great deal of time, organization, and skill (Ronka, Lachat, Slaughter & Meltzer, 2009). The result is that teachers and administrators felt that they did not have the preparation to analyze and use the data to the benefit of student achievement (Ronka et al., 2009). The current study benefits faculty by highlighting the challenges of using assessment data to inform decisions they make related to the curriculum and their instruction. Professional development for faculty, along with administrative-level personnel dedicated to supporting departments and teachers in their attempt to align assessment data results with what is taught, is crucial for any school to fully use data to drive curricular change.

Students

Traditionally serving students from low socioeconomic families, Catholic high schools in the Archdiocese of Los Angeles have an obligation to provide the highest quality data-informed decision-making possible, in order to fully serve a basic mission of Catholic social thought: To have a preferential option for the poor. As such, this study may ultimately benefit students by revealing how leaders can improve informed curricular decision-making, grounded in assessment data. Such findings might contribute to concrete changes in Catholic high schools that improve instruction and learning.

Accountability

While a culture of organizational learning is important in schools interested in improving student achievement, accountability is also important in any profession. High-stakes testing has played an important role in the public sector, and accreditation and competitive requirements in all schools have brought accountability to the forefront of administrative responsibility. The need

for principals to fully grasp the details of data-informed decision-making and collaborative curricular growth has never been more important (Marzano et al., 2005). Principals in Catholic schools have a mission-driven obligation to do everything possible to drive student achievement. While principals, department chairs, and teachers often face challenges related to managing and acting on assessment data to inform their decision-making, this may be a symptom of deeper factors at play, such as fear related to using data in evaluative ways. These factors render more professional development an incomplete solution. As such, in addition to professional development, school leaders must work to create a culture of learning over a culture of accountability.

Social Justice

Traditionally, within the Catholic education sector, Archdiocesan schools have often been the one educational outlet to best service historically underserved and disenfranchised populations (Litton, Martin, Higareda & Mendoza, 2010). High schools that are owned and operated by the Archdiocese of Los Angeles have at their core a mission to serve all students, especially children living in poverty (Los Angeles Archdiocesan School Handbook, 2010). The Catholic Education Foundation (Catholic Education Foundation, 2016) supports thousands of disadvantaged children who are served by Catholic elementary and high schools (Litton et al., 2010). For example, in the Archdiocese of Los Angeles there are over 50 Catholic high schools. Twenty-six of those high schools are owned and operated by the Archdiocese rather than by a religious order or board of directors/trustees. Usually, high schools owned by the Archdiocese of Los Angeles charge a lower tuition, and have the support of the Catholic Education Foundation to help serve children from disadvantaged backgrounds. In pursuit of this mission, Catholic

schools share with public schools the goal of eliminating educational inequities by bringing an effective education to students who are marginalized.

For Catholic school educators, attention to the best use of assessment data goes well beyond providing the best education possible. For teachers and administrators entrusted with Catholic school students, it is a moral and spiritual imperative. Included in a speech delivered to priests and other religious in 2008, Pope Benedict XVI made clear that Catholic schools and those who work in them, have a special responsibility, not beyond academics, but in the full embrace of academics viewed through the lens of the Catholic faith. He said: "Do not abandon the school apostolate; indeed, renew your commitment to schools especially those in poorer areas." He continued to describe Catholic schools as "an outstanding apostolate of hope" (Pope Benedict XVI, 2008). Interestingly, one week after Pope Benedict's address, President George W. Bush delivered a speech at the White House Summit on Inner-City and Faith-Based Schools in which he emphasized that the alarming loss of inner-city faith-based schools through ever-increasing closures deprived thousands of American children of the future they would otherwise enjoy if those schools were able to stay open (DeFiore, Convey, & Schuttloffel, 2009).

Playing an important role in efforts to eliminate educational inequities, Catholic school leaders often meet resistance in their attempts to address their schools' social justice responsibility by addressing factors that may be hindering school change. Strategies that advance social justice in the school are often strategies that are utilized to improve student achievement, including the use of data (Theoharis, 2007).

Definition of Terms

The framework developed by Mandinach et al. in 2006 uses the following definitions, adopted in this study.

Assessment Data, for the purpose of this dissertation*,* refer to any data that a Catholic high school might use to measure student learning of specific content standards. Examples include formative and summative assessments, such as teacher-created tests or quizzes, or standardized tests, such as the PSAT.

Data exist in a raw state. They do not have meaning in and of themselves, and therefore can exist in any form, usable or not. Whether or not data become information depends on the understanding of the person looking at the data.

Information is data that are given meaning when connected to a context. Information is data used to comprehend and organize our environment, unveiling an understanding of relations between data and context.; alone, however, it does not carry any implications for future action.

Knowledge is the collection of information deemed useful, and eventually used to guide action. Knowledge is created through a sequential process. In relation to test information, the teacher's ability to see connections between students' scores on different item-skills analysis and classroom instruction, and then act on these connections, represents knowledge (Mandinach et al., 2006).

Summary of the Study

In many environments, administrators and faculties are fearful of assessment data. Funding in public schools, determined by data-driven accountability, has created a reliance on assessment data, not to drive a finely tuned and versatile curriculum, but to show that a school is deserving of increased resources. In Catholic high schools, where increased resources are based on enrollment—driven by marketing skills as much as academic excellence, an environment where the learning atmosphere reflects growth toward improved learning without consequence-driven anxiety—data use would seem to be a much easier sell to school administration and

faculty; however, acquiring data, disaggregating and using it to inform curricular decision-making has not yet been examined within the context of Los Angeles Archdiocesan high schools.

While there are similarities in instruction between public and Catholic high schools, there are most likely differences in the factors affecting the use of assessment data in Archdiocesan Catholic high schools compared to public high schools. This study attempted to define factors that affect Catholic high schools in the Archdiocese of Los Angeles, and to make suggestions that may lead to improved data usage and learning for Catholic high school students.

The dissertation is organized in five chapters. Chapter 1 provided an overview of the problem, introduced the conceptual framework, research questions and method, and highlighted the limitations of the study. Chapter 2 provides an overview of the literature informing this study, and Chapter 3 details the methods employed in the study. Chapter 4 presents the data and findings, and Chapter 5 discusses the findings.

CHAPTER 2

LITERATURE REVIEW

This study investigated the perceptions of principals of Los Angeles Archdiocesan Catholic high schools related to the use of assessment data to drive curricular decision-making. The study also examined their perceptions of the benefits of using data and the challenges that schools face in this process. Research related to using assessment data to inform curricular decisions suggests a strong link to student learning and achievement. In the Catholic school context, specifically, there is very little research about how these processes occur. The following literature review will situate the need for examining assessment data in relation to curricular decisions and briefly review the history of Catholic schools. Then literature on whether Catholic schools produce strong academic outcomes will be reviewed and discussed. The use of data, specifically in Catholic schools, will then be presented, followed by the roles of faculty and school leaders in the process of using data. There is very little research on data use in Catholic schools; as such, literature on issues faced by public schools is reviewed to ground the purpose of the current study, which is to examine whether such factors are also found in Catholic Archdiocesan high schools.

Why Data Matter

Data are the lifeblood of curricular growth and improvement of student learning. However, according to Mandinach (2012), the collection of assessment data to inform decision making must be systematized and based upon data in addition to experience. While it may be tempting for teachers and school leaders to use intuition to make curricular decisions, the culture of education requires schools to demonstrate the intentional efforts made to formally disaggregate data (Hamilton, Halverson, Jackson, Mandinach, Supovitz, & Wayman 2009).

Effective teachers determine their students' growth; they observe, assess, listen, and examine their students' production. They put this together in their own mind and determine their next approach to the material. While this may be done in informal and subjective ways, today's culture of accountability requires teachers to formalize these practices and show how data informed their pedagogical and curricular decisions. In addition, a variety of data sources are now available to educators, which provide teachers and department chairs ways of being explicit about how they monitor growth in student learning and provide instructional approaches to individual student need (Mandinach, 2012).

Unfortunately, student data are not always analyzed in ways to inform instructional approaches. For instance, formative assessments, a crucial learning building block, utilizing benchmark and other assessments that predict student performance, can impact instructional practices and help students learn (Popham, 2008). They are often treated as summative assessment by teachers and administrators, who use these scores to record student progress rather than as a first step in the discovery process of finding concepts not yet mastered by students. Often these scores are not used to address instructional practices or decisions about re-teaching unlearned concepts to positively impact student progress (Popham, 2008). According to Creighton (2007), data that are collected but not fully analyzed in a way that provides educators with the information needed to make course corrections are meaningless. Unless data collection purposefully attempts to identify students who show progress and academic development, and identify students not making progress, then, according to Creighton (2007), it is not meaningful to even collect the data. Data should be used to identify reasons why a student is struggling in an effort to improve student learning (Creighton, 2007).

In other words, the importance of examining assessment data is based on the fact that assessment data tell educators where students are in the process of learning. Assessment data are ultimately meant to enhance student learning. This fact has contributed to federal policies, such as the No Child Left Behind Act (NCLB) of 2001, that require testing and impose accountability on public schools. This Act intended to establish that all students achieve necessary learning goals and that school districts are held accountable for every student, reaching 100% proficiency within 12 years as measured by standardized tests assessing academic goals (NCLB, 2002). This Act, along with the Every Student Succeeds Act (ESSA) of 2015 (ABC-Clio, 2017), attempted to close gaps in accomplishment and provide all children with a quality, equitable education by mandating accountability for reaching learning goals. The more recent ESSA in 2015, also addressed controversial issues such as over-testing and gave local districts and states more choice in how student achievement is addressed using standardized testing (ABC-Clio, 2017).

While public education is highly focused on assessment data as a result of federal statute, standards, and state accountability systems, Catholic high schools have greater leeway in ascertaining ways to determine the effectiveness of their educational programs. In fact, Catholic high schools are not required to follow a set curriculum, nor disclose assessment results with the public. While the sovereign freedom to find unique and innovative measures of educational effectiveness, unfettered by regulation, might be welcomed by some, the lack of an enforced mandate may contribute to confusion as to what is actually being done with assessment data in Catholic schools. As competition increases across public, charter, and secular private schools, related to school choice options for parents, Catholic schools may need to consider making assessment data public to showcase their strengths. To do so, however, Catholic schools must be able to identify how they use assessment data to drive decision-making.

Catholic Schools

Brief History of Catholic Schools

Catholic schools have a rich tradition in the history of education in the United States. From their beginning, Catholic schools have served a diverse immigrant population striving to acculturate, thrive, and prosper in their newly chosen country. As an institution of learning, Catholic school's place in American educational history began in colonial times and is unique as a system developed separately from the governmental public school system mainly for Catholic immigrants. It still serves this purpose (Bryk, Lee & Holland, 2009).

Catholic schools, staffed with religious and lay personnel from the same cultural, ethnic makeup, and community as the parish children populating the school, allowed for this national assimilation, but in a more comfortable way than would otherwise have been possible (Ryan, 1963). Catholic schools continue to serve recent immigrant social mobility within the context of the Catholic Church through dedication to serving the poor and recently arrived within the local parish (Miller, 2013).

Throughout the history of Catholic secondary education, a major goal of Catholic secondary schools has been to prepare youth for professional pursuits in life (Bryk et al., 2009). Catholic colleges instituted rigorous admissions requirements, including mandatory course requirements (much like today's University of California A-G course requirements) (University of California, n.d.), to admit only those students from Catholic schools that excelled academically. The response in secondary school curriculum at the diocesan level was to make those academic programs more rigorous as well. This was a great service to the immigrant population enrolled in those schools.

Los Angeles

The Archdiocese of Los Angeles Department of Catholic Schools contains 26 Catholic High Schools. Twenty-one are owned and operated by the Archdiocese of Los Angeles with no connection to an individual Catholic parish church. The remaining five are parish schools and are part of the parish community of their church, with the Pastor of that church adding a layer of governance between the principal and the Department of Catholic Schools. There is a centralized administrative office with supervisors for Catholic high schools within the Department of Catholic Schools that supports the school principals. Each of these schools is site-managed with their own enrollment, income, and staffing challenges (Archdiocese of Los Angeles Catholic Schools, 2016). Although some highly impacted high schools receive subsidies, Archdiocesan high schools are expected to be fully self-supporting without assistance from the Archdiocesan Department of Catholic Schools. As such, every aspect of a school's life is impacted by the need for funds. With that, the financial structure of Catholic schools in the Archdiocese of Los Angeles is such that they rely on tuition dollars from families to operate. While some schools may also receive financial support from foundations and some families might receive tuition support from philanthropic groups, by and large, tuition funds are used to operate Catholic schools (Goldschmidt & Walsh, 2011). Nationwide, many Catholic schools are closing due to declining enrollment, mostly concentrated in urban, inner city and rural areas (McDonald & Schultz, 2014). In Los Angeles, urban schools face the hardest enrollment and financial challenges. As a result, the Church is highly challenged to fully serve the students who are the most vulnerable and in need of quality education.

Catholic Schools: A Better Education?

Catholic high schools have relied upon a perception that they are academically superior (Kallemeyn, 2013). Once that perception disappears—or in any way reliably questioned—part of the reasoning behind spending thousands of dollars per year for a Catholic education declines precipitously. Still, there is a great deal of research suggesting a positive Catholic school effect (Bryk et al., 1993; Coleman & Hoffer, 1987; Grogger & Neal, 2000; Jeynes, 2002). Research centering on the premise that Catholic schools may provide better education than public schools illustrates the challenge that empirical social scientists have when they are distinguishing between correlation and causality. The variables are so varied and plentiful it is difficult to determine whether differences between Catholic and public schools are caused by the quality of the schools or by other factors not related to the school itself—such as unobserved student and family characteristics (Altonji, Elder, & Taber, 2002). For example, some research, controlling for the family dynamic of wealth and matching students in Catholic and public schools, has concluded that SAT math scores are higher for public school students, while Catholic secondary student SAT reading scores are higher than public school students (Huchting et al., 2014). However, it is important to note that the percentage of Catholic secondary students who take the SAT is far greater in Los Angeles Archdiocesan secondary schools than it is in local public schools (Huchting et al., 2014). Because students who take the SAT are, by the very nature of taking the exam, expressing interest in attending college, it may be that such comparisons do not extend to all students; rather these findings may be linked only to motivated students interested in college. Some researchers have concluded that the positive results of Catholic high school attendance may be due to family characteristics, rather than the quality of instruction (Goldberger & Cain, 1982). Other studies have attempted to control for family characteristics

(Grogger & Neal, 2000). Even so, students from Catholic schools historically score higher than their public school counterparts on standardized tests and other formative and summative measurements (LA Catholic Schools, 2015). As the debate about whether Catholic schools provides a better education for students continues, a study identifying the factors affecting the use of assessment data in Catholic high schools may provide school leaders with information that assists with efforts to create the best educational programs for students possible.

Using Data in Schools

Educators have used assessment data to inform curricular decisions for decades. The formal use of assessments by school administrators to determine the effectiveness of teaching began as far back as 1949 and, by the 1950s, when school districts began to organize and coalesce, assessments were used to some extent to inform curricular direction. The 1960s saw the use of assessment to differentiate instruction brought to significant popularity (Gordon & Bridglall, 2007).

Long before the advent of NCLB (2002) and the reauthorization of the Elementary and Secondary Education Act (ESEA) in 2012, there were significant discussions and debates about data driven decision-making (LaFee, 2002). For example, there was tremendous controversy during the 1970s over the use of measurement data to improve instruction and planning (Picciano, 2006). During the 1980s, there were several conversations about the use of data in response to mandates requiring the use of statewide assessments to propel academic decision-making within each school site. After the publication of *A Nation at Risk* in 1983, a publication that galvanized efforts to reform education in the United States, secondary school curricula became increasingly rigorous and focused on accountability. Congress enacted legislation establishing the National Education Standards and Improvement Council (NESIC), whose

purview was to review and certify *voluntary* state education standards that began in response (Shepard, 1991). Later, as the push for school strategic planning during the 1990s demonstrated, an ongoing conversation began about the use of assessment data to inform curricular growth (Reeves & Burt, 2006).

The level of accountability required by NCLB hastened any data-driven decision-making programs already in development and compelled school districts to fully implement the requirements of the law (Bernhardt, 2003; Streifer, 2002). As a result of a robust climate of state and federal accountability for student achievement, data-driven decision-making began to move into a new process that was intended to methodically measure progress, set and act upon goals, and increase the quality of instruction and curriculum (Bernhardt, 2003; Mandinach et al., 2006). Before NCLB took effect, a number of states, such as California, Colorado, Iowa and Maryland, already required the use of data-driven decision-making (Armstrong & Anthes, 2001). As a result of the emphasis placed on data-driven decision-making, a large body of research emerged addressing the factors that affect the public school environment in adhering to the requirement.

Catholic School Use of Data

Because Catholic schools in the United States rely on tuition dollars and are considered part of the private education sector, the effect of public legislation such as NCLB did not impact Catholic schools related to assessment in the same way that it impacted public schools. Still, Catholic high schools typically use a variety of standardized assessments, such as the Comprehensive Test of Basic Skills (CTBS), PSAT, and SAT and, beginning in 2016, the PSAT 9/10 test from the College Board (a PSAT test for freshmen and sophomores).

The College Board also disaggregates the data for educators. For example, PSAT results are now disaggregated and sent to schools to use to inform their curricular approaches. These

results are sent using the Summary of Answers and Skills (SAOS). For this reason, it has become less time intensive to take data from tests like the PSAT and apply those findings to what is taught in the classroom. However, without the pressure of state and federal mandates regarding high stakes testing, Catholic schools have responded with a lower level of motivation toward the use of assessment data to drive curricular decision-making (Holter & Frabutt, 2013).

Because very little research exists specific to Catholic high schools, it is unclear as to what extent Catholic schools are using assessment data to inform curricular decisions and the factors that affect curricular decision-making have not yet have been addressed. After a wide search of the literature dating back two decades, a specific attempt to find factors affecting the use of assessment data to inform decision making unique to Catholic schools yielded very little. Even so, the Catholic school principal now is expected to master marketing, enrollment, development, finances, and a variety other aspects of challenges facing today's Catholic school that a public school principal might not face (Holter & Frabutt, 2013). To manage these administrative duties, the Catholic school principal must feel comfortable using assessment data to drive decisions (Armstrong & Anthes, 2001).

Challenges Affecting Data Use

While there are most likely many similarities, Catholic schools do not face the same accountability standards mandated by state and federal policies, that public and charter schools face (Reeves & Burt, 2006). However, the literature on the challenges experienced by public and charter school principals may provide insight for Catholic school principals. This literature addresses challenges related to using assessment data in the public sector (Campbell, 2007; Walker, 2014l; Ikeler, 2010;Tschannen-Moran & Gareis, 2014). Specifically, some areas outlined by literature include:

- Teacher perspective that the use of data may be an accountability system directed at them rather than a tool to inform curricular decision-making and change.
- Experienced teachers may resent and resist the use of measured standards to inform teaching strategies.
- Teachers feel they will lose power to school administration in their choice of instructional strategies.
- Importance of faculty trust in the principal and administration achievement.
- Teacher perception that data collection and disaggregation takes more time than the school will provide.
- Teachers reluctance to take responsibility for student outcomes by separating student performance from their own performance.

According to the research listed above (Campbell, 2007; Ikeler, 2010; Walker, 2015; Campbell, 2007), it is clear that a major challenge related to using assessment data is based on teachers' perceptions of how the data will be used and how they may be affected by the conclusions. The successful use of assessment data to inform curricular decision-making requires a professional level of trust and shared mission between faculty and administration.

Additionally, the relationship between faculty, department chairs, and administration is noted in the literature as important. Certainly, these relationships are complex and filled with day-to-day interactions in which there is significant interdependence. In reality, this complex system of informed decision-making requires that trust between faculty and administration must be present and believed to be present. According to Tschannen-Moran and Gareis (2014), faculty trust in the principal and administration is crucial for success in improved student achievement. Teachers must trust that their own professional interests are protected by the principal if there is

any hope of success in improving student achievement (Tschannen-Moran & Gareis, 2014). Furthermore, leadership behaviors including, collegiality, a sincere concern for the welfare of teachers and their professional concerns, a considerate and helpful approach to interactions, a friendly and approachable demeanor that puts teachers at ease, and an ability to articulate common goals and elicit shared ideas without fear, are consistent with schools that show high student achievement (Tschannen-Moran & Gareis, 2014).

In addition to trusting relationships between faculty and school leaders, research also suggests that teachers may fear that assessment data will be used to compare them to other teachers to determine their effectiveness. According to Ingram, Louis, and Schroeder (2004), there often is disagreement about which data are important or even useful to evaluate teacher effectiveness. Teachers might also feel that positive changes never occur related to assessment data but rather that assessment data will be used to make unfair comparisons. Take the example where teachers feel their job is simply to teach the material mandated by standards or school curriculum, or the example where teachers are able to ignore assessment data because their students have been successful in passing their class each year. Moving beyond those traditional perspectives to the modern notion that teachers should take responsibility for student outcomes is often difficult (Ingram et al. 2004).

For many teachers, particularly veterans, it is uncomfortable to move from a culture of teaching to a culture of learning. Winkler (2002) further highlights the difficulties associated with varying years of experience as a teacher. Faculties, particularly veteran teachers, may see the use of disaggregated data to inform decision-making as an interference with their own professional decision-making ability and power in their own classroom. Along with this perceived loss of power in the classroom, they may see a corresponding increase in paperwork

and detailed examination of assessment data. Other teachers—particularly new and/or inexperienced—may see the opportunity for collaboration within their department in a positive light and as an opportunity to learn and grow as a professional educator (Winkler, 2002). As such, school leaders benefit from recognizing that faculties are not monolithic constructs, but vary within themselves in terms of acceptance of differing learning cultures.

In addition to fears about the data being used in evaluative ways and fears related to a loss of power, teachers know that it will take a considerable amount of time to obtain, organize, and disaggregate data (Roderick, 2012; Walker, 2014). If teachers' perceptions are that their livelihood is heavily based upon the result of test scores, an increased amount of time may be spent just on preparing students for a summative assessment rather than in a rich and varied approach to the curriculum (Long, 2014).

Role of School Leadership in Data-Informed Decision-Making

Based on the research highlighting the challenges related to using assessment data in schools to inform decision-making, it is clear that school leaders who believe that a collaborative culture of using data, free of fears related to job security or performance, may be able to affect student learning positively. In fact, Levin and Datnow (2012) highlight how a collaborative culture with passionate educators, who want to serve their students free of these fears, requires a strong school leader. These school leaders must have strong interpersonal skills and work to establish trust among their faculty. These school leaders must also provide departments and teachers the tools necessary to work together toward a common goal rather than compliance, accountability, or professional competition (Levin & Datnow, 2012).

Interestingly, both principals and teachers need to be adept at the use of assessment data. Principals face the same issues as teachers regarding disaggregation and use of data to inform

curricular directions. Yet, many principals admit that their educational leadership programs did not prepare them to discern which data are necessary or give them the training to engage in effective analysis (Reeves & Burt, 2006). As such, training is needed if schools expect to have effective ways of using assessment data.

Accomplishing this requires resources that may be scarce. The biggest resource needed is time. According to Mandinach (2012), professional development, technology, and training to use the technology that supports assessment data collection and analysis, all equate to time away from the classroom. Teachers also need planning time where they can collaboratively discuss issues facing their students. But, within Los Angeles Archdiocesan high schools, this time is expensive. Every hour off from teaching and in discussion with peers can cost a school 20% or so of a teacher's salary (L.A. Archdiocesan Handbook, 2015). Therefore, it is not enough just to have a vision for the use of data to inform growth. School leaders must create conditions for success, which most likely requires organizing meeting times, setting goals, creating data disaggregation plans, and other structures for data use, all while building a trusting climate of collaboration.

Role of Faculty in Data-Informed Decision-Making

In addition to strong school leaders setting the culture in schools related to using assessment data, teachers play a significant role in process. For example, one crucial aspect of data assessment is curriculum mapping (Jacobs, 2004). Curriculum mapping is an effective and popular way to determine what is being taught in each class. These maps allow teachers and departments to determine their curriculum collaboratively as a learning community, avoiding "top down" curricular decision making by school administrators. By mapping the curriculum, teachers have a clearly defined depiction of what is taught, when it is taught, and for how long.

Mapping also aligns the curriculum to standards, providing a way for specific skills to be analyzed based on each standard. While beneficial for the entire school, mapping the curriculum is usually a school-wide undertaking that requires collaboration from all faculty (Jacobs, 2004). Yet, according to Deprato (2014), the benefits of a map, including knowing what, when, and for how long topics are addressed and aligned to standards, do not negate the fact that these are one of the least popular undertakings in a school. To compensate, new online tools such as *Curriculum Mapper* (Curriculum Technologies, 2016) and *Atlas Rubicon* (Atlas Rubicon, 2015) allow teachers to prepare their map along with their lesson plans to minimize duplicative efforts.

The use of data to inform curricular growth can be threatening to teachers who feel that data are used to judge their progress as instructors. Public school teachers complain that the use of assessment in a high-stakes environment makes instruction more test-driven, resulting in an atmosphere where it is difficult to motivate students with the material (Hunt et al., 2009). Without the weight of high-stakes testing, an advantage that Catholic high schools have is that they are free to be motivated by a clear vision of growth rather than a loss of funding. The vision, of course, is to use data from assessment compared with what is taught in the classroom to chart future curricular direction. Department chairs and teachers can compare areas in need of growth to what is actually taught to alter curriculum. If teachers feel secure that disaggregated assessment results compared to a mapped curriculum are used to determine future curricular direction rather than a threat to their livelihood, a vision of departmental self-determination can be exciting.

It is the educational leader's responsibility to build a culture of trust that allows teachers and school leaders to work together to use assessment data to inform curricular decisions. A leader must understand that his or her success is highly dependent on people and relationships,

and that if an effective culture of academic growth is to flourish, free of vocational fear, the leader must have a clear grasp of what motivates the faculty. While faculties, like all people, are primarily motivated by self-interest, ethics and principles are also an important motivation that can lead to a collective leadership process that can result in a collaborative vision of shared curricular growth (Begley, 2009).

Conceptual Framework

As explained in Chapter 1, because this study examined factors affecting the use of data, a conceptual framework explaining data-informed decision-making in the context of this study is important (see Figure 3, below). This framework provided a way to approach curricular decision-making by using data. It has been refined throughout the years and is based originally on the work of Ackoff (1989). The framework was further refined for educational leadership purposes by Mandinach et al. in 2006. To include current-day examples of data sources, the adapted framework of Mandinach and colleagues is presented in Figure 3. In this framework, data have no stand-alone meaning. Rather, the data become meaningful information only after they are put into context, allowing administrators and teachers to fully comprehend and organize those data leading to well-informed curricular decision-making. In this framework, the ability of school leaders to make decisions linked to assessment data is the result of a logical progression from raw data that evolves into usable knowledge (Mandinach et al., 2006).

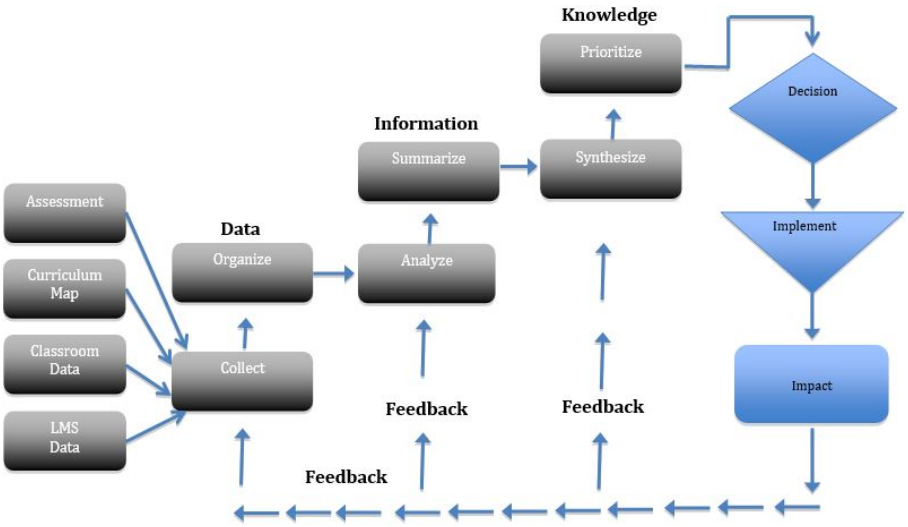

Figure 3. Theoretical framework for the use of assessment data.

There is great utility applying this framework in schools. This framework can be used at the classroom level for teachers to make instructional decisions as well as at the larger school or diocesan level, where principals or superintendents use data to inform their decisions (Long, Rivas, Light, & Mandinach, 2006). This framework was developed based on data collected at the individual teacher level and the administrative level of public schools (Long et al., 2006). As such, the current study will be the first to apply the framework to understanding the use of data to inform decision making among Catholic high schools.

The Current Study

Applying Mandinach's (2006) conceptual framework to Archdiocesan Catholic high schools, this study examined the perceptions of principals related to using assessment data. First, principals received a survey measuring their current processes, and their perceptions of the benefits and challenges of using data. Next, a select group of principals was interviewed to illuminate these processes, benefits, and challenges related to using assessment data to drive decision-making in Catholic high schools. The current project begins to fill the research gap, which currently lacks any investigation of using data among Catholic high school principals. The

literature reviewed in this chapter about challenges facing public and charter school principals provided a guide for this inquiry and serves as a starting point for discovering whether similar issues are faced in the Catholic sector.

CHAPTER 3

METHOD

The purpose of this study was to explore the perceptions of Los Angeles Archdiocesan secondary school principals regarding factors that affect the use of data to inform decision-making in Catholic high schools in Los Angeles. There is minimal research on using data to inform decisions in the Catholic education sector. This chapter will describe the research methodology of the study, explain the sample selection, describe the procedures used in designing the survey and in-person interviews, and provide an explanation of the procedures used to analyze the data.

Research Question

The use of assessment data to inform curricular decision-making is the responsibility and obligation of the principal, who is the academic leader of the Archdiocesan Catholic high school. Done correctly, using assessment data provides Catholic high school leadership the opportunity to give teachers and department chairs the tools and encouragement they need to collaborate and affect the learning environment in their school. To determine factors that might hinder or help this process, Catholic high school principals were interviewed and surveyed about their perceptions related to using assessment data. To accomplish this, the following research question guided this this study: What are the perceptions of principals in Catholic high schools about the use of assessment data in their schools? This over-arching research question was specifically addressed by looking closely at the following two inquiries:

1. How are Catholic Archdiocesan principals in Los Angeles using assessment data currently in their schools to inform curricular and pedagogical decisions?

2. What are the factors that affect the use of assessment data to inform curricular decision-making in Catholic high schools?
3. To answer the research questions, this study utilized a mixed-method research approach. First, a quantitative survey was sent to Archdiocesan principals in Los Angeles. Next, qualitative interviews with three of the twenty-six principals occurred to hear explanations and stories related to using assessment data in Catholic Archdiocesan high schools. Combining the two methods offers a better understanding of the study results than each method alone might be able (Cresswell, 2009). Additionally, the term "assessment data" is operationalized in this study to refer to any data that a Catholic high school might use to measure student learning of specific content standards. For example, formative and summative assessments, such as teacher-created tests or quizzes, or standardized tests, like the PSAT, are all considered "assessment data."

Context

At the time of this study, there were 51 Catholic high schools in the Archdiocese of Los Angeles, with over twenty-five thousand high school students and over two-thousand full-time staff. It is one of the largest high school "districts" in the State of California. When Catholic elementary parish schools are added, there a total of over seventy-eight thousand students. Taken together, this number of students represent the third largest school "system" in California. The Archdiocese of Los Angeles spans 150 miles from end to end, over 10,000 square miles and three counties: Los Angeles, Ventura, and Santa Barbara. Twenty-one of those schools are not associated with a specific Catholic Parish or religious order, but are owned and operated by the Archdiocese of Los Angeles. In addition, there are five Catholic high schools associated with a

specific Catholic Parish. The other twenty-five are owned by religious orders or by Boards of Directors or Trustees and those schools, owned by entities other than the Archdiocese of Los Angeles, tend to have a more affluent clientele and greater access to resources.

The current study focused on high schools owned and operated by the Archdiocese of Los Angeles. Tuition in these Archdiocesan owned schools is usually, if not always, lower than schools owned by religious orders or boards, yet most of those schools are completely self-sufficient and operate with no subsidy. Of the 26 total Archdiocesan high schools, five are owned and operated by the Archdiocese of Los Angeles and are "parish" high schools, or schools attached to a Catholic parish (church). Under Catholic canon law, the parish priest is also the head of the school and hires the principal. The Superintendent of Secondary Schools hires the majority of the other 21 Archdiocesan principals; however, three high schools in the Archdiocese use a president/principal model of governance with the president hired by the Superintendent of Secondary Schools. In those schools, the president hires the principal in close consultation with the superintendent. As such, some of the 26 schools may have different governance models, yet they all share very similar challenges and requirements from the Department of Secondary Schools.

Additionally, there is a wide variety of school sizes and enrollment challenges. Every school has enrollment difficulties, but Archdiocesan high schools vary in size from just over 200 students to over 1,300 students in the largest schools. Some schools are 1:1 iPad or laptop schools with each student using these devices as textbook and instructional delivery systems. Others use paper-based books entirely and base their instruction on more traditional techniques. These differences might account for some differing incidents in data-use challenges. Taking these differences into account, this study focused on Archdiocesan principals.

Participants

For the survey portion of the study, 24 of the 25 Los Angeles Archdiocesan secondary school principals (not including myself) were invited to participate. The study used purposive sampling by selecting principals from Archdiocesan-owned high schools, rather than all 51 Catholic high school principals in Los Angeles. However, within the sample of Archdiocesan schools, there are differences among the schools (i.e., school size, governance structure, etc.), which allows for some contextual variation in the results.

Recruitment. Because of my current position as principal of one of these 25 Archdiocesan high schools in Los Angeles, I have previous relationships with each participant. I know them individually as colleagues and have worked with most of them for many years. To recruit participants, I made contact inviting their participation via email. Principals were notified that a survey would be arriving via email within two weeks and that their participation would be very helpful to other schools in the Archdiocese as well as their own. The principals were informed of the study topic along with the possibility that this could be a positive addition to the knowledge available to Archdiocesan principals in the performance of their duties. They were informed that the survey was voluntary; additionally, I indicated that the survey and interview subjects would be completely anonymous so as to encourage honest responses.

The Archdiocesan Department of Secondary Schools was very supportive of the study and assisted with recruiting principals to participate. Given that there has never been an attempt before to articulate obstacles to data use for decision-making in the Archdiocese of Los Angeles among principals, response rates were strong; in fact, 22 of the total 24 principals (not including myself in the study) completed the survey, yielding a response rate of 88%.

Survey participants. Each Archdiocesan high school principal was contacted and asked to participate in the survey. The researcher received completed surveys from 22 of the 25 Los Angeles Archdiocesan high school principals. The 22 secondary school principals in this study were age, gender, and ethnically diverse. Of the 22 principals completing the survey, 16 were men and six were women. Four of the principals held a doctorate and 18 held masters' degrees. Experience as a principal in their current school ranged from one year to 25 years, yielding an average of 6.5 years with a mode of 1 and median of 4. Total principal experience ranged from one year to 35 years averaging 10 years of total experience as a principal with a mode of 8 and a median of 8. Four of the 22 schools had a president-principal model of governance in which the principal reported to a president. Eighteen of the schools in the study had a "principal only" model of governance.

Interview participants. Three principals were purposively sampled to participate in the qualitative interview portion of the study. These principals together, had over 40 years of administrative experience. One was a principal from a large school of 800 to over 1,000 students; another from a medium-sized school of 450 to 750 students; and another from a smaller school of 400 students or less. These differences maximized the diversity of the schools involved in the interview portion of the study. Although some schools in the Archdiocese used a president/principal governance model, the three principals interviewed serve in schools using a "principal only" governance model. None of the three schools were attached to a parish and all were owned and operated by the Archdiocese of Los Angeles.

Procedures

Surveys. Every principal, except myself, employed by the Archdiocese of Los Angeles (N = 24) was sent an anonymous link to a web-based survey using Qualtrics. Survey collection

of data via email is efficient and compatible with the characteristics of this study population. The survey was sent just before Christmas vacation (2015) to coincide with a slight reduction in professional responsibilities. The efficient nature of an email survey allowed principals to answer the questions at their own convenience and at a comfortable pace.

Prior to taking the survey, principals read and electronically "signed" the consent form, agreeing to participate in the study. The study had Institutional Review Board (IRB) approval from the University and signed written consent from the Superintendent of Archdiocesan Catholic Schools.

Interviews. The purpose of the interviews was to bring about a better understanding of the survey data and record the perspective of Catholic principal in light of the findings. Each principal was asked to give consent prior to being interviewed and audio recorded. All of the interviews were conducted face-to-face. Interviews averaged 45 minutes with a range of 41 to 49 minutes. All interviews were tape recorded and then transcribed. Nonmeaningful utterances such as "uh," "um," etc., were omitted by the researcher. The interviews were semistructured, guided by a script, but informal enough to allow for the conversation to move from the script to other areas that were related to the research questions of the study (Appendix B). The qualitative aspect of this study provided a link between the qualitative and quantitative data by clarifying the survey results more fully than each method alone could accomplish.

Measures

Survey. The survey (Appendix A) consisted of close-ended, Likert-scale questions, so that data were easily quantifiable. The survey included four major sections: demographic data, current use of assessment data in schools, positive benefits related to using data, and challenges related to using data. The items within these sections are provided in tables located in Chapter 4.

Because this survey measured factors affecting the use of data, the questions were based upon the Mandinach et al. (2006) conceptual framework. The analysis of this study included all of these questions located in the tables referenced in Chapter 4.

Demographic information. The questions included simple demographic information, including: (a) years of experience, (b) size of school, (c) school organization (all male/female or coed), (d) ethnic makeup of the school, (e) socioeconomic makeup of the school, and (f) administrative curricular support.

Current use of data. Several items asked principals to respond to current ways in which they are using assessment data in their schools. For example, the sources of data for this construct of Mandinach's framework (2006) discusses concepts like Learning Management Systems (LMS) and curriculum mapping. To align to this framework items assessing current use of data included, for example: "My school uses curriculum mapping to determine what is taught, how often, and when by each teacher"; "As principal, my staff and I have developed summative/formative assessments aligned to our curriculum or other standards"; and "Teachers gather data in the classroom and attend data-driven meetings to better understand students' progress toward student achievement goals". These items were measured on a five point Likert scale from Strongly Disagree to Strongly Agree.

Benefits. The survey included items to measure the benefits of using data. Given the literature highlighting the importance of establishing a trusting relationship between school leaders and teachers, these items included examples such as: "Teachers at my school feel that the analysis of data to make curricular and instructional decisions improves learning"; "My teachers feel that data analysis has had a positive impact on student learning in my school"; and

"Teachers feel that data analysis has helped to identify instructional needs in my school". These items were measured on a five-point Likert scale from *Strongly Disagree* to *Strongly Agree.*

Challenges. Finally, 10 questions on the survey were designed to reveal challenges and obstacles principals face when attempting to use data to make important decisions. For example, principals were asked to respond along a five-point Likert scale, from *Strongly Disagree* to *Strongly Agree*, to example items such as: "My teachers feel that they do not have time to analyze data on a regular basis"; "My staff does not feel trained in the skills to analyze data on a regular basis"; and "My faculty and staff fear that analysis of data will be used to determine their effectiveness".

***Interview*s.** Interview questions were composed after the analysis of the survey data in order to explore the data more fully. Once the questions were developed, each principal who was selected to participate arranged a time and location to meet for a face-to-face interview, and permission to record the interview was obtained. During the interview, principals were asked to answer questions regarding their perceptions of using data, including the benefits and challenges related to the use of data to inform curricular and course decision-making. The interview script included questions to gauge how schools currently use assessment data, such as: "Can you describe the process your school currently uses to examine data to inform instruction and curricular decisions?"; followed by prompting questions such as: "Do you use curriculum mapping? If so, how does that work?" and "Who is involved in the process – Teachers? Chairs? You?". Principals were also asked about the benefits and challenges related to data-informed decisions, including: "What are some of the factors/reasons why you think the curricular-decision making process works?" and "What are some of the factors/challenges as to why you

think this is not working?" Because this was a semistructured interview, at times, the flow of the conversation dictated that additional follow-up questions be asked, such as*:*

1. Do you use your curriculum maps to compare with the disaggregated data that you get to drive curricular decisions?
2. How do your teachers feel about curriculum mapping, looking at what they are teaching and comparing that to the results of standardized testing?
3. Did you ever start any programs, any curricular programs of any type because of data that you have seen, examples or anything?
4. How much do you think the principals approach to curricular growth is responsible for teacher fear level?
5. What do you think would help you as a principal or help other principals be more effective in using data to inform their curriculum decision-making?
6. How do the teachers feel about the use of data? For example, do they feel like it is mostly a vehicle to improve curriculum or student achievement, or do they think it is a way to check up on their success as a teacher?

Analytical Plan

To determine what factors principals contend with in using assessment data to inform decisions, descriptive statistics in the form of means and standard deviations were calculated for each of the sections of the survey. These descriptive statistics indicated current processes related to using data, benefits of using data, and areas of greatest challenge to principals. In addition to means and standard deviations, frequency responses were examined to understand the breakdown of responses by principals. This analysis provided a sense of how many principals agreed or disagreed with each item.

To analyze the qualitative interview data, the conceptual framework adapted from Mandinach et al (2006) provided a lens to view what it meant for a school to approach curricular decision-making. The framework informed the survey items and the analysis of the survey data informed the interview questions. As such, the concepts of the framework were present in the questions asked of principals. I then applied the framework and analyzed the interviews to look for types of data (or data sources according to Mandinach's framework) used in schools; how principals were currently using data; and then benefits and challenges of the process of using data to inform decisions. For example, the concept of data sources from the adapted framework by Mandinach was an a priori code and captured responses by principals about the use of "curriculum maps" and "LMS" as examples. The other a priori codes included benefits and challenges, and these were used to capture principals' perceptions of the factors that influence the use of data to drive decisions in their schools. Finally, according to the framework, assessment data, which do not have meaning alone, are contextualized and become information, leading to knowledge that would, in turn, lead to informed decision-making and future action. This aspect of the framework captures the process of turning data into meaning. In Chapter 5, I discuss where along the process dimension of the framework a breakdown in the use of data occurs.

Summary

The purpose of this chapter was to describe the research methodology of this study, explain the sample selection, define the procedures used in designing the collection of data via the survey and interview, and provide an explanation of the procedures used to analyze the data. The following chapter will present the findings from the survey and interview questions to illuminate how Catholic Archdiocesan high school principals are using assessment data and their

perceptions of the benefits and the challenges associated with using data to inform decision-making.

CHAPTER 4

FINDINGS

Study Background

The purpose of this mixed-methods study was to determine what factors influence the use of data to inform academic decisions among Catholic high school principals in the Los Angeles Archdiocese. This chapter will present the findings to address the research question and two subsequent areas of inquiry. The over-arching research question was: What are the perceptions of principals in Catholic high schools about the use of assessment data in their schools? To address this broader research question, two subresearch inquiries were specifically addressed in the survey and interviews:

1. How are Catholic Archdiocesan principals in Los Angeles using assessment data currently in their schools to inform curricular and pedagogical decisions?
2. What are the factors that affect the use of assessment data to inform curricular decision-making in Catholic high schools?

For the purpose of this dissertation, assessment data refer to any data that a Catholic high school might use to measure student learning of specific content standards. Examples include formative and summative assessments, such as teacher-created tests or quizzes, or standardized tests, like the PSAT.

Brief Review of Methods

A mixed-method approach was implemented, involving a survey and interviews, to address the research questions. The majority (22 out of 25) Los Angeles Archdiocesan principals completed a survey for a response rate of 88%. Survey items measured how Catholic Archdiocesan principals in Los Angeles currently use data in their schools to inform curricular

and pedagogical decisions. Additional survey items addressed factors that affect the use of data, including benefits and challenges. The means and standard deviations were calculated for each item and are presented in this chapter. To provide additional context, the percentage of principals who agreed or disagreed with various items that had either high or low mean scores was also calculated.

The over-arching, main research question regarding perceptions of using data was also addressed via interviews with three Los Angeles Archdiocesan principals, selected purposefully based on pre-existing relationships and the assumption that they would speak candidly about their schools. Each principal served in a different school setting, representing small (250–400) students), medium (450–750 students), and large (800–over 1000 students) high schools in the Archdiocese of Los Angeles. Interview data were coded to examine the research question regarding principals' perceptions about the use of data. Interview responses also shed light on how data are currently used in schools and the factors affecting the use of assessment data. As such, the findings below are organized by these themes, with both survey and interview data presented together to provide a fuller picture of the findings.

Current Use of Data

To determine principals' perceptions of how data are used in Catholic high schools, the first research question asked Catholic Archdiocesan high schools to describe their current uses and processes of using assessment data. Survey items to capture the current use of data were aligned to the Mandinach et al.'s (2006) conceptual framework and included newer aspects of data gathering, such as Learning Management Systems (LMS), curriculum mapping, and assessments. The table below provides the means and standard deviations for 14 items meant to determine how Catholic high school principals were currently using assessment data to make

well-informed decisions. As a reminder, the responses represent the view of the vast majority of Los Angeles Archdiocesan high school principals (22 out of 25).

Table 1

Means and Standard Deviations for Use of Data Items (N =22)

Survey Questions	Means	SD
1. My school uses curriculum mapping to determine what is taught, how often, and when by each teacher.	4.04	0.71
2. My school has an established protocol for the collection, analysis, and dissemination of data.	3.35	0.89
3. My teachers feel that their learning management system (LMS) provides them with data that they use to inform their instructional decisions.	3.04	0.71
4. As principal, my staff and I have developed summative/formative assessments aligned to our curriculum or other standards.	3.74	0.75
5. Teachers and departments regularly meet to discuss data analysis.	3.30	1.06
6. Student data are analyzed in core subject areas regularly on my campus.	3.39	0.84
7. Grade-level data are analyzed in core subject areas regularly on my campus.	3.04	1.02
8. Members of my staff have recently attended professional development sessions related to student data analysis.	3.26	1.10
9. I create expectations by stating clearly that data use is non-negotiable and expected from teachers and departments.	3.52	0.85
10. Teachers gather data in the classroom and attend data-driven meetings to better understand students' progress toward student achievement goals.	3.18	0.80
11. I or a member of my staff examines results of summative/formative assessments to inform instructional decisions.	3.82	0.59
12. Department chairs and teachers have used data to define student achievement goals for each subject area.	3.77	0.69
13. Departments at my school make data informed instructional decisions for individual students based on results of both formative and annual student-level assessments.	3.68	0.57
14. Analysis of data has helped my teachers and staff to identify instructional areas that need to be addressed in my school.	3.77	0.61

All of these items assessed how principals currently use data and yielded mean scores greater than 3 on a 5-point scale overall. As seen in the table above, these survey questions were

a list of statements that describe actions that indicate whether a school engages in the use of data to drive curricular decision-making. Because all of the means were higher than a 3.0 with only two items at 3.04 (neither disagree nor agree), the results of this section broadly indicate that principals agreed that there are processes in place to use data to inform practice at their schools. However, they also shared in interviews that they felt they could improve their processes of using data. Survey responses that conflicted with interview responses are provided next to illustrate greater detail about the process of using data in Catholic high schools. These areas of divergence include aspects related to the conceptual framework by Mandinach et al. (2006): Types of Assessment; Learning Management Systems; Curriculum Mapping; and Protocols.

***Types of* assessment.** Principals were asked on the survey to indicate whether their staff had developed summative/formative assessments aligned to their curriculum or other standards. The mean score was 3.74 (SD = 0.75), indicating relative agreement. Formative assessment is usually conducted by the teacher in the course of teaching, yielding immediate data that allowed teachers to alter the direction of their teaching quickly. Summative assessments are tests of what was learned at the end of a period of time or area of study such as a chapter. Both forms of assessment generate data that measures student achievement. Survey results suggest that overall, formative and summative assessments are being developed to align to curriculum or standards.

However, during interviews, the principals indicated that the assessments used in their schools to really examine which standards were being met by students were common standardized assessment tests, such as the PSAT, SAT, CTBS, or ACT Explore. Principals indicated that these assessments were analyzed, discussed, and acted upon. However, in-house formative and summative tests (or school/teacher assessments) were never mentioned in interviews as a source of data used to inform the overall curricular direction of the school or a

department. All principals interviewed also indicated that standardized assessment was more likely to be used. For example, when asked about the sources of assessment data and how they were used and disaggregated, one principal shared: "We give the HSPT to students before they came in, ACT Explore for Sophomores, PSAT for juniors, and SAT to juniors and seniors" without mentioning in-house data sources. Another principal mentioned standardized assessments and shared:

> We use the HSPT for our incoming freshman class to place them. In addition, we use the PSAT and SAT, which are looked at by our counselors. Formative and summative assessments developed by our teachers are compared to the previous year's class to see if there is improvement or not.

When asked if there was a formal procedure for this, the principal said that "each teacher does this in their own way." The impression was that nonstandardized assessment meant that to inform curricular growth is more anecdotal and may vary from teacher to teacher. In other words, school- or teacher-developed assessments were not discussed as a type of assessment used to inform curricular decisions.

Related to the type of assessment used to drive decisions was the frequency of meeting to discuss assessment data and the training teachers have to handle data. Fifty-five percent of the principals surveyed agreed or strongly agreed that teachers and departments regularly meet to discuss data analysis, while 35% disagreed or strongly disagreed. This contrasts with the survey result that 64% of the principals feel that their teachers believe that they did not have the time to analyze data on a regular basis. In other words, the majority of principals indicated that faculty meetings occured regularly to discuss data but the majority of principals also indicated that teachers did not feel that they had the time to analyze data regularly. This contradiction might be

explained by the fact that 45% of the principals felt that their teachers did not feel trained in the skills necessary to analyze data on a regular basis, which might indicate that the meetings that were regularly taking place were not as effective as they could be if teachers were better trained. Interestingly, in the interviews, all principals were clear that the disaggregation of assessment data was performed by counseling staff and delivered to departments to act upon. One response from a principal touched upon this:

> Our counselors look at the data and present it to the teachers. Often this is a difficult meeting because the teachers don't always understand that lower scores can point the way to improvement. The conversation sometimes becomes stressful because the impression is that it is the teachers fault. Even the counselors can be a little critical at some of teachers instead than looking for growth opportunities.

Learning Management Systems. One of the survey items asked principals to rate "if their teachers feel that a Learning Management System provides them with data that they use to inform their instructional decisions" and yielded a mean of 3.04 (SD = 0.71), indicating neutrality. This item addressed principals' perceptions of their teachers' view of Learning Management Systems (LMS). An LMS platform is software, usually web-based, that allows educators to administer assignments, track and report results, and deliver content. Students are able to collaborate, receive directions, and maintain a clear view of their progress. An entire course can be administered with an LMS allowing for a blended (online and tradition classroom setting) approach to learning. There are many on the market. Currently, the Archdiocese of Los Angeles does not require that schools use an LMS platform, and it is possible that some schools do not have an LMS, contributing to the lower mean score on this survey item. However, the use of LMS platforms was widespread and often used as a gradebook that fed directly into

administrative software that was used schoolwide. An LMS is also a simple and efficient way for teachers to communicate with both students and parents about current progress in a class. For these reasons, Learning Management Systems such as Schoology (Schoology, 2015), Blackboard (Blackboard, 2015), and Moodle (Moodle, 2015) are commonly used in high schools.

Although an LMS can provide a wealth of student specific data, only six principals (27%) felt that teachers believed that their LMS provided them with data that they use for instructional decisions. The majority (73%) of principals *neither agreed nor disagreed*, or *disagreed*, that their teachers felt that they used that LMS to inform their instructional decisions. Again, it may be that principals without an LMS at their school opted to respond with neither agree nor disagree, contributing to this finding. Yet, in interviews, principals confirmed that more experienced faculty were less likely to use an LMS or utilize data from one if it was not mandatory. This may have been because Learning Management Systems are relatively new to education; perhaps younger faculty were more used to this technological platform and may even had used one during their undergraduate and graduate work. Also, principals may have believed that teachers saw a schoolwide LMS as course management and data storage software that supports administrative aspects of the school rather than as a tool to gather and analyze data to help inform curricular direction. Overall, the interview responses aligned with the findings from the survey, suggesting that principals believe that teachers do not feel overwhelmingly positive about the LMS assisting them with data to make instructional decisions. It may also indicate that, because they are not mandatory in every school, principals may not have considered an LMS a source of data.

Curriculum Maps. One survey item asked principals to indicate if their school used curriculum maps to determine what was taught, how often, and when by teachers and yielded the

highest mean out of the survey items assessing use of data, with a 4.04 (SD = 0.71). Eighty-seven percent of the principals indicated they *agree* or *strongly agree* that their school used curriculum mapping to determine what was taught in each subject of their school's curriculum.

In the interviews, principals confirmed the use of curriculum mapping in schools but also suggested that teachers found curriculum mapping to be time-consuming and redundant, particularly if they were expected to produce regular lesson plans. For example, one principal shared:

> When we began online curriculum mapping the teachers were a little skeptical, but hoping it was a better process than we had used previously. When they discovered that they created the maps through the entire year, almost all of them hated it. The biggest complaint was that they already did lesson plans and this was a duplication of that. We used *Atlas Rubicon* before, but we eventually canceled it.

Two principals, including the one quoted above, shared in the interviews that he/she did not use online or ongoing curriculum mapping at all or relied on curriculum maps that had aged. One principal, however, shared that s/he matched up data from the PSAT and other standardized assessments with the curriculum map to be sure that the map aligned with student academic need as determined by the assessments. As such, findings from the interviews suggested that schools varied a great deal in their use and response to the use of curriculum maps.

An additional theme that emerged regarding curriculum mapping in schools was the fear of being compared unfavorably to other teachers. One principal indicated in the interviews that teachers, while describing online maps as redundant, may also be threatened because they felt that aligning the map with assessment data (or student success with the content) could indicate

issues with the quality of instruction, especially if they compared unfavorably to another teacher in the school. For example, one principal from a small school shared:

> It took a while before teachers knew that there was not a threat to them in terms being compared to other teachers. I think that was a reason there were initial misgivings about mapping. Once it was discovered that disaggregated data was compared to maps only at the department level, teachers were mainly concerned with the amount of work a curriculum map entailed.

The principal from a medium-sized school suggested that curriculum mapping might initially lead to fear of comparison among teachers but that this fear was not long term:

> I don't think anyone fears anybody else because there is a really great open communication. As a matter of fact, the Director of Curriculum and Instruction sits in the staff room intentionally. One so it's not a complaint session about kids and she can kind of controls that conversation. Two because we just want to make sure we keep everything positive.

Overall, principals interviewed confirmed that teachers were often threatened initially by using maps to highlight teaching decisions and that, with a positive and open collegial environment, the concerns regarding comparison may be minimized.

Related to curriculum mapping, principals were asked another survey question about whether their teachers and administrative staff felt that data management tools such as online curriculum mapping simplified the process of acquiring data. Only 35% of the principals surveyed *agree* or *strongly agree* that online curriculum mapping simplified the process of acquiring student achievement data. The majority of principals (60%) neither agreed nor disagreed that mapping simplifies the data-gathering process. Yet, on the other item related to

curriculum mapping, 87% of the principals indicated that they used curriculum mapping in their school. Taken together, these survey findings suggest that while mapping is used in the great majority of schools, principals did not necessarily feel it simplified the process of data gathering and usage to inform curricular decisions.

While the survey data indicated that schools were using curriculum mapping, there seems to have been a difference between what was and was not curriculum mapping among the principals interviewed, which may explain the mixed results related to the perception that curriculum mapping simplified the process of data gathering. One principal stated:

> Maps have a lot of different definitions. Here the teachers have their unit plans. The curriculum map is kind of a school wide, "Here is what you are doing" kind of thing. Rather than each teacher indicating what is taught, when is it taught, and how long, the curriculum map, as they see it, is a generic, in-depth syllabus.

The principal went on to say:

> Let's say sentence structure scores are off. What the department chair is going to do is, she will go back to the department and say, "How much time do we spend on this, this is an area we need to spend another week on," and so they will adjust their lesson plans, and then the next year they will adjust their curriculum maps.

Curriculum maps in this school were maps for the entire department, developed by the Curriculum Director without a specified, individualized timeline for each teacher.

Protocols. Another survey item asked principals about having an established protocol for the collection, analysis, and dissemination of data at his/her school. Only one principal strongly agreed to the survey item. Eleven (52%) of the principals agreed that their school used an established protocol.

While over half of the principals agreed that their school had a protocol in place, the fact that only one principal strongly agreed may indicate that principals felt there was room for growth in the development of a protocol for collecting, analyzing, and disseminating student achievement data. This finding was supported by interview responses. In interviews, two principals mentioned having a designated person at their schools who would be responsible for presenting standardized test scores to the department chairs or to the faculty as a whole. None of the principals described a written protocol for handling the data. Related to analyzing data, while principals on average indicated relative agreement (M = 3.77; SD = .61) on the item, "Analysis of data has helped my teachers and staff to identify instructional areas that need to be addressed in my school," the scores for items related to actually analyzing data were consistently lower (see items 5–8, for example). In other words, this finding may suggest that there was agreement among principals about the importance of analyzing data but that the process of actually analyzing the data appeared weak (means were 3.40 or lower on all items). Given the findings presented earlier about Curriculum Maps and Learning Management Systems, perhaps the trend was that Catholic schools had a process for gathering data but did not yet have clear protocols for analyzing the data.

Data Use Conclusion

Findings from both the survey and the interviews appear to suggest that Catholic high schools have a process of using data to inform instructional practices, however, protocols for analyzing data were not consistently indicated by principals. Furthermore, although the survey indicates that Catholic high schools had developed and used summative and formative assessments, little details were shared as to how formative and summative/standardized data were compared to curriculum maps, mainly because this was handled by other members of the

administrative staff. Findings may suggest that an area of growth related to using data to inform curricular decisions may be in the actual analysis of assessment data, time to do this work, and an acknowledgment of the fear teachers may have had about comparisons of their effectiveness.

Factors Affecting Data Use

In addition to asking principals to describe how their schools currently used data to inform curricular and pedagogical decisions, the second research inquiry in support of the research question attempted to highlight what may have been impacting the use of data in schools. To that end, this inquiry asked about the factors that affected the use of assessment data to inform curricular decision-making in Catholic high schools.

The benefits of using data, such as gauging student learning or identifying instructional needs, were assessed on the survey. Additionally, negative factors, or challenges that might impede the use of data, such as lack of time or lack of training, were assessed. The findings are organized below to showcase the benefits of using data, followed by the challenges affecting the use of data in Catholic high schools. Both survey and interview data are offered to describe these factors.

Benefits of Using Data

Survey items asked principals to describe their perceptions of how their teaching staff felt about the processes of data, including benefits of these processes. Specifically, items in this section of the survey measured the ability to gauge student learning and identify areas of instructional need (see Table 2 below). A common theme related to these items was the principals' view of how teachers felt about using data, which aligned to the literature on creating a trusting environment for data analysis to occur.

Table 2

Means and Standard Deviations for Benefits (N = 22)

Survey Items	*Means*	*SD*
1. My faculty and staff trust that data will be used to inform curricular decisions, not teacher evaluation.	3.57	0.84
2. Teachers on my campus have the necessary skills to analyze and interpret data to improve instructional practices.	3.22	0.90
3. My teachers feel that it is important to review and gauge student learning and alter their instruction accordingly.	3.96	0.48
4. Teachers at my school feel that the analysis of data to make curricular and instructional decisions improves learning.	4.04	0.77
5. My teachers feel that data analysis has had a positive impact on student learning in my school.	3.48	0.68
6. Member(s) of my staff serve as data coaches are available to support data analysis campus-wide.	3.13	1.01
7. My teachers and administrative staff feel that data management tools such as online curriculum mapping simplify the process of acquiring data.	3.48	0.85
8. Teachers feel that data analysis has helped to identify instructional needs in my school.	3.50	0.67

Similar to their use of data items, principals generally agreed to items in this section of the survey as seen above in Table 2. For example, items measured whether data analysis assists with identifying instructional needs or has a positive impact on student learning. All means were above the mid-point of a 3 on a 5-point scale, with the lowest mean score at 3.13 and the highest at 4.04. Additionally, most of the items seen in the table above ask principals to reflect on how their teaching staff view data, which begins to measure the culture of trust that the literature suggests is necessary for the process of data analysis to actually lead to improved instruction and learning. Overall, findings on this portion of the survey suggest that principals believe their teachers view data as a benefit to instruction and that data have a positive impact on learning.

For example, principals indicated on the survey that their teachers felt that analysis of data to inform good curricular decision-making improves learning (see item 4 above; $M = 4.04$; $SD = 0.77$). Seventy-four percent of principals *agreed* or *strongly agreed* with this, while 26% percent *neither agreed/disagreed.* None of the principals disagreed. Principals were also asked if they felt that teachers believed that data analysis had a positive impact on student learning in their own school (see item 5 above). These are basically the same questions with one distinction: one asks if data analysis improves learning in general while the other asks if data analysis improves learning in their own school. When restricted to the principal's own school, the results change to 57% of principals agreeing with none of the principals strongly agreeing. One principal mentioned:

> My teachers are nothing if not collegial. They enjoy working together and the administrative staff encourages it with my blessing and example. In a truly collegial environment, people just aren't going to be threatened. You and I have both seen people in authority managing by fear. Not only does it not work, but also it makes people go in the opposite direction. I have never directly used assessment data, to fire anybody or anything of that sort. However, I do look at test scores and say; oh boy, our junior level scores took a dip, what is going on in that class. We analyze the data, put our heads together and try to address the problem, not blame the teacher.

Additionally, principals indicated agreement when asked if their teachers felt reviewing student learning to adjust their instruction was important ($M = 3.96$, $SD = 0.48$). Along those lines, principals indicated positive perceptions of teacher feeling as though data analysis helped identify instructional needs ($M = 3.50$, $SD = 0.67$). This finding may suggest that principals believe that their teachers view data analysis as important to learning but, to truly work to

analyze data, principals commented during the interviews on the relational components necessary to build an trusting and collaborative environment. A principal remarked, "It's important to understand how your teachers feel about discussing areas of growth in their own classes." Another principal stated that:

> Most teachers want very much to get better at teaching their subject, so they want to see data. They don't shrink from it. But a few of my teachers avoid looking carefully at assessments. It's as though they believe that the analyzed data is more of an assessment of them than an assessment of their students' achievement.

The comments above illustrate how these principals were aware of the relational dynamics, such as faculty perceptions of the intended use of the data, which are important to creating a positive and trusting environment to use assessment data. Beyond survey findings suggesting that Archdiocesan principals believe their teachers view using assessment data positively, these comments highlight the importance of school leaders understanding their teachers' perceptions.

Challenges to Data Use

In addition to being asked about the positive uses of data in schools, principals were asked to respond to survey items that highlight some negative aspects of using data to inform curricular decisions (see Table 3). These challenges affecting the use of data included issues related to fear, time, or appropriate training to work with data.

Table 3

Means and Standard Deviations for Challenges (N = 22)

Survey	*Means*	*SD*
1. My teachers feel that they do not have time to analyze data on a regular basis.	3.61	1.16
2. My staff does not feel trained in the skills to analyze data on a regular basis.	3.43	0.79
3. My faculty and staff fear that analysis of data will be used to determine their effectiveness.	2.87	0.82
4. My teachers find it challenging to apply data to classroom situations.	3.45	0.74
5. My teachers find the lack of time, particularly time to update and analyze data to be challenging.	4.13	0.69
6. Data analysis and disaggregation is seen in a negative light by my teachers and administrators.	2.55	0.91
7. My administrative staff, department chairs and teachers find it difficult to translate the information generated by data analysis into curriculum.	2.86	0.77
8. In my view the analysis of data does not improve teaching and learning in my school.	1.86	0.56
9. In my teachers view, the analysis of data does not improve teaching and learning in my school.	2.09	0.68
10. My teachers feel that data analysis tells us nothing that we do not already know or cannot discover in other ways.	2.32	0.95

Unlike in the previous survey items, principals indicated less agreement on items measuring the challenges related to using data. Six out of the 10 items had mean scores below the midpoint of 3 on a 5-point scale, suggesting principals disagreed with these items assessing the challenging aspects of using assessment data in schools. Conceptually, a lower score on an item measuring challenging aspects of using data may suggest a neutral or possibly, more positive sentiment. For example, the lowest mean score of 1.86 was found for the item related to principals' perception of data analysis not improving teaching and learning. This finding indicates that principals disagreed with the statement, suggesting perhaps that they may actually agree with the value of analyzing data to improve teaching and learning. Similarly, the next

lowest score was a 2.09 for a similar question assessing the principals' perception of whether teachers find value in analyzing data. This low score suggests that principals disagreed with the statement, therefore suggesting that they believed their teachers view analyzing data as a way to improve teaching and learning. To that end, this may suggest that, by and large, principals disagreed with the challenges of using data, suggesting that there is not much in the way of negative factors affecting the use of data in Catholic high schools, at least as measured by these survey items.

Yet, as seen in the table above, a few items were above the midpoint of 3 on a 5-point scale and, as mentioned above, some negative factors related to assessment data emerged in the interviews. For example, skills related to data analysis were discussed as an area of improvement; a lack of consistent protocols was also a noted area of improvement. One major negative factor not yet discussed but that scored higher than the others on the survey was a lack of time.

***Lack of* time.** Seventy percent of principals surveyed indicated agreement with the statement that their teachers felt they did not have time to analyze data on a regular basis and across the board (M = 3.61, SD = 1.16). If teachers are not given the necessary time to disaggregate, analyze, and use data to drive curricular growth, it does not matter how positive they are regarding the use of data. One principal of a small school interviewed stated,

> We just don't have the resources to give teachers time off regular teaching to analyze and use data. We scramble to cover classes just for illness absences. How can I find time for teachers to analyze data, let alone work and collaborate in their departments?

The principal interviewed from the small school was the most vocal regarding time. The principal also remarked:

> My teachers work very hard and get great results just teaching and doing the large amount of grading and preparation necessary to teach their classes. Many of them teach every period without any time away from the classroom. When are they going to do all of this analysis? It's not a matter of desire, it's a matter of only twenty-four hours in the day.

Another survey item asked if principals agreed with the statement that their teachers found the lack of time—particularly time to update and analyze data—to be challenging. Eighty-three percent *agreed* or *strongly agreed* with this statement ($M = 4.13$, $SD = 0.69$). Seventeen percent *neither agreed nor disagreed*. No principals *disagreed or strongly disagreed*. The results of both survey items strongly indicate that time is a major factor that negatively affects the use of analyzed data to improve student learning.

Lack of skill. In addition to time being a challenge that principals found impeded the use of assessment data in schools, the perception that teachers did not feel trained to analyze data emerged. This lack of skill perception was seen as intimidating and anxiety-provoking, which in turn hindered the use of data. This finding emerged in the interviews. One principal stated,

> My teachers want to know how their students are performing on standardized exams, but it scares them a little. They feel that students can be helped by knowing subject areas that need more attention, but they are intimidated by the idea of analyzing data themselves. I think it's that too much data with too little time is just overwhelming when you just hand them data sheets.

Although, according to their principals, teachers appeared open to using analyzed data to inform instructional change, they were unsure of their own abilities in this regard. This comment may indicate a need for established protocols, as discussed above, for collection and analysis of data.

While the survey data indicated that principals felt that teachers at their school needed to improve their skills to analyze and interpret data to improve their instructional practices, when combined with the positive item related to teachers believing that analysis of data had a positive effect on learning and identifying instructional needs, this finding may indicate that professional development on how to analyze data may be welcomed by their faculties. One principal stated that many teachers believe that:

> There is too much math involved in analysis of academic data, making them afraid to take on the analysis of assessment data to drive instructional achievement. They are surprised to find that it is not as difficult as they thought once they attend professional development.

Another principal said:

> I mistook hesitance to use disaggregated data that was handed to them with a desire to avoid the extra effort necessary. The reality was that they didn't have any idea how to use the data and apply it to their day-to-day teaching.

Comparing these comments to the survey items indicating that teachers see the value of data analysis suggests a need to address this gap with meaningful and intellectually accessible professional development.

Conclusion of Factors Affecting Data Use

By and large, principals indicated positive responses to the benefits of using data, namely to gauge student learning and adjust instruction. Further, many of these survey items touch on the important role of school leaders understanding faculty perceptions of the intended use of data. Still, there a number of challenges emerged, including a lack of time and a lack of skill to properly analyze the data.

When answering survey items that addressed whether principals currently used data to inform curriculum, relatively high means scores of over 3.0 on a 5.0 scale indicated that principals were in agreement that processes were in place at their schools to inform practice. Interview result also indicated that they felt the processes they use to apply data to curricular decision-making could be improved. Interviewed principals discussed a variety of standardized, summative assessments used at their schools, but did not give examples or even mention teacher or school-developed formative assessment as a source of data used for decision-making.

Other sources of data were factors affecting data use. Although an LMS is a potential source of data, only six principals felt that their school used data from that source for decision-making and that teachers often did not use an LMS when it was not mandated, yet it remained unclear if all schools had an LMS. Findings also indicated that, while curriculum mapping is used in most Archdiocesan Catholic high schools, their use varies widely from school to school. Principals did not necessarily agree that curriculum maps simplify data gathering or data usage in their efforts to make curricular decisions. Given the findings regarding curriculum maps and LMS usage to gather data, it may be that Catholic schools have defined protocols for gathering data, but not to analyze them.

Principals indicated their agreement that data analysis to inform decision-making improves learning. The survey also indicated that principals strongly agreed that their teachers felt that analysis of data identified instructional needs and that their teachers viewed data analysis as important to learning. However, interviews indicated that principals were aware that some teachers may have felt that analysis of data may also be an analysis of their effectiveness, suggesting the need to build a trusting and collaborative environment for analysis of data to truly work.

Most principals agreed that their teachers viewed the lack of time to update and analyze data to be a challenging factor. This feeling was strongly held with 83% of principals *agreeing* and the remaining 17% *neither disagreeing or disagreeing strongly.* While surveys showed that principals believed that their teachers were open to using data to improve student achievement, they also indicated that teachers perceived both a lack of time and confidence in their own ability to analyze data as factors. Overall, these findings are helpful to address recommendations, which will be presented in the following chapter.

CHAPTER 5

DISCUSSION

This chapter summarizes and synthesizes the dissertation. The chapter begins by summarizing the purpose of the dissertation and the major findings, followed by a discussion of implications for Catholic high school principals, and concluding with recommendations for further study. While public schools have an emphasis on high-stakes assessment related to funding, Catholic high schools, with funding from tuition income, use assessment data to inform their decision-making without the same high-stakes pressure tied to funding. Findings indicated that principals are currently using assessment data in their schools. In addition, the study indicated that there were significant factors, both positive and negative, that affected the use of assessment data to inform curricular decision making.

Summary of The Study

The objective of this study was to describe perceptions of how assessment data are currently used to make curricular decisions and to define factors that influence that use of assessment data in Los Angeles Archdiocesan Catholic high schools. The study took place in the Archdiocese of Los Angeles. Archdiocesan high schools serve students who are often socioeconomically challenged, but must still rely on tuition. True to the mission of Archdiocesan Catholic schools, these students deserve access to a strong curriculum and great teachers, who utilize data to inform curricular and pedagogical decisions. In fact, research links the use of assessment data to strong student achievement (Marzano et al., 2005).

Catholic high schools do not face the same funding issues related to "high-stakes" testing that public schools face. Assessment data are not related to funding in any Los Angeles Archdiocesan high schools. However, the goals for the schools are the same regarding academic

growth. Catholic high schools have the same challenges of preparing their students for postsecondary education and life. However, knowing whether Catholic schools are preparing students academically remains a methodological question. Although research suggests a Catholic school effect on academic achievement (Altonji et al., 2005), there is debate about whether all factors are controlled to make the causal link back to the school and not family dynamics. Meanwhile, Catholic school students are attempting to gain entrance into college and must compete with graduates from public schools, where data about academic achievement are publically available. Because of these challenges and many others, studies regarding the use of assessment data to make good curricular decisions are important, yet still lacking, in the context of Catholic high schools.

The specific focus of the current study was on the perceptions of Catholic high school principals. School leaders in Archdiocesan Catholic schools play a vital role in the process of disaggregating and using assessment data to make informed curricular decisions, thereby contributing to the culture of their schools. This study attempted to determine how Archdiocesan Catholic principals viewed the use assessment data to improve curricular decision-making in their schools. As the instructional leader of the school, the principal is the most important singular determinant of a successful school (Lachat & Smith, 2005). To effectively determine factors that hinder or help the principal as the instructional leader of the school, it is important to determine the factors that negatively or positively affect the use of data to drive academic decision making.

In addition, Catholic high school leaders have an obligation to fully live the spiritual mission of their school while raising the academic abilities of students in preparing them for postsecondary education and life (Miller, 2013). Complicating this is a lack of research

describing how Catholic high schools utilize assessment data to drive curricular decisions. Catholic school assessment data are not made public to anyone other than those stakeholders in that specific Catholic high school. While this may be convenient for those in that particular Catholic school, it makes research on broader Catholic high school achievement much more difficult. Without this knowledge, Catholic schools cannot learn from one another how to utilize assessment data to make decisions to improve student achievement.

Discussion of Findings

The current study examined, through the lens of a conceptual framework for Data-Informed Decision-Making (Mandinach et al., 2006), with a survey and interviews, how one group of Los Angeles Archdiocesan Catholic high school principals viewed the use of data in their schools. Findings provide a sense of the current processes for data use in Archdiocesan Catholic high schools, benefits of using assessment data to inform curricular and pedagogical decisions, and challenges affecting the use of data in Archdiocesan Catholic high schools. Taken together, findings attempted to answer the question: What are the perceptions of principals in Catholic high schools about the use of assessment data in their schools?

The conceptual framework by Mandinach et al. (2006) was updated and used to guide the discussion of the findings. The updated framework included new data sources—such as curriculum maps—to reflect the current day type of data available in schools. Mandinach's conceptual framework suggests a process for schools to consider in turning data into knowledge that can inform decisions. According to Mandinach et al. (2006) *data* have no meaning in and of themselves, but are given meaning and become *information* by connecting to a context, allowing administrators and teachers to comprehend and organize those data. As this information is considered and deemed important, it becomes *knowledge* and is used to inform future action. The

Figure below captures the conceptual framework, showcasing the process of moving data through information to become knowledge, and can be used to pin point areas of strength related to using data and areas in need of improvement (see Figure 3).

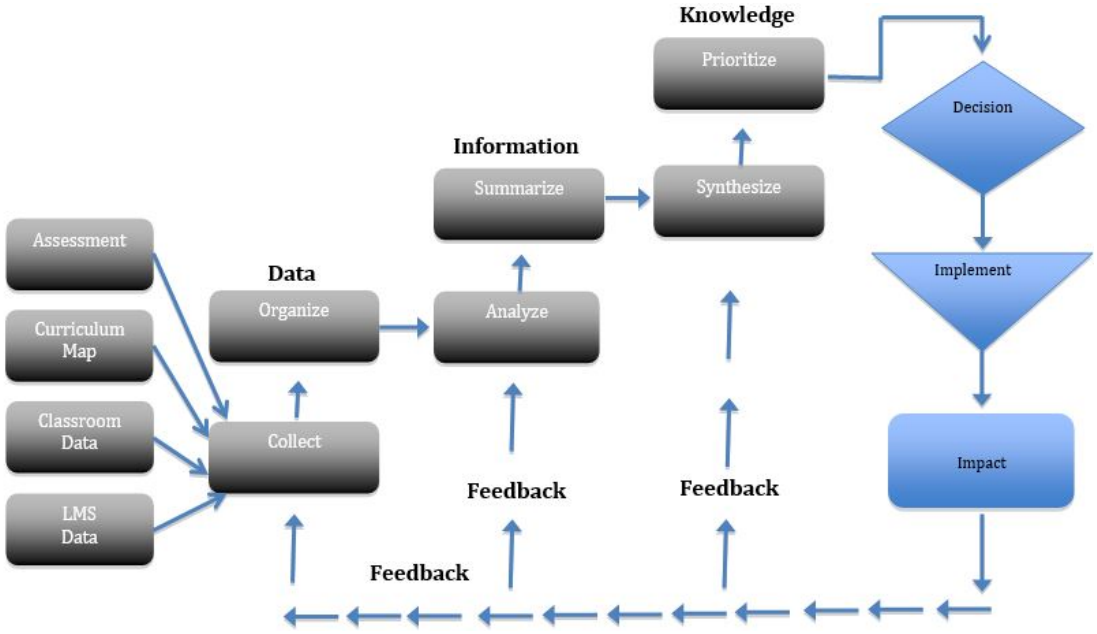

Figure 4. Theoretical framework for the use of assessment data.

Applying the Framework

The survey asked a number of questions about opportunities for the use of data. Based on the updated conceptual framework (see figure above), principals were asked about curriculum mapping, learning management systems, in-school development of assessments, and other current processes in their school related to the use of data. While principals indicated that they all had processes in place to use data to inform curricular decision-making, they also shared in the interviews that they felt this was an area that could use improvement. Principals further indicated in their interviews that the assessments they used to provide data were standardized assessment tests (e.g., PSAT, ACT, or SAT). In-house formative and summative assessments were never mentioned in the interviews as a source of school-wide data to help inform curricular decision

making for future curricular growth. Principals, however, did indicate in the survey that formative, in addition to summative assessments, are used to generate data that are used to inform decision-making. However, during interviews, the principals shared that the assessments used in their schools to determine if goals and standards are being met are mainly standardized, summative assessments that are administered to one or two class levels or schoolwide. Principals could not pinpoint how formative assessment was used as a source of assessment data.

Looking at these findings through the lens of the conceptual framework, there appears to be a breakdown in the use of data available to the school at the very beginning of the process. In the framework, assessments, both formative and summative, are collected and organized to become information and knowledge that can lead to well-informed decision-making. While teachers may well be using formative assessment in their classrooms (and probably are) to determine the scope and direction of their own instruction, that assessment data does not seem to be brought into any schoolwide efforts to make use of that data, suggesting a breakdown in the process of turning data into information and, subsequently, knowledge.

Another example illustrating a breakdown at the data phase of the framework is the finding related to the use of LMS and curriculum mapping. Most, if not all, high schools throughout the Archdiocese use state-of-the-art Learning Management Systems (LMS) and/or curricular mapping. Although a wealth of student data can be made available to a school, only 27% of the principals felt that they were utilized for that purpose in addition to the more day-to-day utilitarian aspect of the software. This finding suggests that while LMS are likely used to gather and organize data in Catholic schools, these data do not ever become meaningful information. The breakdown in the process of using LMS data appears to be in the lack of

analysis of the data, thereby hindering the movement of the data to the information phase of the framework (see figure above).

Similarly, curriculum maps are usually checked during accreditation visits, which explains the high mean score for their presence on the surveys. However, the question of whether or not they are used to inform curricular decision-making is an open one given the interview responses. Two principals shared in the interviews that they do not use online or ongoing curriculum mapping at all or they relied on curriculum maps that had aged. Also, principals indicated that teachers were often threatened by using curriculum maps to highlight their teaching decisions, although they believed that this could be overcome. These findings suggest that the breakdown related to curriculum maps may be occurring at the data gathering phase of the conceptual framework—given that not all principals were using curriculum maps. Curriculum mapping showcases what was taught and for how long. However, without an approach from school leadership to make it more palatable to teachers, it may not be a consistent and sustainable source of data (Lyle, 2010). Taken together, findings suggest that there are processes in place to use assessment data in Catholic Archdiocesan schools, however, the data gathering and organizing varies. Additionally, the analysis and summarizing of data is not occurring uniformly.

One type of data shared by principals suggests that it makes it to the information level of the framework—standardized data. For example, PSAT data are disaggregated by the College Board using the Summary of Answers and Skills (SAOS), which returns disaggregated data reports with the results to schools, and makes software available such as web-based tools to predict AP Exam performance (College Board, 2016). These assessment data are already past the data level of the framework and are at the information level because they have undergone some

analysis and summary reports can be generated (especially if College Board software is utilized). Most standardized tests commonly used by the Archdiocese have reports that take the school closer to the information level of the framework, by partially summarizing the assessment data. Therefore, these data make it to the information level of Mandinach's framework. With the framework only partially completed, however, it is clear that principals are still not able to prioritize and synthesize data, which can lead to actual decision-making and implementation. It is important to note, that for assessment data to result in self-knowledge leading to evidence-based decision-making, the entire framework must be completed (Mandinach et al., 2006). As such, even when some data are disaggregated and analyzed, as in the case of standardized test scores, there still appears to be a breakdown in the process of using that data to actually inform decisions. These findings were corroborated by findings related to factors affecting the use of data.

Factors Affecting the Use of Data

Through the survey and interviews, principals shared that they felt there was generally schoolwide agreement that using data yields benefits in determining student learning, informing curricular decision-making, and improving student achievement. Their responses on a number of survey items indicate that principals agree that their faculties positively regard the use of data to drive decision-making for improved student performance.

While a small majority of principals agreed that their school had an established protocol for data analysis, the lack of a strong response here shows that there may be room for growth. During interviews, two of the principals spoke of a designated person responsible for disaggregation and presentation of data to department chairs. Principals appeared to agree that gathering and analyzing data was helpful but that the process of analyzing appeared weak. This

finding is similar to the work of Lachat and Smith (2005), who suggested that even with good intentions, often educators do not know where to begin, what data to use, or how to summarize data in an understandable way. While the gathering of data seems to be occurring, the use of protocols to analyze that data seems to remain an area of potential growth. Principals indicated in the survey and interviews that their teachers agreed that data analysis was important and that they wanted the information, but that they were overwhelmed by the amount of data and their lack of training to make use of it.

In fact, specific factors that emerged as affecting the use of data in Catholic schools included issues related to time and training. These same findings were reported by public school principals (Firestone & González, 2007), who also complained that they do not have the time or knowledge to make use of the data. Additional research by Reeves and Burt (2006) showcases this consistent concern among principals about appropriate training necessary to effectively use data. In the current study, principals indicated that teachers regularly met to discuss data, but most principals did not feel that their teachers believed they had enough time to analyze data on a regular basis. In addition, most principals felt that their teachers did not feel trained in the skills necessary to analyze data on a regular basis. All principals were clear that the disaggregation of assessment data was performed by counseling staff and delivered to departments to act upon and oversee. One principal agreed, saying in an interview that he/she did not have the resources to give teachers the time away from teaching to analyze and use data or collaborate with colleagues. The current study therefore aligns with the literature about a needed area of growth among educators related to protecting time, improving skills, and securing resources in order to move data to the knowledge phase of prioritizing and synthesizing data to drive decision-making.

Limitations

The findings appear to align with the literature about the need for more training and time to analyze data. Still, there are several limitations to the study design that should be considered when interpreting the findings. First, the questions on the survey assumed an understanding of the various types of assessment data sources, and the wording of some items may have been confusing to principals. As a principal of an Archdiocesan school, I wrote the items in consultation with personnel from the Archdiocese, and chose language that I felt was appropriate to a sample of principals. Still, it may be that some principals did not have certain data sources, such as curriculum maps and LMS, at their sites, making it difficult to respond to these items. The language of the items may have introduced error and had an effect on their responses and, by extension, the survey results.

Further, empirical research that utilizes qualitative interviews are inherently limited by design. While this study revealed important information regarding the perceptions of principals about the use of assessment data, principals naturally would want to place their school in the most favorable light, particularly when the interviewer is a fellow principal. Also, principals may have been reluctant to reveal information that would put their school at a competitive disadvantage to the school of the interviewer. While it is my professional belief that these principals were forthright regarding their school's use of data, this limitation should be acknowledged.

The three principals interviewed and 22 principals surveyed were a convenience sample of Los Angeles Archdiocesan owned and operated high schools in the Los Angeles Department of Catholic Schools. Although this sample allowed for input from almost every principal of those high schools, it may not be representative of the larger population of Catholic high school

principals outside of the Archdiocese of Los Angeles or of different Catholic high school contexts within the Archdiocese of Los Angeles (i.e., independent Catholic schools). The sample therefore limits the generalizability of the study findings. However, the intent of the study was to add to the body of knowledge surrounding Archdiocesan high schools in Los Angeles, which has unique needs. In that way, the study may benefit the Archdiocese in considering the 25 schools they oversee.

Finally, at the time of the study, the Archdiocese of Los Angeles was embarking on a variety of professional development programs for principals and teachers designed to bring a greater understanding and implementation of core instructional practices to bear on student learning and assessment. This study was completed before these programs were implemented and therefore did not capture the impact of these programs on principals' perceptions of the use of data in their schools. It may be that many of the study's findings are currently being addressed due to these newer programs.

Implications

Instructional leadership by the principal, along with support and encouragement of a schoolwide effort to fully use assessment data to inform curricular decision-making, is crucial. The framework presented in this study can be a helpful tool to analyze whether a specific school is successful in using assessment data to inform decisions. The amount of sources for assessment data, both formative and summative, can be maximized and acted upon using the framework provided. Training will be a positive step, but time to analyze data in a collegial environment is a crucial component. Levin and Datnow (2012) discussed the importance of a strong school leader to protect time to analyze data regularly in a collaborative endeavor.

Changing the Culture

Research suggests that school leaders set the culture of the school, and this is no different when setting the school culture related to the use of assessment data (Marzano et al., 2005). According to Marzano et al. (2005), school administrators must provide teachers with the tools and encouragement they need to collaborate in order to meet the needs of students. Bringing an end to a culture of academic fear felt by many teachers is a challenge that many principals can be trained to accomplish. As such, this study has implications for school leaders, who are reminded to focus on a culture of collaboration and learning when referring to assessment data.

Because Archdiocesan students are socioeconomically and educationally similar from school to school and principals of the Archdiocesan high schools are available to attend professional development regularly at the direction of the Archdiocese, one implication for school leaders is to commit to training on how to turn data into information to make decisions. The ability to see data transform into information to increase student academic performance is within the grasp of Los Angeles Archdiocesan Secondary School leadership. Constructing a culture that permeates the schools with good instructional decision-making and increased student learning based on assessment data can be accomplished with the school leadership already present in Archdiocesan high schools.

Along these lines, an implication from this study related to culture shifting school leaders can do within their own schools is to take a deep look at curriculum maps in order to create a culture of collaborative learning. While curriculum maps are important and expected during accreditation visits, the extent to which they are used in conjunction with curricular decision-making remains unanswered. Principals have an opportunity to bring this powerful tool to bear on student achievement by building a fear-free environment of faculty sleuths who find ways to

adjust their teaching by working together in Professional Learning Communities (PLCs) and comparing their teaching with the maps that everyone in the department could share. As difficult as it can be, ways to inculcate curriculum mapping into the culture of a school must be found to completely and efficiently utilize assessment data (Jacobs, 2004). Leadership strategies are important and helpful, but without a school culture of data use, it will be hard to sustain the effort necessary to build and maintain a living curriculum map that does not sit and gather dust. When compared to data provided by a learning management system and other assessment data, school leaders bring a variety of resources to bring to bear fully utilizing the framework from the gathering of assessment data through to decision implementation and the measurement of the impact those decisions.

Another implication from the findings is that the development of protocols to analyze and use data is an area that principals can impact. Schools tend to look closely at assessment results, often bemoaning low scores and trying new programs to bring scores up. However, reaching conclusions about teaching a specific skill by comparing assessment results to a curriculum map that teachers in a particular subject have developed was rarely ever mentioned by principals. An in-depth protocol where a skill is addressed by looking at what is taught, for how long, and in what detail after finding a disappointing assessment of that skill, was not mentioned by the principals in this study.

The impression of this study was that nonstandardized assessment meant to inform curricular growth is more anecdotal and may vary from teacher to teacher. All principals were clear that the disaggregation was performed by counseling staff and delivered to departments to act upon. The reality is that it is very difficult to fully leverage every aspect of using assessment data fully to inform curricular growth. LMS software and curriculum maps are tools that can help

accomplish this and principals feel that they use these tools effectively; but in reality, much more can be accomplished.

The PSAT and other forms of standardized assessment have become more sophisticated in their disaggregation of data; for instance, reports of PSAT scores provide detailed data about students' achievement and align that with specific skills and standards. Certainly, it is more convenient, less time consuming, and possibly more accurate to use this source of data to compare to maps than to disaggregate data from in-house assessments and follow-up with a comparison to curriculum maps. Leaders must also be mindful that general summative and formative assessments developed by school personnel represent a great deal of time and effort. Working with department chairs and individual teachers, then, to create a collaborative approach to the use of assessment to drive curricular growth is most productive when those teaching are closely involved and relieved of the concern that the results are being used to actually assess the teacher's performance.

Recommendations

Principals create new strategies and policies to accomplish their goals consistently and often. Unless principals positively affect the culture of their school by addressing those strategies and policies along with teacher concerns, lasting improvement in the use of assessment data to drive curricular decision-making may not result.

Principals are in the best position to affect a change in school culture where teachers and department chairs no longer fear assessment results, but see themselves as academic detectives armed with data to positively affect student learning. This is particularly true in Catholic high schools because one of the distinguishing characteristics of Catholic schools in general is the high degree of local authority (Heft, 2011). There is no shortage of innovative programs

available to accomplish this laudable goal. Unfortunately, until these programs are employed and analyzed, there is no guarantee or assurance that they will accomplish the goals they have been employed to achieve. This study reveals that although the desire is there, real change does not occur by fiat and must come from principal leadership. Principals in turn need assistance, support, and training from the Department of Catholic Schools. Therefore, specific recommendations for principals and the Archdiocese of Los Angeles to consider, related to assisting high school leaders with using assessment data to inform curricular decisions, are highlighted below.

Archdiocese/Department of Catholic Schools

1. Provide professional development for Catholic school leaders on how to change perceptions related to assessment data to encourage a culture of learning and collaboration.
2. Hire new principals with the experience and skill set necessary to change school culture.
3. Begin a process of systematically gathering assessment data in Archdiocesan High Schools to inform curricular growth throughout the 25 schools. Lead the schools through the discussion of the advantages and challenges of sharing data to help establish a culture of collaboration in which principals can learn from each other.
4. Institute specific criteria for curriculum mapping in Catholic high schools and indicate how those maps may be to be used to align with assessment data, so that data may be examined similarly across all schools.

5. Share data among school leaders and the Department of Catholic Schools with a clear understanding of the sensitivity of the data.
6. Provide professional development on how schools can analyze and showcase their processes of using data through each step of a framework, such as Mandanich et al. (2006), and embed these steps into an accreditation document.

School Leaders

1. Provide professional development for faculty to establish a clear protocol including a definition of data, how to analyze data, and how to make curricular and instructional decisions based on data.
2. Identify fellow teachers or school personnel who have the skills to analyze data. Invite peers or experts to provide professional development to teachers on how to analyze data.
3. Support teachers and department chairs by instituting policies that provide faculty time to analyze data with departmental collaboration.
4. Create the culture of growth in the school community with effective assurance that this is about learning and not about job status or security.
5. Analyze the current sources of data available at the school. Identify a balance between LMS, curriculum mapping, and lesson planning, accentuating the similarities to eliminate duplication of effort.
6. Provide professional development for department chairs and other school leaders to improve skills in working with others who may be resistant to growth and change.

7. Provide professional development on Professional Learning Communities to allow teachers to collaborate and help each other with analyzing data.

Conclusion

This study highlighted the challenges of using data to inform decisions in Catholic high schools in the Archdiocese of Los Angeles. Findings indicate that principals agree that using data is important to driving decisions. Additionally, principals indicate that there are processes in place to gather data. However, the breakdown of turning that data into information to inform decisions appears to occur because of a lack of time and resources to analyze the data and align the findings to actual teaching and curriculum. Knowing this, recommendations are offered to provide professional development for school leaders and their faculty. Ultimately, the more school principals are open to sharing their data, what is working, and what may be a challenge in their own schools, the more likely a culture of collaboration can be built. Establishing a culture of using data to inform decisions among all Catholic schools, may serve as a model to individual schools about how to engage in the process of turning data into information. When school leaders implement a culture of using data, built on a culture of trust with their faculty, curricular and instructional decisions will be ground in data and this may ultimately benefit students. Such findings might enrich our schools to bring about concrete change in Catholic high schools that improve instruction and learning. While these findings stem from work happening in the Archdiocese of Los Angeles, Catholic schools nationally may wish to join in the endeavor and begin to discuss ways in which we can all create a culture of data use through sharing and collaboration of data nationally.

This work is ultimately in service to our students and the Archdiocesan high schools that have traditionally served students from low socioeconomic families. Although tuition for

Archdiocesan schools are low compared to other Catholic schools, financial aid is a large part of every Archdiocesan Catholic high school's budget. Students who attend Archdiocesan schools, no matter their socioeconomic level, are entitled to the highest quality data-informed decision-making available. Doing so fulfills Catholic thinking of the last century to fully serve a basic mission of Catholic social thought: a preferential option for the poor (Smolich, 1992). Applying this teaching (which originated in Jesuit spirituality) to our role as Catholic educators, a preferential option for the poor brought to bear in our realm of responsibility requires an academic culture that demands the best use and application of data. It is a dedication to this culture of social justice that can bring a commitment to offering the best possible education to those children we serve.

APPENDIX A
Survey Questions

1. My school uses curriculum mapping to determine what is taught, how often and when by each teacher.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

2. My school has an established protocol for the collection, analysis, and dissemination of data.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

3. My teachers feel that their learning management system (LMS) provides them with data that they use to inform their instructional decisions.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

4. Oversight of data analysis for student academic data for my school is provided by:

- Principal
- Vice Principal
- Curriculum Director
- Department Chair
- Teacher
- Other
- No one is assigned this duty

5. As principal, my staff and I have developed summative/formative assessments aligned to our curriculum or other standards.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

6. **My teachers and administrative staff feel that data management tools such as online curriculum mapping simplify the process of acquiring data.**
    - Strongly Disagree
    - Disagree
    - Neither Agree nor Disagree
    - Agree
    - Strongly Agree

7. **Teachers and departments regularly meet to discuss data analysis.**
    - Strongly Disagree
    - Disagree
    - Neither Agree nor Disagree
    - Agree
    - Strongly Agree

8. **Student data is analyzed in core subject areas regularly on my campus.**
    - Strongly Disagree
    - Disagree
    - Neither Agree nor Disagree
    - Agree
    - Strongly Agree

9. **Grade level Data is analyzed in core subject areas regularly on my campus.**
    - Strongly Disagree
    - Disagree
    - Neither Agree nor Disagree
    - Agree
    - Strongly Agree

10. **My teachers feel that they do not have time to analyze data on a regular basis.**
    - Strongly Disagree
    - Disagree
    - Neither Agree nor Disagree
    - Agree
    - Strongly Agree

11. **My staff does not feel trained in the skills to analyze data on a regular basis.**
    - Strongly Disagree
    - Disagree
    - Neither Agree nor Disagree
    - Agree
    - Strongly Agree

12. My faculty and staff fear that analysis of data will be used to determine their effectiveness.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

13. Members of my staff have recently attended professional development sessions related to student data analysis?

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

14. I create expectations by stating clearly that data use is non-negotiable and expected from teachers and departments.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

15. My faculty and staff trust that data will be used to inform curricular decisions, not teacher evaluation.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

16. Teachers on my campus have the necessary skills to analyze and interpret data to improve instructional practices.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

17. My teachers feel that it is important to review and gauge student learning and alter their instruction accordingly.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

18. Teachers at my school feel that the analysis of data to make curricular and instructional decisions improves learning.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

19. Teachers gather data in the classroom and attend data-driven meetings to better understand students' progress toward student achievement goals.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

20. Member(s) of my staff serve as data coaches are available to support data analysis campus-wide.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

21. My teachers find it challenging to apply data to classroom situations.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

22. My teachers find the lack of time, particularly time to update and analyze data to be challenging.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

23. Data analysis and disaggregation is seen in a negative light by my teachers and administrators.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

24. My teachers feel that data analysis has had a positive impact on student learning in my school.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

25. I or a member of my staff examines results of summative/formative assessments to inform instructional decisions.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

26. Department chairs and teachers have used data to define student achievement goals for each subject area.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

27. Departments at my school make data informed instructional decisions for individual students based on results of both formative and annual student-level assessments.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

28. My administrative staff, department chairs and teachers find it difficult to translate the information generated by data analysis into curriculum.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

29. Analysis of data has helped my teachers and staff to identify instructional areas that need to be addressed in my school.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

30. In my view the analysis of data does not improve teaching and learning in my school.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

31. In my teachers view, the analysis of data does not improve teaching and learning in my school.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

32. Teachers feel that data analysis has helped to identify instructional needs in my school.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

33. My teachers feel that data analysis tells us nothing that we do not already know or cannot discover in other ways.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

APPENDIX B
Interview Questions

DESCRIPTION OF STUDY SCRIPT

Thank you for taking the time to speak to me today. I am interested in learning about your experiences in the field as a principal of an Archdiocesan school in LA. I'd like to ask you a few questions about examples of your work with data to make curricular decisions.

Here is the consent form – READ THROUGH CONSENT. I am asking your permission to be interviewed and to audio record today's interview. The recordings are to help me remember the details of our conversation and will be used for research purposes only. After today's interview, if you would like to review the transcripts of these, please let me know. All discussions about findings will be confidential and your name will never be used.

Do you have any questions? ANSWER IF SO.
Great! Thanks, let's get started…

INTERVIEW QUESTIONS

Q1.

a. Describe your current position; how long have you been principal at your school site? Prior to that, where did you work and in what role?

Q2.

a. Can you describe the process your school currently uses to examine data to inform instruction and curricular decisions?
b. PROMPTS:
    i. How do you examine/disaggregate data?
    ii. Do you use curriculum mapping?
        1. Is it online or web-based?
        2. If so, how does that work?
        3. How do teachers (Chairs, etc.) feel about it?
    iii. Who is involved in the process – Teachers? Chairs? You?
    iv. What curricular programs do you offer at your school?
        1. Were any of those started because of data?

Q3.

a. What are some of the factors/reasons why you think the curricular-decision making process works at your school?
b. PROMPTS:
    i. How do the teachers feel about the use of data?
    ii. How does Leadership feel?
    iii. How is time a consideration?

OR

c. What are some of the factors/challenges as to why you think this is (is not) working?
PROMPTS: Resistance? Skills? Fear? Time?

Q4. RECOMMENDATIONS:

a. What do you think would help you as a principal, or help other principals, do better with using data to drive curricular decisions?
PROMPT: What do you or your faculty need? What recommendations do you have?

Q5. Do you have any questions for me?

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