

TEACHING AND LEARNING VS. "DOING SCHOOL"
THE IMPACT OF RIGOROUS CURRICULUM ON STUDENT DEVELOPMENT

A DISSERTATION SUBMITTED TO THE
GRADUATE SCHOOL OF THE UNIVERSITY OF MINNESOTA

BY

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF EDUCATION

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July 2013

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ACKNOWLEDGEMENTS

When I graduated from college in 1998, my parents gave me a ring that was inscribed with the words *May 1998 - Halfway there*. That inscription reflected my lifelong dream of completing my doctorate. At that point, I did not yet know where my academic pursuits would take me in life but I knew that I longed to study at an advanced level. Here I am some 15 years later, and I can't believe how far I've come. Life experiences proved to create some ruts and sharp turns in my path, but my love for learning always came back to bring me to this place. I still wear that ring on my finger today and will only take it off when I graduate.

Teaching and learning feeds my soul. I want to influence the experience for young people who feel an inherent need to constantly learn. I know that they may never find the need that I have to do so, but I at the very least believe that they can appreciate learning in its most pure form - molding one's craft to be better - whatever that craft may be.

Thank you to the University of Minnesota and my advisor, Dr. Karen Seashore (Louis) for allowing me to pursue my studies at such a remarkable institution. I am grateful to have had the opportunity and the means with which to have so many rich conversations with wonderful professors and challenging courses. Thank you to my incomparable advisor, K. Your tough love and honest communication brought me through to this point.

I would be remiss if I did not acknowledge the other people who have helped me to get to this culminating point in my development and growth. My parents have been with me each and every step of the way to celebrate my successes and listen to

me without judgment when I rationalized my lack of progress more for my own ears than theirs. Mom - your strength and faith grounds me in humility. Dad - your unwavering pride for your daughter lifts me up. AC - your strength to overcome reminds me that anything is possible. My second family - the Olson's - you are a true source of peace for me. Sarbear - you bring me back into focus and adjust my perspective when I start to take myself too seriously. Ole - you welcome me without question or judgment into your family. My little bear - you remind me every single day why I became an educator. Your little mind is so remarkable. It is a gift and my greatest joy to watch you grow.

My latest love for program design and organizational change has been a labor of love. During the past six years, I have wrestled my way through theory, writer's block, deadlines, shifts in process and research, and more deadlines to reach this place. This work is a reflection of my development as a scholar and as a professional. I am and always will be a teacher. My work looks different and my classroom is growing, but my intent is always the same - to change education for the betterment of the kids. This work is a reflection in that core belief.

I am proud of this work. I am glad for the growth that I have gone through with this project. I am humbled by the integrity of this process. I am thankful for the tremendous love and support I have received throughout this journey. I am grateful for having had this opportunity.

DEDICATION

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I dedicate this work to my grandmothers - both amazing women from whom I learned strength, devotion, creativity, love, and unapologetic moxy. They taught me to honor the place from which I come and look toward my future, as I am the one who defines it.

Yvonne "Dolly" (Melquist) Jarva

Harriet (Mee) Sipe

ABSTRACT

I think what I learned in the IB [International Baccalaureate] program...well, in a way I felt like – have you read Great Expectations? When Pip gets the stipend from the mysterious person and he's walking out and the clouds are lifting up and he can see all the possibilities – that's how I felt with the IB program.

-Student reflection on experience as an IB student

Schools are faced with many challenges, with the most emphasis on increasing student performance. This challenge cannot be met without thoughtful consideration around the actual meaning of increasing student performance. Traditionally, increasing student performance translates to increasing student test scores across sub-groups school-wide as related to state mandated standards-based assessments. This study posits, however, that by increasing the curricular rigor offered to students in urban high schools, student performance improves in the short-term through student achievement while also improving student satisfaction in the long term by more aptly preparing students to perform in the post-secondary environment.

This very notion of student growth, achievement, and success is nestled within the threads of thoughtful and sustainable program design and arguably - most critically - the power and impact of quality teaching. The argument that students will flourish and thrive when placed in an instructional environment that is simultaneously supportive and challenging is not a groundbreaking discovery. The balance that is required within program design and the support required for teachers to be able to create that environment for students is more difficult to define and even harder still to measure. Therefore, the focus for this research study is the beginning of a larger-scale grounded theory study that will examine several school models grounded in impacting student achievement through rigorous curriculum and the program supports needed in order to create that space for student success.

The research in this first installment looks at the role of the rigorous curricular model, International Baccalaureate; the impact of distributed leadership; and the sustainability of program design for organizational change in reference to student success and growth. Through the process of interviewing, forty-three subjects (4 principals, 4 program coordinators, 15 teachers, and 20 students) were asked to identify the most impactful experiences that they have had throughout the development of the International

Baccalaureate program at Meadow Brook High School, an urban school in Minneapolis, Minnesota. This research illustrates the perspective of program development and organizational change from the practitioners' point of view. Included in this investigation is how teachers view distributed leadership in their settings as well as the behaviors and supports they associate with it. Also included in this investigation is overall the impact that program design and implementation ultimately has on the overall success and development of students enrolled in the International Baccalaureate Diploma Program. The interviews were transcribed and analyzed for themes. A grounded theory approach was utilized in the analysis to bring forth the prominent themes. Upon the themes, further analysis was drawn and implications will be shared.

There were three major findings from the study, which help to inform the field of education on distributed leadership, access to rigor for students of minority or limited socio-economic opportunity, as well as the impacts that rigor can have for these students. First, defining distributed leadership as it is related to program sustainability is a complex process. There is some evidence, however, to suggest that distributed leadership influences the satisfaction and perceived value of stakeholders, which by association informs and furthers sustainability. Second, according to the students and staff members interviewed, the major skills impacting student development for the learners engaged in the rigors of the International Baccalaureate Program at Meadow Brook were self-advocacy, organizational management, and skills for critical analysis. Third, the identification of the elements most critical to student learning and engagement of students in the IB at Meadow Brook cannot be answered in a quantitative measure. The answer rather is presented through the qualitative experience and growth that occurs for students through the supports created for them and the rigor of the curriculum.

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Prologue

In order to truly tell this story of the impact of the International Baccalaureate (IB) on students at Meadow Brook, I must ground myself into this work prior to presenting any findings gathered during the research process. This work began, for me, eight years ago when I accepted a position as the IB Middle Years Program (MYP) Coordinator at Meadow Brook High School. Prior to that, I had been a Language Arts teacher at Meadow Brook for two years where part of my work was design and delivery of the MYP to 10th grade students. When I accepted the position to coordinate the MYP at Meadow Brook, I did so with the hope of building a strong base of IB as the foundation for learning at Meadow Brook. The IB Diploma Program was in the development stage and the principal wanted a strong coordinator team to design curriculum, professional development, and to support staff and students as they battled through the changes ahead...and battle they would.

The initial stages of the work for me focused on supporting teachers. I spent time listening to their concerns. I focused on helping them to identify the obstacles that they felt stood in front of their forward progress, and worked to help them change the equation in order to find success. For most, time and support was the thing that they needed in order to find their feet in this work. For others, they needed a change. IB was not right for them. It did not sync with their philosophy for teaching. My work then became about helping those teachers name that and find a building that would better match their beliefs.

I served in this role for two years before leaving Meadow Brook to pursue another professional endeavor. I continued to follow the development of Meadow Brook's IB program through continued conversations with the building's coordinators and administration. I knew that I wanted to return to conduct my research there. Two years later, I did just that. My focus then shifted to creating an objective and safe space for my research subjects to tell their story. The first step in that was to address any concerns that they had around my objectivity to collect data on a program that I helped to design. These conversations were focused on being open to answer any of their questions while making certain that they understood

that I was no longer affiliated to Meadow Brook or the larger school district in any way nor would I share any of my interview transcripts or data with them directly.

An unexpected component of the research, however, that I did not anticipate was that my research subjects reflected comparatively on the program when I was there to the program after I had left. They addressed these reflections in their interviews. For example, one teacher lamented on the support that she received from me when she first came to the building. She compared that to her present situation saying, “...things were different when we lost you. It was like someone took our foot off the pedal. There wasn’t follow up for our units. We lost our focus for a while.” Hearing this teacher speak brought about some feelings for me regarding my attachment to this program. I reflected on this in reference to the trending and coding of my interview data. I worked to remove these comments from the research, but came to realize that they were an important part of Meadow Brook’s story. They –like my involvement in this program – were inextricably woven into the fabric of the Meadow Brook.

My purpose in telling this story now is to acknowledge that I am a part of Meadow Brook’s history and more specifically the IB at Meadow Brook. Irrespective of this, however, is the need to tell the story of these teachers and students who have contributed and been impacted by this program. It is not about me. It is about them.

Chapter 1

Introduction

Schools are faced with many challenges, with the greatest emphasis currently placed on increasing tested student achievement for all students. Achievement levels have varied across racial and socio-economic groups within schools since the 1960's when schools were integrated, and the public, as well as many educators simply accepted that achievement, graduation rates, and college attendance would vary as well. Recently, however, the *achievement gap* has become a dirty word and pundits argue that its effects range from social polarization to a lack of competitiveness as an educational and economic superpower.

There is no known formula for increasing student achievement, but one thing is certain - there is an ever-increasing pressure for the nation's school districts to perform and make a marked improvement in the achievement of students from all racial and socio-economic standings. Schools, in particular, are faced with restructuring, re-purposing, or the removal of administrators and teachers as an intervention if they are not meeting district, state, and federal measures for improvement.

What can be done to move states, districts, and, at a much more granular level, schools to better meet the learning needs for students from all situations? There are a number of differing solutions continually swirling around professional associations and politicians. One constant has run throughout many of these for more than three decades - a call for a unified set of standards or common core grounded in rigor for students at all levels. The most widely publicized critique of

the American educational system coming in the government commissioned study, *A Nation at Risk* (1983) recommended that schools, both K-12 and higher education, adopt more "rigorous and measurable standards," and have higher expectations for student performance and conduct.

Findings were divided among content, expectations, time, and teaching. Regarding content and expectations, it was found that "curricula have been homogenized, diluted, and diffused to the point that they no longer have a central purpose." Students have stopped taking college preparatory courses steeped in rigor in favor of "general track" courses. "We offer intermediate algebra (algebra 2), but only 31 percent of our recent high school graduates complete it. . . . Calculus is available in schools enrolling about 60 percent of all students, but only 6 percent of all students complete it" (*A Nation at Risk*, pp. 61–62).

The underlying assumptions of the call for more rigorous curricula are numerous. First, if educators are to work to provide a fair and equitable daily education for students, there must be a clear set of standards and goals for that instruction. Curriculum must be clear, focused, and grounded with assessments for learning. Second, there must be a common understanding, belief in and acceptance of those standards and the philosophy through which they will be implemented. Third, in order for this to happen, there must be a common vision and cooperation between the leadership and teaching staff in a school. In other words, the adults in the school must reach consensus around what rigor means, what high expectations consist of, and what standards and benchmarks could be used to determine whether students are experiencing and benefitting from what it intended.

Increasing achievement for a larger number of students can only improve with the collaborative effort of several parties within a school. For example, administrators must have the skills to serve as instructional leaders; teachers must be given the training and opportunities necessary to grow and develop; and opportunities for learning and advancement that are equitable and accessible must be made available to students.

This study will focus on the role of a rigorous curriculum, and how it may contribute not only to increased achievement for those students who already do well in schools, but also for those who are often “left behind”. Rather than emphasizing a “one size fits all” standard of success, as measured by state tests in the U.S., a rigorous curriculum can allow students to find multiple access points through which to access rigor by demonstrating mastery of curricula. A potential fit that encompasses the aforementioned concepts of curricular standards, rigor, and staff collaboration to improve achievement and reduce the gap may be through the introduction of a new curricular model that provides opportunities for rigor to students of all achievement levels. While not focusing on standards, curriculum rigor can also promote student success on more conventional tests. Harris and Herrington (2006) argue, in their historical trend analysis, that the achievement gap has been reduced only when there have been persistent efforts to expose all students to a more rigorous curriculum.

Most current policy initiatives emphasize two main approaches to rigor. First, existing coursework requirements can be “ratcheted up” for increased rigor for all students. It is often recommended, for example, that all students should be

required to take pre-Algebra in 8th grade, and be required to pursue higher-level mathematics courses through high school (Burriss, Wiley, Welner & Murphy, 2008). Second, additional curricula designed to challenge students at an accelerated level can be implemented along with efforts to recruit more underrepresented students into such programs. The press to increase the access for minority students to Advanced Placement courses represents one such approach (Darrity, Castellino, Tyson, Cobb, & McMillan, 2001), including the offering of a la carte AP course selections for all 11th and 12th grade students. Similarly College in the Schools (CIS) is structured around concurrent credit earning for students by providing college-level content in a “regular” high school setting. A third approach, the International Baccalaureate, is offered through comprehensive programs that are designed to emphasize a more rigorous curriculum across all subjects rather than a more piecemeal course-by-course approach. This program will be the focus of my study.

Any curricular model that provides pathways for increased rigor for any and all levels can be difficult to implement well. Teachers require training, which is often accompanied by a substantial investment in fees and professional development; new staffing positions may be required to manage the program; class schedules may need to be re-thought; existing models of instruction may be seriously challenged.

Challenging traditional instructional practices is, without question, the most problematic because the style of instruction is often times the most internalized process point in a school culture. Adapting the way in which instruction is delivered must occur on several levels in order for deep organizational change to take hold. True adaptation requires adults to work together in different ways. Teacher leaders,

principals, and teachers must come to a common understanding around the learning needs of students.

All of this change activates skeptics, who may wonder whether the current round of curriculum innovations is just another “reform du jour”. What are the impacts of the International Baccalaureate on student learning? What role may the relationships and development of organizational culture with the adults in the school have on the success of the program and ultimately on the learning of the students in the program? There is not sufficient or pointed research devoted to the impact that leadership may have on the implementation of International Baccalaureate programming or the impact of the program on student learning. Thus, it is the intent of this study to examine the effects of leadership on program development as well as the overall success of students enrolled in both the Middle Years and Diploma Program.

Research Questions

The research presented in this volume examines the potential connection between student achievement and the comprehensive curricular model, International Baccalaureate. The goals of this study are to determine the relationship between student achievement and comprehensive curricular models and to determine if access to rigorous and comprehensive curricular models in the middle years can moderate the association between race and academic achievement in the high school years. Three main research questions emerge from the literature review and will guide the design.

1. What are the major skills impacting student development as identified by staff and students engaged in an International Baccalaureate Program?
2. What aspects of the IB Program are viewed as most critical to student learning and engagement in a mixed race, low-income metro area school?
3. How is leadership from administration and teacher leaders related to program sustainability and the impact of the IB on student learning?

Organization of this Study

Chapter one introduces this study including the research focus. Three questions serve as a framework for this research. A review of the literature around the topic of distributed leadership, comprehensive curricular models, and equity provide the focus for chapter two. Chapter three outlines the research methodology, while chapter four includes an examination and analysis of the results. The last chapter highlights the major findings of this research and makes recommendations for future research.

Chapter 2

Introduction

As noted in the previous chapter, we do not lack observations about areas that are ripe for reform in order to address the achievement gap in America's educational system—we know less about the *how* to change the vast and highly localized system of public education to put these suggestions to serious test. Exhaustive research has been done on the types of professional development and working structures necessary for teachers to create culturally relevant, standards-based instruction to increase student achievement and grow competent and successful teacher leaders (Smylie (1997); York-Barr and Duke (2004); Murphy (2005); Smylie, Conley, & Marks (2002); Lieberman and Miller (2004)). Still more research has been conducted around the most effective model for principal/administrative leadership in order to affect deep organizational change (Murphy (2005); Smylie, Mayrowetz, Murphy, Louis (2007)). A cursory examination of the funding shifts in federal, state, and local educational legislative funding shows an increasing focus on student achievement juxtaposed with decreased economic support. The conversation around the achievement gap has stretched further in recent years to include racial and socio-economic isolation in our schools and the need to integrate as a tool for bridging the achievement gap (Orfield, Luce, Gumus-Dawes, Finn, & Myott, (2009)).

There are many accountability pressures on schools to reach all students in the form of achieving proficiency as set forth in high stakes assessments. None of them, however, are helpful in bridging the achievement gap without specific

attention paid to the true source for the achievement gap. The achievement gap can be explained in large measure by the lack of quality curriculum, quality teachers, and resources available in schools with high percentages of free and reduced lunch (low socio-economic designation) as well as high concentrations of students of color. Opportunity to learn standards as articulated in *Goals 2000* during the 1990's were created to address the ever-increasing achievement gap to ensure that consistent standards for learning were applied to instruction in all schools regardless of resources (H.R. 1804: Goals 2000: Educate America Act, P.L. 103-227). In actuality, however, schools became more isolated due to concentrated and abject poverty in surrounding communities and increased concentrations of students of color, differences in ability that once classified as tracking began to spread to entire schools.

The reality is that schools offer different kinds of curriculum to different kinds of students. Opportunities and access to advanced courses are not readily accessible to students who attend schools that are racially or socio-economically isolated. Fifty year after *Brown v. Board of Education* (1954), our schools are still sharply segregated by race (Orfield & Yun, 1999). At the same time, racial differences in educational performance and attainment continue to be central to inequality in America (Farkas, 2004; Jacobson, Olsen, Rice, Sweetland, & Ralph, 2001). Recent research shows that during every year of schooling, African American students continue to learn less than comparable white students (Phillips, Crouse, & Ralph, 1998). Whereas African American children begin elementary school approximately 1 year behind whites in vocabulary knowledge, they finish high school

approximately 4 years behind whites (Jacobson et al., 2001).

African American students encounter adversity due to disadvantage whether or not they attend a racially isolated school. On average, they enter with lower academic skills compared to white students (Jacobson et al., 2001; Phillips, Brooks-Gunn, Duncan, Klebanov, & Crane, 1998) and are more likely to occupy lower curricular tracks and take less demanding coursework (Jones, Vanfossen, & Ensminger, 1995; Lucas, 1999; Mickelson, 2001). Moreover, teachers typically rate them as less attached and engaged in their schoolwork compared to white students (Ainsworth-Darnell & Downey, 1998). A growing body of research has found lower achievement gains in urban schools and schools where a higher percentage of the student body is African American (Bankston & Caldas, 1996; Roscigno, 1998).

Within school segregation is common even in racially mixed schools and districts (Conger 2005). Tracking has grown from classrooms within a school to schools within a district. Entire buildings are falling victim to tracking. The achievement gap can be studied between two buildings within the same school district. It is prevalent in achievement scores, leadership and teaching, as well as curricula available to students. Increasing access for all students to rigorous classes or detracking is a potential intervention.

Burris and Welner (2005) point out when all students – those at the bottom as well as the top of the “gap” – have access to first-class learning opportunities, all students’ achievement can rise. Detracking, a term used for the process of creating pathways for students of all learning and achievement levels to find ways in to rigorous and advanced courses. Detracking reforms are grounded in the established ideas that higher achievement follows from a rigorous curricula and that low-track classes with unchallenging curricula result in lower student achievement (Burris and Welner, 2005).

Worse, a less challenging curriculum is often accompanied by instruction that asks less of students who are perceived to be less able. As Appleby, Langer, Nystrom & Gamoran (2003) demonstrate, students who are less challenged through high-level discourse perform better. This is apparent even in “tracked” settings (Gamoran 1996).

Haycock’s review of existing research (2001) identifies several key factors that increase student achievement for lower performing students: standard aligned curricula that offers challenging opportunities for learning for all; opportunities for re-teaching and intervention; high quality teachers who can engage students in their learning; and a rigorous academic core. An in-depth examination of all of these factors in concert is imperative concerning *how* reform should be approached in order to achieve change but as yet, there has been no comprehensive examination of how these factors might be combined to achieve the many goals of educational improvement. This has not prevented many suggestions about particular strategies that might provide strategy to decrease the gap without waiting for massive changes in socio-economic and residential patterns. In recent years, for example, the federal government has established the Magnet Assistance Program, which stipulates as one of its most key tenets that school integration through rigorous course offerings may serve as the inroad necessary to begin bridging the achievement gap (Lucas & Gamoran 2002).

This chapter will organize the literature related to three themes that have emerged in the literature: 1) sustainable reform through increased access to rigorous curriculum, in particular the International Baccalaureate; 2) organizational

change including structural and cultural changes needed in schools; and 3) an internal call for change including distributed leadership and its potential impact on organizational change, principal leadership through instruction, and the development of teacher leaders.

Through these three themes, the potential for a comprehensive curriculum to address the achievement gap and what is required for the adults who work in the schools building these programs must do in order to make the experience a success for all students will be identified. From the literature, a deeper understanding of the multi-leveled impact for school change within models of leadership and decision making will be identified and will provide a lens through which to view attempts at decreasing racial isolation and the potential for bridging the achievement gap in our schools today as well as a need for additional research and study around this issue.

In an educational forum where student achievement on high stakes tests and the achievement gap are driving legislative decision making and funding at state and federal levels, the conversation has centered around equity, integration, differentiation, and pathways for students of color into rigorous courses (Mickelson & Smith, 1999, Mickelson, 2001, Lleras, 2008, Kelly, 2009). While there has been extensive research done around school integration and educational reform, there is a need for study around advanced coursework and models for rigor as a means for eliminating racial isolation and bridging the achievement gap.

The Promise of a Rigorous Curriculum

The educational rationale for school desegregation rests largely upon claims that it improves the access of minority students to the higher quality education

generally available to white Americans and therefore improves both minority students' educational outcomes and life chances. Evidence clearly demonstrates that desegregation improves the long-term life chances of minority students. At the same time, the evidence in support of the claim that desegregation improves short-term educational outcomes has also been unequivocal. (Mickelson & Smith, 1999). One such example of short-term educational outcomes comes through the introduction of a rigorous curricular model that provides opportunities for rigor to students of all achievement levels.

Most current policy initiatives emphasize two main approaches to rigor. First, existing coursework requirements can be "ratcheted up" for increased rigor for all students. A great many empirical studies have examined the determinants and consequences of curriculum track placement in American schools. The results suggest that placement in higher tracks compared to lower tracks leads to greater achievement gains (Gamoran, 1996; Gamoran & Mare, 1989; Hallinan, 1998; Lucas & Gamoran, 2002; Oakes, Muir, & Joseph, 2000; Pallas, Entwisle, Alexander, & Stluka, 1994; Stevenson, Schiller, & Schneider, 1994). The positive relationship between advanced coursework and academic achievement is typically attributed to more material being covered, at a more advanced level, and with higher instructional quality and higher teacher expectations in higher track courses (Friedkin & Thomas, 1997; Gamoran, 1990, 1996; Gamoran & Mare, 1989; Hallinan, 1998; Lucas, 1999). Furthermore, placement in more advanced coursework results in more positive school-related attitudes, fewer behavioral problems, and higher educational

expectations, even after controls for prior achievement and educational plans (Berends, 1994; Vanfossen, Jones, & Spade, 1987).

It is often recommended, for example, that all students should be required to take additional curricula designed to challenge students at an accelerated level. These curricula can be implemented along with efforts to recruit more underrepresented students into such programs. The press to increase the access for minority students to Advanced Placement courses represents one such approach (Darrity, Castellino, Tyson, Cobb, & McMillan, 2001). There are a variety of rigorous course programs used in schools. For example, Advanced Placement offers a la carte course selections for 11th and 12th grade students. Similarly College in the Schools (CIS) is structured around concurrent credit earning for students. A third approach, the International Baccalaureate, is offered through comprehensive programs that are designed to emphasize a more rigorous curriculum across all subjects rather than individual courses.

International Baccalaureate.

The International Baccalaureate provides opportunities to increase rigor, equity, and accountability through its programming and design. Schools that offer IB programming infuse their core curriculum with a world focus designed to help students understand their role as citizens. The IB Organization offers three programs for students aged 3 to 19, working in cooperation with IB world schools: the Primary Years Program (PYP) for ages 3 to 12; the Middle Years Program (MYP) for ages 11 to 16; and the Diploma Program (DP) for ages 16 to 19. These programs emphasize changing technologies, world languages, and cultures in schools'

curricula.

The International Baccalaureate Diploma Program is a challenging educational program designed for capable, highly motivated students in their final two years of high school. It was created in Geneva, Switzerland and was first implemented in schools across post-World War II Europe. As diplomats and others involved in the reconstruction effort relocated throughout Europe, their children required a common high school curriculum that would fulfill the entrance requirements of universities worldwide. As a result, the IB DP was created in 1968. It came to the United States in early 1972. Since that time, the International Baccalaureate Organization (IBO) has undergone remarkable growth, and as of November 2012, 2368 schools worldwide offered the DP, with 121,195 students writing 443,471 examinations (International Baccalaureate North America, 2013).

The Diploma Program offers opportunities for potential gain in all three of the areas that were designated as external factors in educational reform. The IB increases opportunities for access and equity for students through its focus on a path for each student. The Diploma Program curriculum requires that students select one course from each of six subject areas: language A1, offered in more than 8- languages and intended for students to maintain strong ties to their first language and culture; a second language, focusing on spoken and written communication; individuals and societies; experimental sciences; mathematics and computer science; and the arts. In each of these six courses, a core of material, requiring 150 hours of instructional time, is studied. An additional 90 hours of instructional time for higher level material is required for three of those courses, known as Higher

Level (HL) courses.

In addition to the program's subject group requirements, the Diploma Program features three elements unique to the IB that is designed to create a space for students to show their depth as contributing members of their community and as critical thinkers. Those unique elements are the Extended Essay, Theory of Knowledge, and Creativity, Action, and Service (CAS). These three elements are what may serve as those of greatest return in terms of potential building elements. Each allows for an increase in the specialized and authentic experience of the student. The Extended Essay calls for the student to construct a logical argument around a topic of their choosing. They must show an understanding of the research process as well as the components of constructing an argument. The Theory of Knowledge class challenges students to consider why they know what they know. They are encouraged to ask questions and not accept assumptions in their education. Finally the CAS portion of the programs works to grow a sense of purpose in students. "Participation in the school's CAS program encourages students to be involved in artistic pursuits, sports, and community service work, thus fostering their awareness and appreciation of life outside the academic arena" (IBO, 2013).

The IB program offers an increased focus in rigor through its devotion and belief in preparing all students to be inquirers who are knowledgeable, and contributing members of a larger society who work to bring about intercultural understanding and respect. Each course is concluded with a rigorous assessment that is moderated and inviolated by external reviewers all over the world. In

addition to these external summative assessments, students are assessed throughout each two-year course with internal assessments that are designed to track their acquisition of central concepts along the way.

Finally, the IB program supports the external factor of increased accountability not only through its rigorous assessments practices, but also through course standards and benchmarks, which have recently been norm, referenced to the Northwest Evaluation and Comprehensive Assessments for several states.

In reference to curricular innovations and the internal factors for reform listed above, the IB calls for teacher leadership throughout its programming. A fundamental component of the training and professional development matrix for the International Baccalaureate Organization follows a train the trainer model. The IB believes in the development of its own . . . its educators who exist as the best and the brightest for passing on the message (Beard 2006).

While there is a focus on developing leadership capacity from within IB schools, the connection between IB's program of rigor and the potential for reducing racial isolation is also addressed. In a study done by the Wallace Foundation (2010), integration funding used for developing the International Baccalaureate Diploma Program in three school districts produced needed reform in three high schools that were categorized as racially isolated. Integration dollars were used to help schools revamp course offerings, restructure the school day, and align courses across grades, subject areas, and state standards. IB programming resulted in changes for teachers in three main areas including teacher training, collaboration and planning, and teacher evaluations. IB programming changed teacher strategies with the use of

formative assessments to provide feedback to students more group activities, and more technology in classrooms. As a result of IB programming, an increased number of students were planning to attend college since the implementation of the IB. IB brings about adjustments to any school culture in addition to the changes to the organizational structure, course structure and scheduling, teaching strategies, collaborative time, technology infusion, formative and summative assessments (Hale, Cassidy, & Hale, 2007).

Organizational Learning- Structure and Culture

What are the most important elements to consider from an organizational standpoint when implementing a comprehensive curricular program like the International Baccalaureate? The program design calls for a complete adjustment in both the structural and cultural design of the organization, which means that both individuals and groups in a school need to learn how to do their work differently. Support and time are imperative to the design process in order for organizational learning to take hold around any change model (Fullan, 2007). Organizational learning elements addressed in this section will include leadership, structure, culture, collaboration, trust, and commitment as they pertain to organizational change and distributed leadership.

Researchers define organizational learning as the social process of knowledge, or the sharing of individually held knowledge or information in ways that construct a clear, commonly held set of beliefs (Louis & Dentler, 1988). It is the search for new information, processing that information with others, incorporating and evaluating new ideas; generating ideas from within the school; as well as

importing new ideas from outside (Brown & Duguid, 1991; Leithwood & Louis, 1998). Louis (2007) asserts that creating school capacity for organizational learning comes in the form of five dimensions: structure, distributed commitment and collaborative activity, knowledge and skills, leadership, and feedback and accountability. For the purposes of this paper, organizational learning will be considered in two central areas of focus: crafting organizational structures and shaping organizational cultures (including commitment and collaborative activity; feedback and accountability). Distributed leadership will address the dimensions of knowledge, skills, and leadership.

Social learning is a reciprocal process. The learning that results from participation feeds back into the community and impacts subsequent participation (Bandura, 1978). As teachers interact regularly with their colleagues, they shape their educational practice. The purpose of their joint work is, they come to understand what activities are valued, and they establish social norms for relationships among members (Printy 2008). On the basis of these relationships, individuals function as informal leaders who keep the community's purpose at the center of activity and who help shape social relations among members to facilitate learning (Printy, 2008). Organizational learning resembles individual learning, that is, it is a process, the outcome of which is new knowledge, skills, or tools for increasing learning. But organizations learn in a way that transcends the aggregated learning of their individual member . . . organizational learning takes place among individuals as a collective (Marks & Louis, 1999).

An organization that learns, according to the theory, works efficiently, readily adapts to change, detects and corrects error, and continually improves its effectiveness (Marks & Louis, 1999). Marks and associates argue that for school capacity for organizational learning to be strong, teachers need to participate in and influence school decision-making . . . teachers can exercise their empowerment effectively only when school capacity for organizational learning is adequate (1999).

Organizational Structure

Organizational learning is a key process. However, it requires structures and procedures in order to support it (Fiol & Lyles, 1985). In most organizations, it is the responsibility of formal leaders, working with informal leaders, to create the conditions in which such learning can occur. Crowther, Kaagen, Ferguson, & Haan (2002) suggests that the use of parallel leadership when principals assume primary responsibilities for strategic leadership, such as visioning, aligning resources, and networking; and that teachers assume primary responsibility for pedagogical (instructional) leadership focused on implementation at the instructional practice level, a fundamental shift in credibility within an organizational culture can occur.

This review will examine the distributed leadership literature with a focus on instructional/principal leadership, teacher leadership, and rigorous curricular programming to serve as a backdrop for deep organizational learning in culture and structure as well as increased equity and access to begin to bridge the achievement gap. The current school reform movement focuses on *structural* changes (block scheduling, teacher teaming, etc.) and *curricular* changes (cooperative learning, inquiry method, problem-based science and mathematics) as the main features of

effective schools. Less attention has been paid in the reform literature on altering the culture of the school for sustained and continued improvement (Louis, 2006). Louis and Lee (2013) point out that while much has changed in the decades since organizational culture first caught the sustained attention of educational scholars, we are still far from having a coherent theory of school culture and how it is related to improvements in the school's functioning or performance. Many studies focus on interventions to *improve a school's culture*, but do not always tie these clearly to creating a *culture of improvement*.

Blending of each of these concepts that will ultimately improve student achievement in ways that focusing on each independently will not. In other words, the literature suggests that major organizational change can take place through three key areas: strong instructional leadership, the development of teacher leaders and a culture of collaboration, and the implementation and sustainability of rigorous course programming (e.g.: International Baccalaureate).

To shift a school toward organizational learning and professional community requires rearranging existing resources, and the imaginative use of talents and preferences that may have been undetected in traditional schools (Louis 2007). The nature of professional communities and dialogue has emerged as a powerful factor determining collective understanding of new initiatives . . . as well as the creation of coherent and distributed explanation for "how we do things around here" (Bryk & Schneider, 2004).

York-Barr and Duke (2004) view professional community as a vehicle for the exercise of teacher leadership. Supportive interactions among teachers in school-

wide professional communities enable them to assume various roles with one another as mentor, mentee, coach, specialist, advisor, facilitator, etc. According to Murphy (2005), the knowledge and skills required for teacher leadership include (a) an understanding and ability to navigate the school organization; (b) the ability to work productively with other adults; and (c) the ability to promote teaming, collaboration, and joint learning, problem solving, and action.

Re-structuring for Change

Organizational sociologists have amassed considerable evidence that institutional structure shapes and defines relationships in organizations, including the patterns of interactions therein (Murphy, 2005). Louis (2007) argues that schools are centralized and often bureaucratic, permitting little time for teachers to interact around new information of knowledge and to reflect on its implications for practice . . . they emphasize individual rather than collective responsibility for results. (Louis, pp. 14). Structural arrangements in schools are not especially malleable. Many more forces to hold structures in place are in play than there are to loosen and dissolve structural bonds (Smylie & Hart, 1999).

While change structures are important, they lack the power on their own to deepen leadership in schools. Distributed leadership must grow from professional norms and be actively supported by administrative leaders in a variety of ways (Murphy, 2005). Many of the studies of instructional leadership in secondary schools emphasize the development of improved learning environments for teachers focusing on the ability of principals to stimulate teacher's innovative behaviors rather than on their direct support (Louis, Dretzke, & Wahlstrom, 2010).

Principals are in the right position and have the requisite influence to create school structures conducive to distributed leadership. If distributed leadership is to blossom, principals need to be assertive in reshaping structures in the service of developing a deeper pool of leadership (Leithwood, Harris, & Hopkins, 2008). It is the responsibility of the principal to build new forms to house the richer patterns of leadership and to create new policies to support these structures (Crowther, 1997). One of the first steps to creating this space is to provide opportunities for teachers to take on a leadership role through trust and nurturing (shaping culture) and also creating the place for them to engage in this work (Murphy, 2005).

This can take on a variety of forms both at the macro level and micro level of restructuring. As detailed by Murphy, Smylie, Mayrowetz, & Louis (2009), major structural considerations in the initial development of teacher leadership in an organization include, but aren't limited to, the choice of teacher leaders, the degree to which teacher leaders are freed up to work outside of their classroom instruction, as well as the collaborative structures created within the school day for teachers to work with one another.

Re-culturing for Change

Schools are places that do not exist without feeling, practice, tradition, hierarchy, and memory. They are organizations that grow and change at a staggering pace often at the mercy of the latest whims and best practices of researchers and practitioners. The sad reality, however, remains that deep change does not occur in any school without an eyes wide-open awareness of the facets of the organization that must be considered, addressed, and incorporated as the

cornerstones of any change initiative. Schmoker (2006) asserts that true organizational change starts and ends with changing the culture within that organization.

Culture is the all-important element that exists at the very heart of the concepts listed above. If it is not considered and addressed, sustainable change will never take hold. This element exists in between those places where most reformers focus their efforts. Fullan (2007) believes “most strategies for reform focus on structures, formal requirements, and events-based activities . . . they do not struggle directly with existing cultures within which new values and practices may be required” (p.25). The two distinctly different concepts that Fullan describes can be termed as restructuring (changing or modifying practices and/or operations) versus culture work (changing beliefs, traditions, and/or assumptions).

What is culture? Culture is an expression that tries to capture the informal, implicit, often unconscious, side of business of any human organization” (Deal 1985). Roland Barth (2001) describes a school’s culture dictates, in no uncertain terms, as “the way we do things around here.” Ultimately, a school’s culture has far more influence on life and learning in the schoolhouse than the state department of education, the superintendent, the school board, or even the principal can ever have (Sanders 1999). The culture is the historically transmitted pattern of meaning that wields astonishing power in shaping what people think and how they act (Barth 2001). Similarly, Muhammad (2009) asserts that all schools have cultures that may foster collaboration or isolation, promote self-efficacy, or fatalism, be student-centered or teacher-centered, regard teaching as a craft that can be developed or as

an innate art, assign primary responsibilities for learning to teachers or students, view administrators and teachers as colleagues or adversaries, encourage continuous improvement or defense of the status quo.

Researchers have asserted that the cultural and social norms of schools conspire against leadership development . . . most school leaders discover rather quickly that much of the work to stretch and pull leadership across multiple actors violates cultural foundations that define schools. The elements of a non-supportive culture routinely intervene and interact with the structural barriers to distributed leadership. (Smylie, Conley, & Marks, 2002; Murphy, Smylie, Mayrowetz, & Louis, 2009; Spillane & Camburn, 2006).

Principals and culture.

The principal is a key actor in shaping culture of the school to encourage and support shared understandings and forms of leadership. In organizations where culture change takes hold and teacher leadership blossoms, principals are adept at managing school culture in new patterns of leadership and increased student learning. As detailed by Murphy and associates (2009), “these leaders also occupy a critical role in establishing the climate that encourages teachers to assume leadership responsibilities, especially by surmounting the cultural barriers that often prohibit teachers from pursuing leadership work outside the classroom.” Strong leadership also works to create a culture that supports professional community and open conversation without teacher leaders being penalized by their colleagues for stepping into leadership opportunities.

Teacher professional relationships as an element of culture.

Louis (2010) asserts that because a strong professional community is a vehicle for school-wide knowledge processing, creating a professional community enhances a schools' capacity for organizational learning. Professional communities depart from the normal practice in schools in that teachers do not work in isolation but collaborate within a professional culture . . . developing a common knowledge base for improvement, collaborating on the design of new materials and curricula . . . hallmarks of the professional culture and demonstrably related to student achievement (Louis & Marks, 1998).

Any collective action in schools may find success or failure at the hands of an organizational culture's intangible elements - the level of trust among its members. Trust will affect the way in which people make sense of any effort to change leadership patterns and will also have a direct effect on any enactment of leadership (whether centralized or shared) (Louis, 2009). Levels of trust can vary within the same organization even with regard to the same object, say the principal or central office (Goddard, Tschannen-Moran, & Hoy, 2001). Trust is usually developed provisionally and from that point it can strengthen, weaken, be breached, lost, and restored. Trust can have history and become embedded property of organizations (Louis, 2007).

An element that has remained sacred to educational culture and process is autonomy. It applies to teachers in their classrooms; schools in districts; districts in states; and states in the nation as we have seen with research on legislative funding and educational reform. Research over time has established the importance that the

norm of autonomy holds for teachers in their classrooms. Murphy and colleagues (2009) assert that freedom within one's classroom is both a contested right and a core dimension of school culture. Autonomy remains a major component of the isolation of teachers. Secondary teachers, in particular, view themselves as independent contractors who are the masters of their own educational domain. Many times within school cultures, resisters couch their complacency to proposed school reform by "making it look good" to their superiors in terms of their acceptance of change. When in reality, they simply revert to their old ways of the status quo behind the closed doors of their classrooms. Firestone (1996) states that autonomy is a significant cultural barrier to the practice of distributed leadership.

Teacher leaders as culture shift.

Teacher leaders, in formal or informal roles, can easily disrupt the culturally accepted routines of schooling because their existence signals a shift toward collaborative work. Teacher leaders sit in a position that is potentially awkward both politically and socially because regular teachers in the school may view teacher leaders as the new "them", as in they that try to influence and interfere in what "we" do (Smylie & Mayrowetz, 2009). If the potential threat to teachers' autonomy and the status quo can be diffused, teacher leaders are well positioned to move the professional community to a place of deep change. They can help other teachers to develop professionally, improve their practice, take risks, use data, and eventually influence and improve student achievement.

A Call for Diversifying Leadership Styles

There is a need for shared or distributed leadership within organizational reform as a means for building capacity and trust. Marks and Louis (1999) argue that for school capacity for organizational learning to be strong, teachers need to participate in and influence school decision-making. Shared power arrangements must be created that support a decentralization of traditional authority structures within the organization. The shift must be made to focus on distributed leadership devoted to teaching and learning. Decentralization enables decisions affecting the school to be made on site by educators closest to students and their learning, the school, and community conditions (Darling-Hammond, 2000).

There is also a strong need for individualized roles within organizational change initiatives in order to leverage forward progress, distinguish clear roles and duties, and create a space for autonomy and growth. With that, this section of the review will focus on the importance of shared leadership; the role of the principal in instructional leadership; as well as the role of the teacher in organizational change to attain sustainable reform.

Distributed Leadership

Organizational changes to both structure and culture are a powerful design for deep change, but cannot exist on their own. Deep change must be led by strong leadership and built around consensus and support for teachers throughout the organization. Distributed leadership is a tool for building consensus and lending credibility to change for stakeholders. Distributed leadership for organizational change is not a new concept. It has been widely researched and examined. There is

a need, however, to research the impact of distributed leadership on the design and implementation of large-scale school reform where the main focus is school integration and dramatic improvement of student achievement, equity, and access.

Since the mid-1980's research studies regarding a need for increased teacher voice in organizational decision-making have been on the rise. For example, two separate studies by the Carnegie Foundation called for "giving teachers greater voice in decisions that affect schools" (p.42). This was a dramatic step away from the current reality that reported "the majority of public school teachers were not asked to participate in such crucial matters as teacher evaluation, staff development, or budget" (Carnegie Foundation, 1988, p.1). National Education Association produced a report calling for teacher participation in "identifying purposes, priorities and goals of the school" (NEA, 1986, p. 16). These observations point to a common and emerging theme of deficiency of teacher voice in decision-making within schools in the 1980's.

Reformers have advocated decentralizing bureaucratic authority to make schools more productive workplaces for staff and students. Building capacity for organizational learning demands forms of leadership differing from conventional models (Leithwood, Jantzi & Fernandez, 1994; Murphy & Louis, 1994). More and more schools and school systems are attempting to develop distributed leadership. Increasingly, state education agencies and national education organizations are encouraging them to do it (Louis, Smylie, Mayrowetz, and Murphy, 2009).

Distributed leadership defined.

Distributed leadership, a term that is often used interchangeably with shared leadership, is usually thought of as the network of both formal and informal influential relationships in a school (Louis, Dretzke, Wahlstrom, 2010). One of the central benefits of distributed leadership is the reduction of teacher isolation and increasing commitment to the shared vision of the organization. As stated by Marks and Printy (2003) experiencing influence and validation in the context of important professional discussions is a vital ingredient that fosters a focus on shared practices, goals, and vision. Spillane, Halverson, & Diamond, (2001) see distributed leadership as the sharing and spreading of leadership work across individuals and roles throughout the school organization. Smylie & Mayrowetz (2004) identify one of the fundamentals of distributed leadership is its focus on the call for teachers to conceive of their roles differently and to assume different responsibilities, mostly beyond the classroom and often for purposes of school-level improvement. "As teachers' work becomes redefined so too does administrators' work, not only with regard to distributing particular leadership functions but also supporting redefined teacher work and creating conditions conducive to its success" (Murphy, 2005).

Effects of distributed leadership.

Distributed leadership in terms of school governance and instructional implementation works well in building a culture of trust, increased communication, and increased credibility (Crowther, 1997). This credibility can often serve to build greater ownership and commitment to organizational goals. In the case of teachers, "when teachers share in decision-making, they become committed to the decisions

that emerge. They buy into the decision; they feel a sense of ownership; therefore, they are more likely to see that decisions are actually implemented" (Weiss & Cambone, 1994, p.350). When teachers (specifically teacher leaders) are relaying information back to their colleagues regarding a change initiative, teachers will often lend more credibility to their explanation than a presentation delivered by administration in a top-down message. If a goal is implementation of curricular and instructional reforms at the classroom level, an internalized sense of ownership and commitment among employees who lead at that level - that is, teachers - is essential (Hart, 1995). Teachers who participate in making decisions about conditions that affect what happens inside classrooms have a greater sense of empowerment and are less likely to feel like passive victims (Barth, 2001). "The teacher who leads . . . gets to sit at the table with grown-ups as a first-class citizen in the school house rather than remain the subordinate in a world full of subordinates" (York-Barr & Duke 2004).

In addition to an increase in distributed leadership and collective responsibility within an organization, teacher leaders can also play an integral role in the implementation of teacher collaboration within a building. As described by York-Barr & Duke (2004) teacher expertise is at the foundation of increasing teacher quality and advancements in teaching and learning. This expertise becomes more widely available when accomplished teachers model effective instructional practices, encourage sharing of best practices, mentor new teachers, and collaborate with teaching colleagues.

Sustainable reform and distributed leadership.

The key to building trust, creating strong professional community, and increasing student achievement is through sharing instructional leadership between teachers and principals. Shared instructional leadership involves the active collaboration of principal and teachers on curriculum, instruction, and assessment. Within this model, the principal seeks out the ideas, insights, and expertise of teachers in these areas and works with teachers for school improvement. The principal and teachers share responsibility for staff development, curricular development, and supervision of instructional tasks. Thus, the principal is not the sole instructional leader but the “leader of instructional leaders” (Marks & Printy 2003).

When teachers feel valued and supported in their work, not only by one another, but also by leadership, they are more likely to participate and take risks. Using the results of a survey responses from a national sample of US teachers, Louis, Dretzke, and Wahlstrom (2010) were able to establish distributed leadership as an important means of creating a learning organization in which efforts are focused on ways in which increasing instructional capacity can influence student learning. Louis, Dretzke, and Wahlstrom (2010) believe that distributed leadership and instructional leadership are both important, but they are indirectly related to student achievement. Both, however, gain influence because of strong relationships to the way teachers organize their collaborative work and the strength of the professional community in the organization. It is safe to say then that the three elements - instructional leadership, distributed leadership, and professional

community work in concert to impact student achievement. Marks and Printy (2003) emphasize the importance of combining leadership foci (transformational and instructional) as a means to increase student learning. “When distributed leadership is framed as an opportunity for teachers to change school and classroom conditions so that they can carry out their main job more effectively, they are more likely to see it as central to their work rather than an “add on,” rather like lunch duty or hall monitoring” (Louis, Mayrowetz, Smylie, & Murphy, 2009). Leadership becomes a collaborative process, which will increase investment and ownership.

Principal Leadership

There is a deep well of literature on the leading and managing of educational organizations to effect large-scale organizational change. The literature targets the role that the principal and organizational leadership play in that reform as a change agent. Recent leadership studies have situated instructional leadership as central to the principal’s role (Marks & Printy 2003). Marks and Nance (2007) describe the two domains of principal influence: instructional leadership (standards, accountability for curriculum, instruction, assessment) and administrative supervision (hiring, evaluating, school budgets, and discipline). Internally, principals operate within sets of challenges unique to their schools and within organizational conditions shaped by available structural and human resources, including their professional teaching staffs. Externally, multiple accountability contexts - states, school districts, local boards, schools councils, and parent associations - have the potential to support or constrain the influence of school principals (Marks & Nance, 2007).

Since the implementation of NCLB legislation and even prior to that with *A Nation at Risk*, the focus in educational leadership has shifted from that of a managerial focus to the need for an instructional leader to function in the role of the principal. Even in states that have received waivers from the federal requirement that all students meet state standards by 2014, they run the risk of being under sanctions. "Monitoring student achievement on state standardized tests and their completion of standards within the classrooms has replaced classroom observation as a major focus for supervision. (Holland 2004) Gone are the days of performance appraisal comments based upon the artwork covering the walls of the classroom and the students' ability to remain quiet and focused for that one hour of observation. The role of the principal has shifted to ensuring not only the learning of their students, but also the survival of their school as well as themselves as a leader. If a school is identified as underperforming and eventually "failing", the school runs the risk of closure, but the first action made in most cases is the removal of the principal. The stakes are high and principals must be able to support the work of their teachers in the classrooms. This means they must be able to understand the curricular and instructional process. Student achievement is ultimately the responsibility of the entire building under the direction of the principal.

Principal leadership defined.

As presented by Louis, Mayrowetz, Smylie, and Murphy (2009),

The paradox of distributing leadership is that it may require a significant "push" from the top of the organization (the principal) in order for more initiative to be taken by other school professionals or even student and parents. Principals play a central role in determining the opportunities for sensemaking and organizational learning because they have a role to play in determining structures and the allocation of resources to any change

activity...second, their behavior will determine the degree to which teachers trust that taking on new leadership roles will be rewarding and have long-term benefits themselves and others (2009).

In schools most effectively implementing site-based management, additional features of the high-involvement organization model include a system of instructional guidance integrated into the school vision and strong instructional leadership by a supportive, systems oriented principal (Robertson et al., 1995). In a sense, at the school level all change flows through the principal's office. These formal leaders are in a critical position to move initiatives forward or kill them off, quickly through actions or slowly through neglect. Principals occupy the critical space in the teacher leadership equation and center stage on the work redesign required to bring distributed leadership to life in schools (Murphy, 2005).

Printy (2008) asserts that principals influence teachers' understandings in two ways. First, principals have direct influence by shaping the policy messages teachers receive, deciding what to bring into school and what to buffer out. Second, principals have indirect influence through their participation in teachers' sensemaking activities, where teachers struggle to construct the meaning of policies and understand the implications for their own practice.

While there are many factors that affect whether or not professional community exists in a school, one of the most significant factors is principal logistical and moral support (Bryk, Camburn, & Louis, 1999). Even supportive principals may struggle with the expansion of teacher influence into areas of work that were once their own and with how to negotiate and share influence in newly defined authority relationships with teachers. An important element in supporting

instruction and leading a building toward becoming a professional community lies in the selection of teacher leaders. Smylie and Mayrowetz (2009) discuss the prevailing sense that good teachers make good teacher leaders . . . teachers who are effective with students will naturally be effective in leadership work with fellow teachers, administrators, and other adults. This is not always the case. They go on further to present research from Murphy (2005) and others which assert that it is “clear that the knowledge and skills required for teaching and teacher leadership are substantially different and that difficulties arise when teacher leaders are “recruited straight out of the classroom” with little regard for preparation or support (Smylie & Mayrowetz 2009). Instructional leaders must be particularly cognizant that teacher leaders are often the first to burn out and require professional development that will enhance their skills making them more effective in developing the entire faculty.

Murphy and associates (2009) detail the risk of principals in embracing distributed leadership by pointing out that administrative leadership in schools has been shaped and hardened over the years in forms that are hardly conducive to shared conceptions of leadership (Crowther, et al. 2002). So much so that championing and supporting distributed leadership necessitates a transformation in their understanding of leadership and in the ways they enact their leadership roles. Marks & Printy (2003) assert that in order for this transformation to take place, principals must reconfigure themselves as a leader by reframing their conception of schooling from a reliance on bureaucratic and institutional lenses toward viewing

schools as community-anchored organizations (Murphy, 2005). This involves a shift toward decentralization in leadership.

Effective school leaders act not only as instructional leaders, but also as stimulators to serious intellectual interaction around issues of reform and improvement (Newmann & Wehlage, 1996). Using survey responses from a national sample of US teachers, Louis and associates (2010) were able to determine that instructional leadership is assumed to have both direct and indirect effects on instruction, since the measure included principals' visits to classrooms and other behaviors that might direct recommendations or advice about change in instruction. Louis, Dretzke, and Wahlstrom (2010) suggest that instructional leaders must acknowledge and act on the increased importance of collective and shared work around instruction. They believe that secondary school leaders must be given additional support to establish the kind of instructional leadership that is "workable" on their large and complex settings. Secondary leaders seem to have an effect on teaching because of the organizational ethos they create rather than specific interpersonal interactions or interventions (Harris, 2002).

Leadership involves the identification, acquisition, allocation, coordination, and the use of social, material, and cultural resources necessary to establish the conditions for the possibility of teaching and learning (Spillane, Halverson, & Diamond, 2001). Research suggests that there is increasing pressure on school leaders to "deliver" (or at least promote) better instructional support, and that consistent and knowledgeable support from leaders makes a difference in staff improvement, but also in staff morale (Louis, Dretzke, & Wahlstrom, 2010). The

school improvement literature identifies several functions that are thought essential for instructional leadership, including construction and selling an instructional vision; building norms of trust, collaboration, and academic press; supporting teacher development; and monitoring instruction and innovation (Spillane & associates, 2001).

In the current climate of high stakes testing and accountability legislation, there is a big push to engage school administrators in leading instructional improvement (Coldren & Spillane, 2007). The role of the principal is to manage the structure of the school and include the academic structure into the plan for the school's success (Blase & Blase, 1999). With that in mind, what is instructional leadership? What does it mean for the day-to-day work of the principal in a building and to the teachers who work for that leader? Instructional leadership is a term that has been widely used in literature of the past twenty years of academic study and research as the principal's role has risen to the forefront of educational practice.

Leithwood & Louis (1998) identify instructional leadership as a separate role orientation that focuses on the behavior of teachers as they participate in activities that relate directly to student growth. O'Donnell & White (2005) believe it to be – in a broad sense - any activity that affect student learning. These two theorists assertions alone show the depth of understanding and interpretation of instructional leadership as it relates to practice and reform. This is not to say that either of these views or any others posed is incorrect. It is only to say that the definition requires some clarification as far as instructional leadership is a part of the principalship. Whatever the definition that an organization lands on for their

interpretation of instructional leader, it is imperative that the stakeholders in the organization have a clear understanding of the how the principal will be working in that capacity. If left up for interpretation, it is entirely probable that teachers and principals in an organization may have entirely different perceptions of the instructional leader. Another important variable that requires understanding and communication is the principal's level of understanding and ability to engage in conversation around classroom teaching. At the very least, principals must make their interpretation of instructional leadership part of their vision. It should be communicated and demonstrated.

Avila (1990) asserts that an uncommunicated definition of instructional leadership will be of little use to principals seeking to avoid conflict and miscommunication with staff members and superiors. Principals must be able to adjust their leadership styles for different situations in their daily management of their building. Kanpol (1997) believes that the key to the ability to adjust to situational leadership as an effective leader lies with the understanding of the curriculum that is delivered by classroom teachers. "Concurrently, the justification in understanding curriculum lies at the very core of what school is all about" (1997). This is a source of debate for those aspiring principals as there is little to no training in the principal licensure that grounds educators in instruction. Likewise, until 2009, teaching experience was not a requirement in order to become a principal. The shift toward high stakes testing and the mandates of NCLB are direct contributors to the change in licensing requirements to reflect teaching experience.

The risk of varying interpretation on instructional leadership by teachers and principals also extends to the relationship and trust within the culture of a school building as it moves to implementing any type of reform. If teachers do not feel supported in what they are doing in their classrooms, they are more likely to lose faith in their work when confronted with the many obstacles in their teaching. Teachers, specifically those in urban classrooms, are faced with an extremely difficult task of working to bring students who are met with challenges that make their learning completely secondary to their very survival. Urban educators must have the additional support to meet the needs of students while moving them forward to a competency level that mirrors those students in other schools and districts who experience none of the abject poverty that is part of their reality.

In addition to the need for a focused and articulated principal vision for instructional leadership, principals play a key role in developing teacher leadership within their buildings. Ideally, the training and experience that principals have had throughout their career will enable them to identify, develop, and support teacher leadership within their schools.

Teacher Leadership

Teacher leadership is an undeniable element to sustainable change within organizations. In recent years, teacher leadership has taken a seat of importance due to an increase in qualitative research and case studies done documenting teacher leadership in reference to the improvement, reculturing, and deep change within educational organizations. Although this is not a new concept, "what is new are increased recognition of teacher leadership, visions of expanded teacher

leadership roles, and new hope for the contributions these expanded roles might make in improving schools" (Smylie & Hart, 1999). Ways of thinking about teacher leadership have evolved over time, but it remains an important issue that requires further study because the studies that have been done are "largely qualitative, small-scale case study designs that employ convenience samples and self-report methodologies, mostly interviews and some surveys" (York-Barr & Duke 2004).

As detailed by Marks & Louis (1999),

When research documents a positive relationship between teachers empowerment and improvements in instruction and student learning, participatory decision-making structures have explicitly concentrated on issues of curriculum and instruction (Bryk, Camburn, & Louis, 1999); Marks & Louis, 1999; Smylie, 1997). To the extent that greater numbers of teachers participate in instruction-related decisions making or that schools professional cultures are strong, instructional improvement is more likely to occur (Bryk, et al., 1999; Smylie, 1997).

There are a variety of forms that teacher leadership has taken on in organizations. York-Barr & Duke (2004) point out that the focus or level of leadership work engaged in by teachers leaders has been also diverse, ranging from organizational-level work (e.g., membership in a site-based decision-making council) to professional development work mentoring) and instructional-level work (e.g., action research). Expanded and evolving teacher leadership roles range from assisting with the management of schools to evaluating educational initiatives and facilitating professional learning communities. The hope for teacher leadership is continuous improvement of teaching and learning in our nation's schools, with the result being increased achievement for every student. Silva, Gimbert, and Nolan (2000) describe this evolution of teacher leadership focus and role in three areas:

1.) Teachers serving in formal roles (e.g., department heads, union representatives);
2.) Teachers focusing on the instructional expertise of teachers (e.g., curriculum leaders, staff developers, and mentors of new teachers); and 3.) Recognizing teachers as central to the process of organizational change and the implementation of their expertise from the second area.

Why focus on teacher leadership?

Since the mid-1980's, teachers have been looked to with increasing regularity as agents of school and classroom change. Their leadership has been promoted in a number of different ways, from involving them in school-level and district-level decision making; to creating specific leadership roles related to teacher professional development and instructional improvement; to encouraging informal and collaborative leadership work on teams, as part of school professional community, and through initiatives to develop distributed leadership. (Smylie & Mayrowetz, 2009)

For over 3 decades, reform proposals in many countries have recommended the inclusion of teachers in leadership roles. Recent policy discussions in the USA and elsewhere suggest there is broad support for expanding teachers' participation in leadership and decision-making tasks. These discussions are supported by research suggesting that increased teacher influence in schools has the potential for significant positive effects on school improvement (Leithwood & Beatty, 2007; Leithwood, et al., 2008). Teacher leadership redefines that nature of the working relationship between principals and teachers who take on new leadership work. The success of teacher leadership depends not only on how well teachers perform their new leadership work but also on how principals perform their new leadership work (Smylie & Mayrowetz, 2009).

Smylie & Mayrowetz (2009) also point out that teacher leadership has been promoted in a number of ways, from involving them in school-level and district-

level decision making; to creating specific leadership roles related to teacher professional development and instructional improvement; to encouraging informal and collaborative leadership work on teams; as part of school professional community, and through initiatives to develop distributed leadership.

Teacher leaders' expertise can also be harnessed to build trust and capacity within a school culture. Schmoker (2006) describes the roles of teacher leaders when they function in the role of primarily classroom teacher with added responsibilities of coaching and mentoring as having "a substantial amount of credibility in the eyes of their colleagues." Teacher leaders can assist to bridge the gap between principals and teachers. Along with the principal as instructional leader, teachers become the instructional advocates and leaders within a building. They could still be considered an extension of administration in this instance because they served in an advisory role to leadership, but their purpose was to advise in their area of expertise: instruction.

Growing teacher leaders.

In a four year longitudinal study of 10 schools within the Coalition of Essential Schools, Robert Hampel found that there were typical factions that emerged within each school faculty: the cynics, the sleepy people, the yes-but people, and the teacher leaders (2000). Even within those schools who could be considered progressive and reform-minded, no more than 25% of the staff was made up of teacher leaders. "Something deep and powerful seems to work against teacher leadership" (Barth 2001). Why is it so difficult to empower and support teacher leaders to step forward and embrace the challenge? Current legislation has

forced educators to embrace the statement, “All students can learn”, but can this notion be transferred to “All teachers can lead”? Blase & Blase (1999) believe that many skeptics would amend the assertion to “some teachers,” or “ a few teachers”. These low expectations are as destructive, limiting, and self-fulfilling as “some children can learn”. The fact of the matter is that all teachers harbor leadership capabilities waiting to be tapped into and engaged to improve student achievement for the overall organization. York-Barr and Duke (2004), conclude that every member of the education community has the responsibility – and the authority – to take appropriate leadership roles. Leadership . . . has been reconceptualized to include all facets of the school community (263).

What are the potential impacts of teacher leadership when it is supported properly and implemented with fidelity by building administrators and system leaders? The impacts are limitless. Marks & Louis (1999) found that in organizations where teacher leadership was implemented through democratic processes that were the vehicle for school decision making; and teachers focused their empowerment on the core technology of schools: teaching and learning took off in leaps and bounds; professional community and collective responsibility for student learning flourished; and substantial student achievement gains were made. In an educational culture where an ever-increasing emphasis is placed on student performance on standardized assessments, the potential influence of teacher leading and collaboration that improves student learning is imperative. From a policy perspective, the proper scaffolding, leadership opportunities, and trust for

teacher leaders can greatly benefit the way that our educational organizations function.

Positive relationships between colleagues within a professional community work to create trust for those in the organization. Trust allows for open exchange of information and creates a context in which problems can be disclosed and addressed before they are compounded (Louis & associates, 2009). Trust can also foster change by itself, by establishing “safety” that in turn can support communication and critique (Bryk & Schneider, 2004).

Conclusion

Equity, access, and increased accountability around student achievement are complex topics in education and highly studied and discussed issues. There is not a clear solution to address learning gaps within today’s public schools. In fact, there are marked differences in the cause for these gaps and what they may look like for different cultures and organizations. This is a realistic issue in that all schools, decision makers, and students are unique. Schools are dynamic organizations that are in a constant state of flux, which makes pinpointing just exactly what makes effective leadership for change look like a difficult task. With the preceding research, there have been many ideas brought to the forefront of the issue of student achievement and underachievement including the evolution of the achievement gap; the types of leadership that work well in implementing change initiatives for increasing student achievement; as well as the potential for increasing student equity, access, and achievement through rigorous programming like the International Baccalaureate.

With all of the research out there it is not disputed that distributed leadership is a vital part to student learning. Principals and teachers working together to achieve the common goal of student learning is the ideal equation. There is no argument that students' learning is the school's only real purpose and, regardless of how that term is defined and assessed, the main responsibility of all educational leaders is to work together in reaching that goal (Murphy 2005). It truly will take everyone working together under the direction of the principal to move the organization forward and capitalize on the instructional leadership practices to help students improve their learning. "Effective" or "Successful" leadership is critical to school reform (Leithwood et al 2004).

It is still unclear how effective models for rigorous coursework such as the International Baccalaureate will stand up in terms of raising student achievement through increased expectations and differed style of curricular delivery. A further look into the relevance and effectiveness of rigorous course programming coupled with a distributed leadership approach to organizational change can affect student achievement.

While strong connections have been established between shared leadership for change; rigor in curricular offerings as related to equity and access; and the pressures of meeting the demands of government on student achievement, the story at the heart of all of this research and study exists within the learning of the students who participate in these programs. It is their stories and experiences that show the true growth and worth of a program. That is the true sustainability. An in-depth examination of the student experience will be presented in Chapter 4.

Chapter 3

General Research Design and Methodology

This study utilized a structured case study approach to explore the impacts of a comprehensive curricular model like the International Baccalaureate on student learning as well as providing increased opportunities for access to students in high diversity, low income schools. This qualitative approach was selected for two primary reasons as suggested by Merriam (1998). First, much is unknown about the details of comprehensive curricular models like the International Baccalaureate's Middle Years Program as it relates to student achievement. Research has been conducted to analyze the implementation of such programs, but little has been done to study the impacts of the program and the influence of leadership on the development of the program as detailed by staff and students. Case studies are concrete and conceptual. They resonate with experience rooted in context where knowledge can be distinguished from the abstract, formal knowledge derived from other research designs. Secondly, it is valuable to establish a study that explores the how and why of the phenomenon of the role of teacher leadership, leadership, and instruction as they relate to programmatic student achievement.

Applying a case study method coupled with specific, detailed interviews allows us to learn such detail. Case studies in a few schools typically require relying on interviews rather than surveys, largely because the number of potential responses to a survey instrument would be quite small, making any statistical inference inappropriate. Consequently, the primary data source was personal interviews. Additional resources included assessment databases and evaluation

reports of the program's effectiveness conducted quarterly by the Magnet Schools of America as well as the Center for Applied Research and Educational Improvement at the University of Minnesota (CAREI).

I adapted the method of grounded theory through a semi-structured case study approach to collect and analyze data. The use of a grounded theory approach allowed me to identify significant factors and explanations of the leadership and program design/coordination as quality measurement factors across the two sampled schools and specifically selected students enrolled in the program. Grounded theory informed the analysis and trending of the interview data as it was collected. More specifically, I processed through the first wave of interviews to identify trends. After identifying primary codes for these findings, interview questions were adjusted to delve deeper into the trends that had been identified. In addition, after initially interviewing adults, the themes were applied to an additional group of student respondents. The student interviews helped to reshape the focus of the final coding, analysis, and presentation of the "story" of the IB at Meadow Brook. While the grounded theory approach when used across an entire study is intended to result in a nascent theory, my study focused on a structured case study using grounded theory in data analysis for a single case, and stopped short of collecting additional data in another site in order to develop a more clearly articulated and generalizable theory.

Forty-three semi-structured, in-depth interviews were conducted with teachers, coordinators, principals, and students to gain an understanding of the program's design, implementation, and sustainability. Interviews were selected in

order to provide the best possible data to gain insight into the thinking and actions of the stakeholders groups as they interacted with the program at different pulse points. “Qualitative interviews are conversations in which a researcher gently guides a conversational partner in an extended discussion” (Rubin & Rubin, 2011, p. 4). Each of the conversations are unique and gives the researcher the ability to find out what the subject knows by matching the questions to what he is willing to share (Kvale & Brinkmann, 2009). The design used in-depth interviews as a source for providing a clear focus on the topic of comprehensive curricular models. Identified questions (See Appendix 2) and probes were utilized to guide the process and elicit the most in-depth, rich responses from the participants. The questions were selected as a starting point for the interviews from the broad range of topics included in the literature review. The topics from the literature included increasing equity and access through rigor, a call for organizational change and restructuring, and distributed leadership as a vehicle for change.

Questions were continually monitored and modified as themes and trends emerged from the data. The researcher asked follow up questions to aid in the research process when the need arose for clarity or additional detail was required (Rubin & Rubin, 2005). Generating depth of understanding rather than breadth was the main focus of the interviews. According to Rubin and Rubin (2005), “responsive interviewers recognize that each conversational partner has a distinct set of experiences, a different construction of the meaning of those experiences, and different areas of expertise” (Rubin & Rubin, 2011, p. 34). Each individual conversation contained unique experiences to be gathered and probed for further

understanding. By looking collectively at all of the teachers' experiences, administrators' experiences, and students' experiences, a greater depth of information emerged. Utilizing grounded theory, as an approach, provided a structure that allowed trends to evolve from the data and be defined by further collected data or contracted by less data. Through the use of trending and coding as detailed in grounded theory, themes emerged from the data and were categorized to dictate the future path of each stakeholders interview protocol.

Sampling

This study utilized two levels of sampling. The first level of sampling was in the selection of schools. According to the International Baccalaureate Organization website, there were 34 schools that offered both the Middle Years and Diploma Program in the State of Minnesota. An initial sample of 5 International Baccalaureate programs (junior and senior high partnerships) was drawn randomly as part of a 7-district consortium, as designed by the Northwest Suburban Integration School District and the Magnet Schools of America. These schools were selected due to their focus on the International Baccalaureate Middle Years and Diploma Programs. The process of this selection involved schools being grouped by magnet focus and junior/senior high level partnership then through a series of draws, school pairings were randomly pulled from the group of eight school pairings in the consortium. Upon speaking with both the director of Northwest Suburban Integration School District and the Board of Directors of the MN Association of IB Schools, it was stated that accurate records were not tracked depicting the implementation process as it pertains to student achievement or

student satisfaction of perceived success in either of these programs. The most effective way to measure perceived success or satisfaction would be to interview the stakeholders. This discovery led to a two-fold search for participants including an email to the program coordinators of the six Minneapolis/St. Paul suburban middle and high school campus programs and a data search for staff within those programs who would participate. Initial contact was made via email with the six schools.

Overall the schools selected for the case study were representative of each of the six campus partnerships that were initially selected in terms of size, percentage of free and reduced priced lunch, limited English Proficiency, and Adequate Yearly Progress (AYP) status. The schools ranged in size from 633 students to 1614 students, with an average of 1202 students at each high schools and 889 at each middle school. The free and reduced priced meal levels ranged from 43% to 87%, with an average of 68% of the students receiving free and reduced priced meals. The number of limited English Proficiency ranged from 1% to 69%, with an average of 42% of students receiving English Language Learner (ELL) services. Of the six schools none were meeting adequate yearly progress in either math or reading for black and special education subgroups, with four schools not meeting AYP in math only.

Based on progressive implementation and program evaluation of those campus programs, it was determined that two schools located in the Northwest Metro would be the focus of this case study. Initially Meadow Brook High School and South View Junior High were selected as the focus for my study (see Appendix 1 for specific demographic data on both schools). However, after initial trending of the

interview data, it was determined that the focus of program impacts was better suited to be told from the perspective of Meadow Brook on its own. While data was collected initially from South View Junior High, that data has been excluded from the research findings.

The second level of sampling involved the selection of interviewees. Due to focused interests in identifying the effects of teacher leaders, leadership, and relationships on the achievement and perceived satisfaction of students in the IB program, I interviewed key staff who were actively engaged in this process as identified by their job titles. These individuals were identified based on the organizational structure of their organization and the information provided about their role by the program coordinators. I was also interested in the actual achievement of students who went through both of the comprehensive curricular programs offered in these schools, I interviewed a random selection of students drawn from a program database.

Selection Criteria

The staff persons I focused on for this study were selected based on initial interviews with program coordinators for the IB programs in both sites as well as specific school district job descriptions. The purpose of this focus on teacher leaders and administrators was to determine the level of impact their role in the decision making process around the program development, design, and delivery may have influenced the overall success of the students in the program through its design and implementation. A review of each school's staff directory/database allowed me to identify who these key staff persons were in each school.

Student participants were chosen based on their involvement in at least two or more years of the Middle Years Program in at least one of the partnered campuses as well as at least part-time election into the Diploma Program in their junior and senior years of high school at Meadow Brook High School. The largest sampling of students came from those who graduated in the spring of 2011 as they had the most exposure to the upper level of the program. A sampling was also taken from those students currently enrolled in the junior class as well as sophomores and freshmen that were planning to enroll in the Diploma Program upon entering into their junior years. In-depth interviews were done with those students who were already enrolled in and had completed the Diploma and Middle Years programs respectively.

Selection Process

Sampled respondents were invited to participate in the study using a personal letter, followed by telephone calls, and then emails. To obtain consent, I asked that the staff and students interviewed mail or fax a signed consent form, acknowledging that they were aware of the purpose of the study, any risks involved, adherence to the anonymity, the confidentiality of information they shared, their right to withdraw at any time, and an agreement to provide them with a transcription of their interview to ensure that they are satisfied with the accuracy of their statements.

Demographic Data from Interviews

Of the fifteen teachers selected, nine were females and six were males. The sample was predominantly white, with two African American teachers and one

Asian American teacher. Teachers ranged in years of experience from one to thirty years in teaching experience. This sample created a variety of shared years. Of the four principals who were selected, three were Caucasian females and one was an African American male. Two were in the first five years of their administrative careers, while two had more than 15 years of administrative experience. Three of the four had previously been classroom teachers and had been employed for at least ten years in education as a teacher. The remaining principal moved into the principalship through a natural progression of leadership roles. Of the four coordinators interviewed, three were male; one female. All four were Caucasian and had been classroom teachers for at least ten years. Of the twenty students selected, four graduated in 2011; eight graduated in 2012, and eight are slated to graduate in 2013. Nine of the sixteen in the upper grades were full-time Diploma Program students. Twelve of these twenty students were female and eight male; thirteen were African American, four were Asian American, and three were Caucasian. This resulted in a cross-section of experiences in each stakeholder group including background and prior knowledge of the International Baccalaureate.

Data Collection

I used five sources of data for this analysis including two types of secondary data and three types of primary data. The secondary data came from achievement data on IB sanctioned exams as well as internal assessment delivered through the final years of the IB Diploma Program.

As a primary source of data, interviews were an in-depth way of gathering information from multiple groups concerning their views and ideas of their actual

roles and responsibilities. Semi-structured interviews allowed for variation and in-depth questioning as I continued along with the interview. Questions were open ended, yet specific in intent, allowing for individual responses. This is the most common type of interview in educational research (Kvale & Brinkmann, 2009). Interviews allowed me to ask for clarification and review the accuracy of the data collected. Interviews were used as a method of data collection, to gain a deeper understanding for how stakeholders, namely administrators, teacher leaders, and students view program development and implementation, how that development enacts with teaching and learning, and how it ultimately impacts student achievement. The make up of the interview group are shared as a means to help inform the data analysis. The themes represented are revealed through a discussion of the data as they relate to the afore-mentioned research questions.

The choice of open-ended questions was designed to allow for a depth of understanding from the stakeholders views on the IB program and their interaction with that program at multiple levels. The questions were loosely related to the categories from the literature reviewed in chapter two allowing for that deeper understanding and so as to allow for the diversity that was apparent when talking about instructional programming. The literature clearly stated that in implementing deep organizational change through comprehensive models or without, there are varied levels of investment and understanding across those stakeholder groups. Therefore, it was important to allow for consideration throughout the data collection process that would allow for the broad topics to be shared and gather insight as to the multiple levels of investment, understanding, and implementation

of both IB programs. These questions provided a link between the literature review and the program implementation in the two school settings.

The first source of primary data I used is interview data from previous interviews collected by the University of Minnesota's Center for Applied Research and Educational Improvement (CAREI)¹ as well as evaluation reports from quarterly conducted evaluations from 2006-2010 concerning the program design and implementation. I received permission from both the Meadow Brook and South View school principals as well as the primary researcher with CAREI. The second source of primary data that I used was new interview data that I collected as the primary focus of analysis for the current case study.

The primary data collected in new interviews was collected using a semi-structured process. My research design used one-hour interviews to explore the characteristics of teacher leaders and administrators as change agents for program design and quality curricular development. Principals, coordinators, and staff members were interviewed individually at a location of their choice. Interviews were digitally recorded to aid in the data collection process and provide a manageable method for transcription. In each interview, I used the same interview protocol to gain information relating to the educator's role in providing quality education to students as measured by their efforts relating to accountability, leadership and student achievement. I asked how they see their role in addressing the elements of the curricular model, its design and implementation; and how well the program was succeeding in terms of influencing student achievement and

¹In 2009, CAREI conducted a seven-school qualitative analysis of magnet program implementation through a series of interviews of stakeholder groups.

quality of learning (See appendixes 2 & 3). The interview questions were focused on specific belief systems, behaviors, internal organizational factors, and external forces to explore the nature of the role of IB teacher based on their experiences. Respondents were provided with a copy of the interview questions in advance, in order to allow them to think about the questions. The interview protocol was especially aimed at directing the interviewees to discuss key themes highlighted in the theoretical and conceptual foundations identified in the literature reviewed.

Speaking with stakeholder groups about program design and overall satisfaction, as it pertained to the International Baccalaureate programs in the two schools researched, revealed many interesting insights. Initially, my findings from the interviews were organized around defining distributed leadership, support, and effective programming, and behaviors associated with these terms. I thought that principal and coordinator self-reflections on distributed leadership, including the identified limiting factors and needs for the future direction of program development and leadership were the main story because in my mind, this was a study of program design. Teacher and student reflection and reactions to overall program satisfaction and effectiveness were the secondary thread.

As I delved deeper into trending and coding, two things became clear to me. First, while my initial intent was to study two school campuses offering the Middle Years and Diploma Programs together (South View and Meadow Brook), the trending and experiences around students learning and growth came from the work done at Meadow Brook. Therefore, the remainder of the teacher and student interviews focused exclusively on the work and program design at Meadow Brook.

Secondly, I realized that I was so focused on what I wanted to study that I was missing the real story that was emerging from the data. This was really about people's lives as they interacted, struggled, and grew from a style of learning through an elevated approach to academic rigor. I continued to work to fit the trends into the prescribed framework that I had created to no avail. After a conversation with my advisor, I acknowledged the shift in my study and followed the data to begin to tell the story of these individuals who interacted with the program.

In late spring, I sent an email out to five students who had been full-time participants in the first cohort of the IB program at Meadow Brook starting in 2009. I conducted interviews with these five students over the summer of 2012 when they were home from college. The first interview with Ashley resulted in a phone conversation with Will to set up an interview with him. "Sure, Ms. Jarva. I'd love to meet with you to talk about IB and how it has impacted my life. What about Parker? He is my roommate and we are pretty much inseparable. We could do the interview together! We both feel like we have a lot to share with future IB students. We feel that we have a responsibility to teach them about the things that we never learned on our way through since we were the first ones. It's sort of our duty."

Data Analysis

Preparing data for analysis

The individual interviews were recorded and transcribed for analysis. I developed and used a coding framework rooted in the key factors identified by the

theoretical and conceptual factors identified as essential elements relating to successful program implementation and student achievement. In the process of analysis, grounded theory was utilized in order to find meaning and to provide a perspective on the program implementation and impact on student achievement. “Grounded theory is derived from data and then illustrated by characteristic examples of data” (Glaser & Strauss, 1999). The unique aspect of grounded theory is that the concepts come directly from the data and are systematically categorized and worked out in terms of the data throughout the research process (Glaser & Strauss, 1999). The themes that emerged throughout data collection informed and influenced the direction that my research took as it developed.

Based on this method of analysis, I followed a specific structured method of analysis. I analyzed data throughout the data collection in order to guide the direction of consecutive interviews. This process allowed for continued reflection to identify any need to modify the interview protocol if it should fail to address important information. I analyzed concepts and looked for themes that emerged from the data. This process provided greater refinement of categories and identifying subcategories within the main categories. I tracked patterns and variation and applied the same systemic process throughout the data collection and analysis. Throughout the process of data collection and analysis, I continuously developed and verified emerging hypotheses about the relationships and categories found. I sought out feedback from my advisor, program coordinators, and school administration to guard against researcher bias. Although the main focus of analysis was the role of teacher leaders and administration as well as the impact of

the program on student learning, I also analyzed larger structural conditions, which were identified as external factors such as program development and implementation; staff and student mobility; and length of program. As data collection and analysis progresses, I was able to better incorporate these conditions into the emerging theory and better determine the level of relationship between the themes within the study. I started coding data while interviewing and adjusted interviews to ensure that I covered new themes or ideas that emerge.

Protecting Research Subjects

To protect the privacy and confidentiality of research participants, I employed a series of strategies and practices. During the data collection, I secured informed consent from participants using a consent form along with a statement of confidentiality assuring them of their anonymity. I also kept digital files and transcripts in a secure location where only I was able to access them. When reporting key findings, anonymity of respondents was maintained by not identifying names of staff, students, or the school that were being studied.

Limitations

The limitations to this study included the specific region of which the interviewees were selected. Utilizing only one state, Minnesota, and the suburban areas limited the generalizability of the data. The results could be considered unique to the state or region of which the programs were developed. Due to the convenience sampling of the participants, the generalizability was again affected. The subjects were all either employees or students within the two schools studied during the implementation of the programs. Interviewing only 19 teachers/teacher

leaders at each site provided a limited perspective into the thoughts of all teachers and limits how the results could be applied across settings. Interviews were time consuming and did not allow for the complete anonymity of the participants, which may have altered the responses.

Another limitation was the role of the researcher. Due to the qualitative nature of the study, the researcher was highly involved in the collection and analysis of the data. The researcher conducted and transcribed the interviews for further analysis. As a result of the close involvement in the research process, there was a level of bias that was brought into the process. The background knowledge and personal experiences of the researcher are a reality and therefore had potential effects on the data being collected. The researcher engaged in self-disclosure prior to the interviews and during the interview process to account for factors that might affect decisions during interviews and analysis (Orcher, 2005). Since the researcher was once a program coordinator and a current practicing administrator, there were potential biases that must be considered and could potentially have had an effect on what type of information the interviewee shares. Utilizing self-disclosure strategies prior to interviewing helped to account for the researcher's potential bias. A written statement of the researcher's purpose and experience with programming was included for each interviewee.

Chapter 4

Data in this chapter is focused on the importance of engaging students. Several student experiences will be highlighted throughout the chapter and will be woven into the learning and growth of the teachers' experience. The stories of two students in particular provide a quick snapshot of the student experience as it relates to preparation for further study and the impact of rigorous curriculum on their development. Both of these young men come from life circumstances that could have limited the amount of access that they had to opportunities for advancement. Both are students of color and come from communities and families characterized by socio-economic challenge and poverty. Their experiences, as reported in the interviews demonstrated how they became ready to take on the challenge of rigor and expectation that they encountered in the IB. They approached the challenge with their eyes wide open, and were also open about the struggle to engage with a school experience that was very different from what they had encountered in the past. Themes that emerged from their interviews and other student interviews centered on initial struggles, survival of the fittest, growing pains, and preparation for the future. We begin where they begin. Why did they want to be an IB student at Meadow Brook?

Will and Parker

P: I wanted to be a part of something difficult. Something that was harder, something that was more advanced than what a standard student had. The Middle Years Program (MYP) definitely influenced my decision. I still would have done it like if I were coming from a different place just because of my attitude but it wasn't a question; it wasn't a decision that needed to be made when I got to high school. It had already been decided. It was just automatic by the time I got to high school. Meadow Brook was not my attendance school, but I had no intention of going anywhere else.

W: I had quite a different experience because I didn't hear about the IB program until my sophomore year when I arrived at MB. But my answer is pretty similar in that I wanted to challenge myself and I've always been that kind of person. In Junior High, I took all the high performance classes and stuff. I wanted to take some of the challenging classes in high school and the IB at Meadow Brook was the most challenging option available.

While each young man came into the program from different motivations and experiences, it became clear throughout their interview responses that they had embraced the challenge, struggled through each task, and were better for having done so.

Learning how to Learn - initial struggles

Our conversation bounced around to land on the topic of challenges that were offered through the IB program that had never been encountered throughout their student lives thus far. Will thought for a few moments and said, "We didn't know what we didn't know." I asked him to say more. He put his palms up to represent two scales. He described how in all other classes up to grade 11, the expectations were here (low) and our ability was here (high). "When we arrived into IB, the expectations were the same as our ability levels or even sometimes above our abilities. It was something none of us had ever experienced." When I asked how they felt that had impacted those in their cohort of learners, they said, "13 of 25 of the original group dropped out. Twelve of us reached the end." What led them to drop out?

That was probably the biggest one. For some, it was about elective courses. Not being able to take band, choir, or a specific art class because they didn't fall under "IB" was tough. Electives did away with a few people, but the majority of people, it was too hard. They just didn't like it - it was just too difficult. It was really about the workload; and not necessarily that they couldn't handle the workload but that they weren't sold on what the

workload was for . . . if there was really an end goal. They weren't really sold that it was worth it, not that they couldn't handle it per se but you know if they would be better off or not necessarily better off but that they would rather instead of chasing something that they weren't really familiar with they would rather do something else. (Will)

They described the level of frustration as growing pains throughout the two years of the program. Parker talked about how the frustration that people felt "came in waves and was multi-leveled . . . the teachers were frustrated with their comfort level as teachers; we were frustrated as learners who had rarely failed in our lives; and our parents were frustrated with the level of stress that we struggled to balance." Will described how teachers and students chose to leave the program, but "getting down to that core group of 12 with our teachers made us stronger. It felt like we were on *Survivor*. I remember making a pact with another student to stay in until the end and promising that we would keep each other strong."

When I asked the pair if their experience prepared them for college and were they different learners than their peers in college. They nodded their heads emphatically.

I think it definitely prepared me for college. I felt like the quality of work that was demanded of me was the same but instead of being at school from 7 to 3 and then going to sports 3 to 6 and then work from 6 to 10 and then doing my homework after that, I had a class for an hour and then had a whole day to just relax. The workload is different but also the nature of the workload itself. (Will)

How did the work change? What did the IB do to change that?

I remember junior high and sophomore year; we just answered multiple choice questions and short answers. Well you're looking for something specific in IB but it's like specific strategies and how you're wording things like how critically you're thinking and whatnot – whether that's attributable to the program or the teachers themselves I think that like maybe a combination of those things helped me like actually think critically and ask

questions. For example, why am I in school? Why are we forced to stay in school til we're 16? And why does there exist a program like this which really questions things? (Will)

What was different about your experience versus a non-IB learner?

Generally I think questioning and challenging the status quo is involved in the maturation process of an individual anyway but I felt like I was faced with that a lot earlier than most people would. I think most people would face that when they're in college and so – as far as that goes once I arrived at college like I knew that I already like started questioning things so I felt like I had a better understanding of like why I was going for a secondary education in general but my problem was that like the learning style was different in college and I suppose that's like idiosyncratic of the different professors but I think there's a distinct style in the IB program at Meadow Brook like they assigned readings and they stick very closely to the readings but in college it's readings like maybe a little bit of outside knowledge and lectures and so it's a lot different and I think that I did fine, I got a fine GPA and everything but I think I struggled actually learning how to learn. (Parker)

International Baccalaureate - What's it all about?

Both Will and Parker stated that IB taught them how to learn, but they never quite got around to describing why and how that connection was made. I asked them to explain to me what it was - what was it about the IB that was different.

What was it all about?

In psych, they always asked what is IB? We always started out by saying the International Baccalaureate Program. They say OK. What's that? I think one of the defining characteristics of the IB program is the liberal and universal view – I mean I would say it's an international education within – from an international point of view vs. Minnesota point of view, US point of view or a western hemisphere point of view. That's probably the biggest, that's like the age we're in though like the globalization and like all the great ways to communicate. It's more useful to have an international program . . . to a certain extent like AP is international but we have to be global thinkers and think from a global perspective because if we don't we're missing out on potential solutions to the problems that we have in the world.

The young men talked through further to arrive at a theme of the collective versus the individual through connections to religion and philosophical viewpoints.

We can make a connection to our learning in the IB to Emerson's religion – Unitarianism which plays a factor in his philosophical beliefs. Unitarianism focuses on me instead of we . . . we all have a role, but it's not necessarily an individual's fault. It's like how success is portrayed by a larger group. IB places such a huge emphasis on open mindedness . . . how do you know what you know? How do you know what you don't know? How do you know what you want to know?

How has IB education and teaching changed the way that you process information and learn?

I don't know how to process any other way that since it's been so long since I've had different type of education besides IB. It really seems to me like other types of education places more of an emphasis on learning what the teacher has to teach you vs. trying to learn everything that you can from all different points of view and being liberal and tolerant and understanding of all other viewpoints and not necessarily accepting them, but knowing them and understanding them and realizing that there's more than one way to be right. That's the world we live in though, that's the world vs. like I said learning what the teacher wants to teach you.

As I got back into my car two hours later, it was clear to me that everything is different now. The stories of three of the other graduates of the first IB cohort at Meadow Brook revealed more of this pattern of learning how to learn. In interviewing Will and Parker, the focus of my research expanded as it now reflected and revealed connection to the meaning of the important issues teachers experienced in design. The stories that I chose not to present also revealed the student experience and will be woven into the remainder of the chapter. I built my case study around the design of a program and how distributed leadership impacts student satisfaction. I realized then that this was only part of the real story. The real story was the story of these young people and how their stories gave a real-time picture to the struggles that teachers went through as they carved out the space for students to struggle and thrash about with difficult academic content as they learned to be learners. It was the story of how advanced studies and the true

pressure and rigor that came along with it stretched people - learners and teachers, and turned them into a very unique club of scholars.

That is not to say that the experiences of the administrators, coordinators, and teachers who were integral in the design and sustainability of the IB at MB are less important. They are all a part of the story where the heart of the learning that has emerged is in the lessons of the learners. The responsibility that Will spoke of in our initial planning conversations trickles down through the three cohorts of students who are participants in my research. They all have learning and lessons to share with those who will come after them. Similarly, the professionals interviewed in my research have learned lessons from year to year. This study will work to create a record of those lessons.

Carving Out the Space for Learning

The core of this work was situated in teaching and learning and the struggles of growth and frustration that come from the development of this program at Meadow Brook. My focus shifted to the development and creation of the place created for students to learn and the lessons taken from that development by the teachers who created it. When I asked a group of current Meadow Brook IB students during a focus group what makes an IB teacher, I was blasted with 12 voices at once each wanting to share with me their version of the same truth. We started slow with a once around. I asked them to say one word that described an IB teacher. "Organized." "Strict." "Brilliant." "Demanding." "Decisive." "Caring." "High-expectations." "Deep-diver." "Compassionate." "Inspirational." "Relentless." "Open-minded." The peaceful silence that followed this once around gave me a chance to

observe these young people do what they have learned to enjoy - think. Their faces said it all as they took a brief, fleeting moment in their hectic days to be thankful for their teachers.

The moment passed and off we went - "IB teachers know what they want from their students and they will settle for nothing short of that." *How is that different from any teacher?* They clarified to say - "all teachers want the most for their students, but IB teachers have so much material to squeeze in to such a short time. It puts an extra layer of pressure on everyone." This led me to think about why this work is so hard? The short answer is because something is happening here.

As previously stated, without the thoughtful design and commitment of those delivering the instruction of the IB with fidelity and monitoring its impact, there would not be a space for students to struggle, learn, persevere, and grow to success. While the story revealed itself to me through the data as the story of the growth and learning of young people in particular, there was also tremendous growth and learning by teachers, coordinators, and principals around program design and sustainability.

Growth from frustration - the Teachers' Perspective

Everything starts somewhere. My research took me to the experiences of the adults as they worked through the program's development from its beginning. "It wasn't always like this." Meadow Brook's principal recalls the rough beginnings of the program at her school.

IB came to us in the spring of 2007. We were not consulted about the placement of the International Baccalaureate at Meadow Brook. It was decided for us. I will never forget that phone call and thinking about how we would go about delivering this news to staff without getting any other

reaction than anger. Staff reacted with frustration and – on some level - pain. People believed that this was yet another thing being done to us by *the district*.

A teacher described how the news was delivered to the staff: “From the very start, it was made clear to us as teachers that IB was not even necessarily something that we were investigating in order to learn more about; instead it was what we were going to be doing. That felt a little strange. All we wanted was to feel like we were consulted about what we were being asked to do” There was some level of development around the notion of inclusivity, however, when the design of the program began to take shape.

Themes emerging from the adult interviews conducted through my research showed an evolving pattern of frustration and growth. Initially the frustration stemmed from a place of mistrust at not being consulted about the program placement. It then developed into frustration and fear around the development of the program and making it fit with the school. The staff evolved into a place of frustration that stemmed from a fear of their own abilities around the delivery of the steep rigor of the program’s curriculum. The student stories emerge from this frustration to serve as hope for teachers, which led to the next phase of hope for the future and for staying the course. This section will tell the story of the teachers’ journey through these stages. Each story is different, but will be blended to create the story of the collective at Meadow Brook.

Everything starts somewhere

A prevalent starting point for each professional interviewed was to recollect the beginning of the work. The Meadow Brook coordinator recollects the first steps

to “making IB a Meadow Brook thing.” “We broke the design into five initial components in the early stages of design: program education, professional development, program planning and certification, recruitment, and marketing.” He described how when the program was sketched out between Meadow Brook and South View, there was little to no understanding of what was involved in the International Baccalaureate programming. They started from the beginning and began to hold informational meetings for staff. The team created advisory groups (consisting of parents, teachers, and district representatives) to educate and sketch out our implementation plan.

Edward, a graduate of Meadow Brook’s first cohort, remembers attending one of the initial informational sessions described above. “There was an excitement in the air . . . a real potential for something new. My parents weren’t sure how we were going to pay for me to go to college. After we left the presentation, there was hope. We thought it could really happen if I finished the IB Diploma.”

Teachers recall the emotional pull of those first meetings for stakeholders. “We were excited to see the turn out, to see the interest from the community around this project, but we were pulled, conflicted by the fact that this was still something being done to us, not done by us. That was a tough pill to swallow. One that many never did and as a staff we needed to come to that place - this wasn’t something that would suit everyone, but it was happening, we couldn’t wait for them.” Teachers were at varying points in their acceptance and belief in the ability of the IB for kids. They would need different treatments in order to move forward whether in or outside of Meadow Brook.

To be or not to be IB - that is the question

The frustration that was felt by those who interacted with the program daily was not always overcome for teachers and students alike. There were not always successes. Ashley, a graduate of Meadow Brook's first cohort, describes how many students and staff struggled through those first years. "We felt like guinea pigs. There were days when we knew very clearly that the teacher did not have any idea of what came next. They were as new to it all as we were. It was like the blind leading the young and impressionable!" Ashley described the experience of one of her best friends who dropped out of the IB halfway through her junior year. "Bianca's heart just wasn't in it. She wanted to play soccer and have a job and be a high school kid. I remember trying to convince her to stick with it because of the long-term benefits. She thought about it for a few minutes and just said that she was too young to think about long-term right then." The other student cohorts shared different versions of the same story, each ending with a student determining that it just wasn't the right fit for them.

This notion led me to think if there was any transference to the experiences of the teachers. I reflected on Ashley's story of the blind and the young and impressionable. I took that to the coordinators and teachers. Indeed there had been a similar exodus among teachers at Meadow Brook in the early years of the program's introduction to the school. He described a wish for more time in the day and/or a restructuring to the schedule in order to provide more choice for students.

From the very beginning it was a battle to find a way for our musical students to fit band or choir into their daily schedule while still being able to take all six of their IB required courses. Every time we went to market to the junior highs about our program, a parent would ask about band or choir. It felt like

an either/or rather than a both/and until at year three we were able to build in the zero hour concept for an IB music class. I should have fought for the schedule to be built differently. Our first cohort didn't have the choice and I feel that we lost kids.

Teacher reflection on student buy-in over time showed an anecdotal increase in the amount of interest and engagement for students as pertaining to IB programming in general, but more specifically to the Diploma Program. One teacher described "an elevated level of requests from younger siblings and new students to learn about what they would need to do in order to get ready for the IB". He described a push for students coming from not only South View, but the other Junior High in the Meadow Brook attendance area as well to enroll in at least a couple of IB classes. He believed that this push was prompted by buy-in with teachers at the junior high levels. They were seeing the value of the program and what it could provide for students.

The theme of increased perception of value and opportunity with teachers at the junior high level was finding traction with the teachers at the high school level as well. Overall the high school teachers whose focus was devoted primarily to the delivery of the Diploma Program instruction felt that their professional practice had developed substantially over the three years since the program began at Meadow Brook. One teacher described how day after day she felt like a brand new teacher who was frantically rushing to stay up to date with the readings and notes just to stay in front of the students. She described how that suffocating feeling has decreased over time. For example, she has now given the Internal Assessments

three times to the three cohorts and felt that her students in Cohort three were going to show the best scores yet.

The Meadow Brook staff had come to a critical juncture. They were making a shift from frustration and doubt to potential and opportunity. When I probed to find trends I found a critical point that created a lever for organizational change within Meadow Brook's culture. It lay within the moment when the staff had to decide whether they were going to be IB or not, that was the critical question.

The two Meadow Brook coordinators highlighted this fork in the road in their responses. One described coming to a certain point when you must not lag behind to wait for those who are not on board. "We spent so much time trying to gain buy-in from the masses that it held up our forward progress." The other coordinator talked about her biggest learning that came when a veteran teacher who was the building's union representative pointed out that we were wasting our breath and energy in waiting and trying to educate and re-educate the naysayers. They would come along when the critical mass shifted, or they wouldn't, and if they didn't they would retire or leave. "It was as if a light bulb had gone off. We had been given permission to run ahead with those who were with us. They were the ones who needed to be supported and fought for and protected."

This revelation detailed by a coordinator was echoed throughout the teacher interviews. She went on further to say, "it was not time to assess the needs of those who were on board. We needed to identify their motivators and nurture them into leading, teaching, writing curriculum, whatever it was, the time for expelling energy

for our resistors was over. We were moving.” The stress that the teachers spoke of in trying to fit it all in was a prevalent theme.

As I looked deeper into this trend as it was emerging, I was able to see that it went deeper than the everyday stresses of being an educator in our day and age. It was tied into significant feelings of feeling put upon at multiple levels. Several teachers described the pressure that came with each new request. One teacher told of the sinking feeling in her stomach each time one of the coordinators stood up in front of the staff. “We knew they were going to ask us to do something new, and they hardly ever took anything away. They just added.” Another teacher who openly talked about the reluctant and sometimes resistant feeling he had around becoming IB described the additional work as an onslaught where the pressure built and built without any relief - something was going to blow. I asked what could or should have been done to relieve this pressure. He responded that the best thing that could have been done and was eventually done was to push back for teachers.

Tell the district that we can't do it all! Tell them that we have to do things differently than other schools. If we are IB and they really want us to be IB, then we have to be able to focus on that and maybe not all of the other stuff. When this happened we felt some relief. It helped us move forward as a staff.

Different Teachers, Different Motivators - Moving Forward

Moving forward was the key to the work of Meadow Brook. However, it became clearer as they went deeper that different staff would require different approaches. The Meadow Brook principal remembers feeling as though they were facing a group of educators who stood on a continuum of need. “Not one of them was in the exact same place, neither in development nor acceptance. We needed to get them moving forward from wherever they were. That became our work before

the work of teaching our kids could even start, and we had to do it together or it would never stick.” Another teacher described the level of consultation and collaboration as being extremely democratic in nature. “Teachers were consulted at nearly every turn of the road. There was an advisory committee that discussed training, scheduling, course offerings, and how we would take steps toward educating our parents and community members. They (the district) told us that we were going to be IB now, but it was definitely our job to make this program work for our current students in addition to those that we were trying to attract to Meadow Brook.”

Another set of teachers identified a key motivator in the process as training and professional development. One teacher described her first IB training. “I went to Portland with six other teachers. We got off the plane and didn’t know much about what we were doing there or how we were going to make this thing work, but after spending three days immersed in the language among fellow educators who were already practicing IB, I felt inspired. We returned to MB and were ready to get started. We wanted this program for our kids!” Another teacher spoke of the motivational benefits of regularly meeting with other IB teachers from around the state. “There are resources for us to learn from right across the city. One of the most valuable experiences I had was to go and spend a day in the IB classes of a teacher who had been teaching IB for 15 years.”

A continued theme woven throughout each response given by teachers aside from their own specific motivation as it pertained to their professional growth and practice, was in the potential for the students of Meadow Brook to be highly

successful. “We knew that we had some really bright kids, but there was often an unspoken doubt around whether or not *our kids* would be able to be successful in the IB.” Another teacher recalled hearing about the IB from another teacher who worked in an IB school in an affluent west-side suburb. “She described the high rigor that came with the program and that it was a stretch even for her kids. I couldn’t help but think that if the affluent white kids in her suburb were struggling- did ours even stand a chance? Were we kidding ourselves?” This sentiment is echoed in reluctance and anxiety expressed by students who entered into the program’s first cohort at Meadow Brook. Even while the motivators were different for students and teachers, there were times that they were simply insufficient.

Growing Pains - Is IB really for all kids?

Just as the staff recollects turning the corner to hit critical mass for being IB, they are hit with a wave of doubt around the ability to deliver the rigorous expectations of the program as well as about how successful students from Meadow Brook would ultimately be with the new rigor. This is a theme that echoes throughout each of the student interviews as well. Frustration grows from within around self-doubt.

Teacher uncertainty co-existed with student hesitation and doubt. When asking a focus group of students about what it means to be an IB student, I was struck by their answer. “Being an IB student means having to know what you want years before the other people who are walking the halls with you. You need to make decisions that will determine your course of study, it will determine your future.” The pressure for teachers with this notion surfaces in the response given by an IB

math teacher as she speaks about her students. “I remember having a conversation with my IB class about the algebraic functions of polygons. I asked a question - they looked at me as though I was speaking another language and I couldn’t help but think is this really for us?”

The frustration in change, development, voice in decision-making, the potential of failure, and lack of faith in ability emerge as prevalent themes in the interviews done with students, teachers, and leaders. All parties expressed a quelling in overall anxiety overtime, but the fact remains that there were casualties to the frustration and anxiety. The development of the IB at Meadow Brook came with bumps in the road for staff both in re-culturing and support, but also in terms of creating a product that could be sustained over time.

Design and Leadership: Maintaining and Sustaining over time

This very concept of sustainability and legacy is considered to be of equal import to the design of a program by academics studying organizational change (Fiol & Lyles, 1985; Crowther, 1997) The main trends emerging from the research around sustainability presented as program design over time focusing on sustainable, internalized practice of the IB at Meadow Brook; changing culture through leadership; and monitoring program practices through distributed leadership. Each theme stems from the importance of leveraging leadership practices to create a clear path toward program growth and sustainability.

Standing on IB Ground: Program Design over time

In order for the clear path to become part of accepted practice, its practices must become a part of everyday operations, rituals, and practices within an

organization (Taylor & Porath, 2006). The evolution of the program design at Meadow Brook did not occur over night or even over the course of a handful of years, but instead is an ongoing process, which as described by students in Meadow Brook's third cohort, "IB is not something that's done at Meadow Brook, it is not a new thing. It is simply Meadow Brook. Either you are IB here or you aren't." This notion is one that has transferred throughout the sustained design of the IB program at Meadow Brook over the course of its implementation. One coordinator described this process and its evolution:

The focus in recent years has shifted away from convincing those involved to taking the program to the next level- increasing the number of low income and minority students enrolled; improving scores; and pushing teachers' work to a deeper level.

A good portion of the focus and energy of the coordinators and program designers from the beginning of IB at Meadow Brook was to think with the end in mind. The goal was to work backward to envision what they wanted to see in the program and whom it would be serving.

We started with the question of *where do we need the kids to end up?* We pitted this against the dream of *where did we want them to end?* Within these two guiding questions, we worked to land in the middle and started to design backward from this spot. The program came to Meadow Brook to decrease racial isolation, but the end that we saw was for it to benefit the current students we served - students from lower socio-economic means and backgrounds of diversity.

A consistently emerging trend throughout interviewing was the gap between the district administrators' purpose for placing IB at Meadow Brook, and the real need that it has actually served for Meadow Brook students and their development as learners. Those working in curricular design and instruction at the district level envisioned the IB program as a means to attract students from the west side of the

school district thus creating a more equal demographic balance within Meadow Brook and South View which had historically been schools of 76% or higher students of color and 87% free and reduced lunch. One of the principals described the pressures that the district received from the state to integrate those schools that were designated as “racially isolated (higher than 70% students of color)” to be mounting as the 2014 deadline loomed.

The principals and coordinators echoed one another’s responses regarding the sometimes contradictory feeling of the pressure and support that came along with the implementation of a program using both federal and state integration dollars as well as equity and diversity funds. The coordinators interviewed in particular spoke of the constraints and additional accountability measures required quarterly over the course of the program’s initial design and implementation over the first three years. When asked if these accountability and monitoring measures made for a stronger program, one coordinator replied that “it forced us into regular and deliberate systems monitoring that probably would not have been done with as much fidelity had it not been monitored by the feds.”

At the same time, however, it “increased the pressure on teachers to document and show what they were doing when they didn’t necessarily feel confident or comfortable as IB teachers in the early stages of design.”

Another coordinator pointed out that having to show what we were doing with the money at each and every turn made us really think about how we were spending it. We shared that with the teachers who sometimes felt that they were being asked to do things simply to say we were doing them. The integration spending parameters had already been shown to work in the design of magnet schools across the country. It was already considered best practice. You can’t argue with best practice - at least not as much.

All of the coordinators and principals agreed that the monitoring of the design process was a benefit since qualified parties at the federal level were monitoring it. The monitoring of the design at the district level sometimes felt like “we were flying the plane while it was being built.”

Distributed Leadership through Program Design

Designing a program while simultaneously implementing it is not new to education. The leadership design used in this process, however, had an impact on how the program developed and how sustainable it was after its design. While the coordinators’ reflections were about buy in and choice for kids, the school administrators were more organizationally focused on the need to monitor the program’s development. One administrator talked about legacy and how a program is often times only as strong as its leader. When the original leader leaves, the program falters. She described that when one of the coordinators left, monitoring and accountability looked different and the progress of the work done in previous years slowed down. Altering the pace and progress of the work in order to accommodate for the loss of a member of the organization was not sustainable. Thus administrators pushed for an increased focus on distributed leadership across coordinators and teacher leaders. This allowed for a systematized approach to task completion, but also created a greater need for teacher voice in the design of the program. Thus, the loss of a program coordinator accidentally carved out a space for culture change based on distributed leadership.

This step by principals allowed for forward progress and focus to be re-established and maintained with the programs at Meadow Brook and South View. It

built trust within the organizations and led to a deeper buy in from teachers. The principals were able to tap into and build a deeper bench toward distributed leadership. The coordinators in each building began to see a shared focus toward monitoring and sustainability of the IB with fidelity. Of course with that came a continued need for monitoring and accountability. A teacher who came into the fold during the distributed leadership design reflects:

The tasks identified immediately for teachers who were going to be delivering the program remained the same throughout sustainability - training to develop curriculum. After some time, however, it was made clear that part of being IB was that we were all going to be shifting the way that we designed our instruction. We were encouraged to design our units with an international and globally minded perspective. Even as Middle Years Program teachers for grades 10-12, we came to learn that this was to be a different approach.

Several high-priority tasks emerged from the teacher interviews around distributed leadership included but were not limited to meeting the requirements for authorization: creating a master schedule, designing and submitting course proposals, and creating outlines and syllabi - all of which required extensive time and professional development. Portions of each of these high-priority tasks fell on the shoulders of the teachers. They all expressed having felt the pressure of getting it done, not only in a timely manner, but getting it done well.

A logical connection can be made between the need for consistent and high quality professional development and support that would assist teachers in developing the depth of skill that would be required to follow through on the priorities. Meadow Brook's coordinator reflects,

When we were moving through the authorization and monitoring process, we needed to start creating course outlines and proposals. We knew we couldn't do that without training our teachers so that they had the base knowledge in their subject areas. We, as coordinators, already had developed

a level of knowledge about the program through training, but we knew how vital it was to get our experts trained in the content.

Throughout the teacher interviews, a common theme that presented around training was not only the inherent value and inspiration that came from being sent to IB training, but the difficulty in explaining what was experienced to the other teachers in like subject areas upon returning. The coordinators continued the theme of high quality professional development for sustainability - IB teachers must be IB trained. That is an expectation of the International Baccalaureate Organization as a part of their program.

Monitoring as Management: Accountability for Continued Development

Distributed leadership may very well be the key to the legacy and sustained success of educational programming as it exists within an ever-changing environment of funding and people. One of the program coordinators that I interviewed summed it up well by saying, “faces change and the money comes and goes. No one person can make this work. The brain trust has to be shared across a team of people. We must constantly be designing an exit plan for our positions because we never know who stays and goes from year to year. No one person can carry the load - the principal is the face of the program for the public, but the design and day-to-day tasks fall to the coordinators - even they can’t be out there all by themselves.”

A prevalent theme among interviewees lies in the notion that the design of a successful program involves more than just the actions of one person and more specifically more than just the actions of the principal. One principal stated, “It is impossible for me to be the only one carrying the ball all the time. We must involve

other people, distribute the leadership, and get more buy in.” Each principal pointed to the need to include teachers, other staff, parents, and even students in the process. They spoke of the need to build capacity through “sharing the load” and “building the vision of the program together.”

These thoughts reveal an emerging focus on shared leadership that was not part of the original plan. In the comments, the distinction between shared leadership with program coordinators and teacher leaders became blurred. The principals continued to support the broad definition of distributed leadership as focused on program design, but spoke specifically about the importance of distributing and sharing the leadership at an even deeper level.

One principal in particular shared that everyone within the school setting has some connection to student learning through direct or indirect methods, and each one of those methods would become necessary at some point if the hope is to develop a program that would be sustainable. Another principal stated, “I consider everyone a leader; coordinators, instructional coaches, teachers, custodial staff, secretaries - if they don’t have the information on what we are selling - we don’t stand a chance”.

They also articulated the importance of working together with other designated building leaders in order to lead school instruction effectively. The two lead principals were specific, stating that the program development tasks as related to the IB programs were shared with assistant principals, IB coordinators, instructional coaches, learning specialists, and testing department leads.

Program Success Over Time

A variety of both tangible and intangible elements converge to create perceived success within any program implementation. When trending to determine what was successful about the IB at Meadow Brook and South View, exam rates and student enrollment in the program emerged as two of the quantifiable data points. Those that are more qualitative in nature, however, are the perceived success and satisfaction of stakeholders, the feelings of effectiveness by teachers, and anecdotal stories of growth from students.

Steady as they grow

“Many programs in education come and go. Somewhere along the way, we thought it would just go. We didn’t really believe that it was going to be the one thing that managed to stick around. Some still believe that it will go.” An IB social studies teacher describes the skepticism that came along with the phases of development and implementation of the IB program at Meadow Brook. He went on further to state that the success of many of the students has made it difficult to discount the program’s rigor and high level of cognitive engagement for students. He says, “there are certainly fewer people who see it going away, but those that do are quieter than they once were because they are outnumbered.”

When delving deeper into the reason that some staff may still want to see it go, responses surfaced like “not everyone teaches it - some teach IB, some just regular - similarly there are the IB kids and everyone else - isn’t that just another way to create separation?” When I probed into this notion further with leadership, the Meadow Brook coordinator pointed out that the numbers of IB students who

participate in the IB program has increased from 46 students to 225 students over the past three years. He described this as the newest form of growing pains within the program. It is the latest form of frustration.

Why was there such frustration? Why was this work so hard? Was this something that was worth staying the course for? “Amidst the frustration and the growing pains, it was impossible to ignore that something was happening here though,” a coordinator reflects in a follow up interview. He reflected on the themes that were emerging from the first research collection of the data.

I remember those days. The kids were taking steps forward. Some were walking, some were running, but their strides showed success. The teachers took that in to their practice. We knew that we needed to stay the course for them because they were growing and getting closer to reaching the point of success within the program.

While this area can be difficult to analyze in reference to the impact of the development of teachers and their students’ satisfaction around their teaching, a cursory examination of the exam data shows an impact. When looking at a cross section of student scores over the past three years, a developmental increase can be seen in exam scores, which would indicate that, at the very least, the delivery and design of curriculum would have had a slight impact in the development and success of students. (See Appendix 6) In addition to the exam data, there has also been an increase in the number of students completing the IB Diploma. From Cohort 1 to Cohort 2, the number of graduates increased from 4 to 9. There are 13 students slated to graduate from Cohort 3 in 2013.

Each group had a different perspective on the evolution and development of the program over the past five years. The comments of the principals were

overwhelmingly focused on the areas of teacher growth and student success. They spoke of the growth teachers had displayed in the development and design of IB curriculum. They spoke with pride about the strides that teachers had taken in particular in science and the arts instruction. One principal described how the physics teachers had been able to fold IB instruction throughout all of their classes, both IB and general education, as a means for challenging all students at a deeper level. Another principal described the design and implementation of the additional elements of the IB programs that are often more difficult to implement as they are not a part of the instructional day. She spoke specifically about the creation of the Personal Project in grades 9 and 10 between South View and Meadow Brook as well as the implementation of the Extended Essay and Creativity, Action, and Service projects.

Coordinators spoke about the growth in the number of students participating in their programs as well as the growth of the teachers delivering the program's instruction.

The growth factor and learning curve has been steep for all of us involved over the course of these past few years. Watching the students grow and struggle through the organizational and content challenges; watching teachers and students learn this program in step and side by side has been frightening at times, but extremely gratifying. It was a struggle to blindly create checks and balances that no other school had yet done, but we knew that it was what we needed to do in order to build our program with fidelity.

Teachers spoke about the development of their students as well as the development of their own curricular design. A math teacher pointed out the pace at which her students were able to work now as compared to where they started.

Teaching the fundamental components of how to think *IB* takes time with students, especially younger students, in the Middle Years in particular.

There are always those within my classes who are bound for the Diploma Program; they come along quite naturally. The other students, however, are trickier to figure out.

She described how the students at both South View and Meadow Brook come from highly diverse environments not only in culture and heritage but also in socio-economics. Some who live in poverty have not yet experienced a culture outside of their school or neighborhood. Getting them to acknowledge the perspective of cultures and practices that are not theirs can be a challenge, but when they get to the point where they internalize global mindedness - it is inspiring.

The growing pains aforementioned form a common theme throughout all of the conversations that I had with administrators, coordinators, teachers, and students. Each group was reflective about the progress that has been made even in the face of the tension that often comes with large-scale organizational change. As previously stated in chapter 2 of this study, the program design of implementing the IB calls for a complete adjustment in both the structural and cultural design of the organization, which means that both individuals and groups in a school need to learn how to do their work differently.

This realization proved to be a powerful tool for reflection for both administrators and coordinators who all felt that their work became more effective over the course of the program's development within their sites. When asked about a shift in perspective as it pertained to their work and or their beliefs in the work, each identified with the notion of having evolved as professionals as a result of their interaction with the IB. One administrator pointed out how the interaction with the IB program at Meadow Brook had stretched her learning and practice as a leader.

Building a program as big as this one is uncomfortable for many people involved because it represents a change in practice. One of my main responsibilities has been to support staff and students as they go through this change. It has been difficult at times, and I believe I felt I was failing miserably. I feel that in the long run it has made me a better leader.

Similarly, teachers felt that their perspective had changed for the better as a result of having been a part of the IB program at Meadow Brook and South View. Each teacher wandered toward student learning in their reflection on this question regarding change in delivery and effectiveness. I asked them to think particularly about how their practice had developed and become more effective as opposed to grounding their response in student learning. One teacher pushed back in saying that in his mind the two were inextricably linked to one another and should not be separated. He believed that his growth as an effective teacher was directly linked to the development of his students. Another teacher also moved in a similar direction with her reflection saying, “they pushed me to grow through their growth. At first we were all floundering, no one knew what they were doing, but over time, they pushed us to be better through their successes and their failures.” The student experience in growth and learning fit well with the sentiments of their teachers with these words on their own learning for their future endeavors as they reflected on how far they had come since coming into the program. “When our friends are floundering around us with getting all of their assignments done, we are good. We know how to do this. We can manage our stress and get things done in the right order.” These are words that any learner can live by.

Conclusion

An appropriate place to conclude this chapter lies within the sentiments conveyed by a teacher regarding growth and struggles engaged by teachers and students in this process. He recalled his students as they worked through their first sample exams in his Diploma Physics class.

Students were so frustrated when they received their first scores. They received low marks and did not know how to respond to that. I didn't have any response for them because honestly I felt like I was doing something wrong.

However, over time, both the teacher and the students struggled through together. The teacher expressed great learning from attending trainings alongside other Diploma teachers who taught him about marking exams as well as getting students to start responding to their studies as IB learners. He felt himself growing and developing as an instructor at the same time that his students were growing by leaps and bounds. "Students needed to come to the point that they were experiencing actual learning. The pain that they felt in failure was growth." It is just what Will and Parker described in their description of learning how to be students. "We did not know what we didn't know about being students." I can't help but see their visual explanation with their hands as two scales as they described the difference between ability and expectation before IB and how it shifted as they entered IB.

These struggles are the things that make educators commit. This growth happens when teachers move out of frustration. While frustration was not overcome by all, those that came to a place of growth and success show that what is being offered at Meadow Brook is a program that offers an entry point for students

like Will and Parker and Ashley and even Bianca who would not have had the opportunities that they had to engage with high rigor in their early learning. While what is offered at Meadow Brook may have been designed to meet the governmental demands for decreasing racial isolation, what actually occurred was much more powerful. A space was created for urban learners who come from a variety of socio-economic means to engage with rigor and deep thinking that has provided inroads for their futures.

Chapter 5

There is no single model of distributed leadership and curriculum design that will work in all settings. The IB program was initially designed to serve the needs of a high-income population in order to prepare them for advanced study in a variety of countries. This study investigated how well it could succeed in an entirely different setting. The methods were chosen under the assumption that in order to understand the impact of implementing a new, rigorous curriculum in a low income school, it was important to understand how the implementation process and outcomes were perceived by those who were involved. Forty-three people contributed, through semi-structured interviews, to a clearer understanding of the program design and impact, sustainability, distributed leadership, and learning. The fact that educators at multiple levels have found impact and value in the International Baccalaureate Program as it relates both to student learning and professional growth were key findings from this research.

These key findings were grounded in themes including time management; organization; pressure and expectations for success; and student development as described through the focus groups and interviews with three years of IB students paint a picture of the depth of growth taking place for these students. Time management and organization were expressed as both major challenges and as most impactful and beneficial for development as a means for future success. Time for other activities like band, choir, sports, work, or social lives was viewed as the most limiting of factors. Pressure and expectations for success served as a catalyst for these learners as they did not want to disappoint. Student development and

actual experience, rather than the theory of the program, proved to be most influential for overall growth and program impact. These students were learning how to learn instead of blindly completing tasks.

The stories of these young people would not exist if it were not for the space that was carved out for them to flourish and struggle and grow and learn. That space was created by the thoughtful and deliberate program design of the adults at Meadow Brook on their behalf. The program comes from growth emerging from frustration and professional discontent. It is a story of sustainability and the keen ability of educators to recognize and commit to rigor that makes a difference for kids. The design, implementation, and sustainability of the International Baccalaureate at Meadow Brook involved more than a simple shift in programming. It is a major shift to the beliefs and practices of these professionals about the way students learn and the way teacher teach. The research identified some key challenges to the way that teachers approach their work. These challenges resulted in frustration created in struggle, resistance, and ultimately growth toward developing more focused and deliberate practices in teaching which ultimately directly impacted the learning and perceived success of students.

This comprehensive picture provides a better understanding of curricular program design for student impact and growth. The next step is to continue the conversation to include connections to future practices in design and sustainable programming in order to create extended opportunities for research.

Overview

While the findings are presented in Chapter 4, this chapter will highlight those findings that have particular significance in relation to both leadership theory and practice in education. Next, focus will be given briefly to summarizing the implications of these findings for the three research questions set out at the beginning of my study:

1. What are the major skills impacting student development as identified by staff and students engaged in an International Baccalaureate Program?
2. What aspects of the IB Program are viewed as most critical to student learning and engagement in a mixed race, low-income metro area school?
3. How is leadership from administration and teacher leaders related to program sustainability and the impact of the IB on student learning?

Finally, implications for practice and further research will be shared along with the limitations of this study.

What are the major skills impacting student development as identified by staff and students engaged in an International Baccalaureate Program?

Student interviews suggest that the exposure to the IB program was a profound shock compared to their previous experiences. Throughout the data collection process, a number of impacts for students came through ranging from daily challenge through engaging material to feeling better prepared to interact with people in any situation. Low-income students who participated believed that they were challenged in ways that prepared them for college. They felt supported in tackling ideas and material that were more demanding – and more engaging – than

they encountered in previous classes. Their story is one of growth and learning how to be a learner- to be given a safe space. Their main challenges involved time management; organization; pressure and changing expectations for success.

Time Management

As previously identified, learning how to learn was an integral element to the IB program for Meadow Brook students. Throughout their progression in the IB Program, students also acquired the ability to manage their time and to plead their case from a self-advocacy standpoint. This skill was most predominantly identified as most impactful for students by both staff and students. The skills that were developed in the construction of persuasion and argumentation as they were required for final assessments as well as the skills required to complete multiple tasks in tandem profoundly prepared the students at Meadow Brook for their future endeavors.

As a staff member elaborated on the importance of self-advocacy and time management skills for all students, “we have to teach our kids how to navigate the world. They need to know how to ask for what they want and to defend their stance in a way that it is going to make people listen. This is one of our greatest responsibilities - the IB puts kids light years ahead of others in the ability to rationally advocate through facts and manage themselves in times of adversity.

Organizational Management & Critical Thinking

The ability to organize, prioritize, and multi-task was listed a close second with those interviewed as impactful for students. Throughout the data collection, a theme emerged around the stress and pressure that accompanied the rigor of the IB

for both teachers and students. A teacher asserted that “quite possibly the most valuable thing that anyone will take from this program is that it is not only acceptable to question what is being learned, it is a natural part of critical analysis and taking your learning to a deeper level.” These sentiments were common threads for all of the subjects in this data collection – students and teachers alike. Teachers felt that teaching critical thinking skills were one of the most important tasks for them in their teaching. It is that critical juncture point in the program to push student learning to the next level.

What aspects of the IB Program are viewed as most critical to student learning and engagement in a mixed race, low-income metro area school?

The identification of the elements most critical to student learning and engagement in Meadow Brook’s IB program cannot be answered with a quantitative measurement or a matrix. Rather the answer lies in the qualitative experience that these students experience over the course of the program as shared by both staff and students. Throughout the data collection process, staff and students interviewed from a variety of backgrounds arrived at different versions of the same message. This story is one of growth and learning how to be a learner - to be given a safe space within which to develop critical thinking skills, organizational skills, and the ability to challenge and question. These skills were developed through the existence of supports in the form of systems to manage work volume for students and teachers as well as the increased expectations around the rigor implicit with IB program design. These are the aspects most critical to student learning and by extension teacher’s professional growth.

Supports: Systems to Manage and Teachers to Challenge

Each group of student interviewed through the research process pointed to the support system and skills that were developed as a result of participating in the program. Teachers and coordinators alike pointed to the support systems that were created as the program's development progressed. Major changes in practice were required while delivering the program. Teachers were required to alter their instructional philosophy to accommodate a global paradigm while simultaneously creating support systems for students to learn and struggle. The rigor challenged teachers' cultural expectations as well as those of students who had – up to that point – been successful in a system that focused on declarative learning from the western dominant perspective. Supports were required to structure challenge to the existing thought process.

The teacher leader emerged as one of the primary tenets of this support network. Interviews with teachers revealed that there was a key difference between the support provided by teacher leaders and program coordinators when compared to that of building administration. The key to moving the work forward lies in the continued support and advocacy of the teacher leaders at every turn along the way. These individuals served as coaches and mentors for the teachers and for the work as opposed to serving in an evaluative role. They supported the work and the struggle of the teachers.

An additional theme of support emerging from the research was that of the integral role that the IB teacher played in the development, learning, support, and survival of the IB student. While the research clearly showed that teachers were

growing and adjusting to the implementation of the IB at Meadow Brook and the organizational changes that it carried with it, the teachers never stopped serving in a support role for their students as they made their way through the challenges and rigor of the International Baccalaureate program.

IB Rigor

The issue of whether IB (e.g., a rigorous curriculum) could benefit all students remained a question that was not fully answered. It was clear that the students who were able to withstand and maintain throughout the course of the program were qualified as successful and likewise the demographic enrollment of the students in the IB was a microcosm of the overall population of Meadow Brook (see Appendix 5), the fact remains that there were students who chose to discontinue their enrollment as IB students for a variety of reasons. The impact for these students remains largely immeasurable.

One thing that remains clear, however, is that the rigor of the IB at Meadow Brook served as a lever to influence student achievement. The opportunities for critical thought, self advocacy, and analysis found in these IB courses influenced the intellectual practices of all of the students involved including those students who did not complete the IB Diploma. Those skills once internalized are not forgotten. They can be continually replicated and drawn upon as a practice for learning.

Isolating the true impact of rigorous course models on student learning was also difficult to pinpoint and isolate from a quantitative measureable standpoint. Through data collection obtained during the interview process, it became clear, however, that there was an impact on the developmental learning of the students

involved in the IB programs at Meadow Brook. Similarly, it became readily apparent that students had developed the reflective capacity to know how much they had grown largely due to the frame of reference that they had to other students in their university classes.

An additional impact for every cohort of students may not come to fruition for them until they have completed the program and moved on to post-secondary study. The impact of rigor of the International Baccalaureate has prepared these young people to think critically, to analyze thoughtfully, and to organize their studies and tasks logically. “We know how to be students, before we were just doing school. After the IB we know how to learn” (Parker).

How is leadership from administration and teacher leaders related to program sustainability and the impact of the IB on student learning?

The issue of program sustainability was particularly perplexing, and persisted after the completion of the study through increased pressures around funding; a surprising change in the focus of the program; the sustained investment in human capital; and the results produced by the program. Each of these elements shined a light on the residual impacts of the program’s implementation causing district leaders to consider the question of unintended sustainability. The district saw IB as a vehicle for meeting equity challenges by attracting more white students to a racially imbalanced school and allocated additional funding. They were less committed to IB as a strategy for increasing rigor for all. It was difficult to maintain the program as state funded equity initiative when while the program was providing opportunities for increased rigor for all; it was not decreasing racial isolation.

In considering sustainability from a design and leadership standpoint, it was imperative to consider the additional effort required of teachers to manage the program – without any reduction in other work – as mandated by district initiatives. The shared leadership model that emerged in IB was not reflected in the “regular” school programs, creating dissatisfaction and increased frustration by staff members who called for equity across their teaching ranks for the schools across the district.

Emerging evidence of student growth and success was balanced against uncertainty and fragility. While the success and growth of the students exposed to the rigor of the IB at Meadow Brook continued to win out among the staff members, the frustration in work load, training, and professional equity waned for many of them which begs the question to what degree sustainability can be achieved if concerns go unresolved. Shared leadership worked to provide a firm foundation for addressing and creating a space to thrash about in the concerns around professional equity.

The notion of growth in frustration recurred numerous times as the program’s emerging design was described by respondents. There were temporal aspects to the program’s development that resulted in an opportunity for the growth and work of the program to deepen and take hold through struggle. An example of one of those occurrences was my departure from Meadow Brook as the Middle Years Program coordinator, which created a temporary leadership gap. As previously described by one of the teachers interviewed who equated my departure to someone taking their foot off the gas pedal. This change to the management of the program, however,

forced teachers to take a critical look at their learning thus far in the journey. My absence created an opportunity for them to grow their independent practice and application of the concepts that learned previously in our work together. Another example of growth through temporal occurrences in the program could be found in the first preliminary scores received the first cohort of students from the IB.

Students initially scored very low. This was a wakeup call for teachers to modify and deepen their practice and curricular delivery because the scores are a reflection of the teaching occurring within the program.

The key to sustaining a program is to build it with the idea that it must live on without the person who designed it. It isn't about the leader, but rather about the success of the program - that is its legacy. If a leader who uses student learning as the measuring stick for the effectiveness of a program will be more effective in the long run, the program will make more forward progress and suffer fewer set backs.

These reflections from Meadow Brook's principal zero in on the final research question of the impact of leadership on program design, sustainability, and student learning. Sustainability researchers indicate that consistency in the decision-making, vision, and communication of leadership will positively influence the longevity of programming. This can be seen in the programming at Meadow Brook in the development of the IB since its inception in 2008. The school has maintained the same program coordinator and principal throughout. Together they have maintained a continued commitment to the IB through resource allocation, teacher, development, and recruitment of students.

The principal has committed to fund the IB program fully to ensure that students at Meadow Brook will have access to the courses that they would need to

complete the IB Diploma. The residual impacts of this for the rest of the building included larger classes in the mainstream, a complex master schedule design, as well as the staffing allocations to provide high caliber teachers in each IB classroom. The development and support of those high caliber IB teachers requires a significant financial investment for their training as well as the allocation of time for them to write and develop rigorous curriculum.

The recruitment of students is an integral focus for the leadership (administration and teacher leaders) at Meadow Brook in the way that they see program sustainability. “If you build it, they will benefit - if we have a program that is strong and we go out to get them to come be a part of it, sustainability has been achieved - it is basic supply and demand,” Meadow Brook’s principal reflects. Over the three years of the IB program development at Meadow Brook, student enrollment in IB courses has increased from 46 students in the first year to 225 students three years later. The number of IB exams being taken at Meadow Brook has increased by 86% over three years (see Appendix 5). This is due in large part to the recruitment and leadership practices by administration and teacher leadership.

Limitations

As with any study, limiting factors must be considered in context to fully frame the arguments being made. This research is subject to many limitations, which must be carefully considered when making broad generalizations and when looking at avenues for further research and understanding.

The limitations of this study include the fact that only 1 school was studied as a focus for this research. In the Metropolitan area of Minneapolis and St. Paul, many

districts deal with racial isolation, employ comprehensive curricular models as a tool for addressing racial isolation, and choose the International Baccalaureate as the means to do so. There are a number of perspectives that were not represented through the examination of only two schools. Secondly, 43 subjects were interviewed in this research. According to Orcher (2005), “how the participants are selected is usually much more important than how many are selected.” Despite this fact, relying on the views of 43 subjects to represent a larger body of thought ought to be undertaken with some caution.

Using a homogeneous, purposive sample limits the variation among the interviewees opinions. This type of sampling, though, does allow the researcher to narrow the scope of the study and limit the number of variables (Orcher, 2005). In this specific study, only teachers in their first five years as International Baccalaureate teachers were considered. Similarly, students within three years of enrollment of the program were considered. This factor was limiting, but also broad in that the teachers interviewed were of a variety of ages and came from a variety of background experiences. The views of the teacher who had been a science teacher for 25 years were much different than the teacher who was in their third year of teaching.

Another limitation was the actual process of interviewing. According to Marshall and Rossman (1999), “Interviews involve personal interaction; cooperation is essential” (p. 110). It can never be fully known whether the administrators, coordinators, teachers, or students were comfortable sharing all the

details of their situations, or whether the questions asked provoked a deep level of response.

While certainly a notable limitation, it was also a risk worth taking to gain a deeper understanding from individuals about their thinking and professional practices. In a semi-structured, open-ended interview, the interviewee takes the lead and the interviewer follows (Orcher, 2005). This can cause one interview to go in a very different direction than another. The topics presented and ideas shared could potentially have a very different spin. To help account for this fact, each interview began with the same template of interview questions, thus providing some commonality for analysis. Also, gathering personal stories proved to be unregulated, and therefore a limitation, because the stories shared could be determined by the time of year, time of day, or prior daily experiences that influenced the interviewees' responses.

Digitally recording the interviews and taking notes proved a thorough method of data collection. This method, by nature, can be limiting in that the interviewee may feel reluctant to participate fully knowing that their exact words are being recorded (Orcher, 2005). All precautions were taken to account for this limitation, including notifying subjects prior to the interview as well as asking again just before the interview began. However, it appeared that the subjects were unaffected by the recording device and spoke freely about themselves and their interaction with the International Baccalaureate programs at Meadow Brook and/or South View.

Recommendations for Future Research

The prevalent theme from this research is that the real story in this hunt to determine the effectiveness of distributed leadership and program design through the use of comprehensive curricular models does not lie in these buzzwords. Instead, it lies in the learning and growth of the program participants. It lies in the story of the students. Telling the story of these students will not provide the clarity and consistency that will appear in the theory, however. Due to the highly personal experiences that were encountered in interviewing each of the stakeholder groups, the multiple aspects of leadership and varying contexts of program interaction, it would be impossible for the program to look and feel the same for each student. Future research could help inform the practice of collecting and measuring student experience and growth by providing research-based actions that are then used in conjunction with a guide for evaluating the actions and their effectiveness.

As with many concepts in education, semantics change with the entrance and exit of those driving the bus. If we, in academia, come to a point where equity, access, and racial isolation are no longer terms of note, something new take their place, and will likely hold the principal and school leadership accountable with even tighter strings than before. Is there a solution to address racial isolation? Is rigorous course programming truly a solution for equity and access? The one thing that became clear from this research is that schools are doing great things to offer challenging courses to their students irrespective of their racial background; and students are showing tremendous growth as learners.

One area of further research to consider is the potential correlation between the anecdotal and reflective experiences of the students in IB programs and their achievement in the IB program on exams and internal assessments. Are there commonalities across multiple schools? How has sustainability had an impact on student's perceived success or growth in these programs?

Another study could examine the district level and the actual support structures for rigorous curricular programs across a cross section of different district. Does each district's administration view the purpose or scope of rigorous curricular models to meet the same purpose as it pertains to integration and/or equity? If so, is that made explicit to those designing the program? To what degree and in what way are the perceptions of the program's participants taken into consideration and used to shape the development and/or program support provided? What are the potential connections between proficiency tests for achievement and rigorous curriculum?

Questions like these further the learning process and inform future practice. Through future practice, we become more informed and change current experiences to achieve the ultimate intended result of doing things better than we have and for the right reasons. For example, an additional study could work to draw connections between standardized assessments and rigorous assessment tasks in order to move students toward proficiency through acceleration in rigorous classes thereby reducing the achievement gap.

Conclusion

The questions addressed by this study are central to current debates about how best to address problems of both quality and equity in U.S. secondary schools. The study draws attention to both the promise and potential implementation pitfalls of challenging the assumptions and culture that characterize U.S. secondary schools. Increasing content rigor is clearly a component of educational policy, but content alone may be insufficient to engage students with more demanding work. The IB program combines rigorous content with an integrated instructional strategy that allows students to work deeply and to demonstrate their learning in ways that are very different from “standard” secondary school classrooms. This study suggests that a program with these demanding characteristics can be successfully implemented in a low income/high minority school, but that doing so requires significant support and collaboration largely because of the challenges raised by required changes in organizational structure and professional roles. More attention needs to be paid to the issue of how new rigorous content requires major adaptations in teaching, school organization, and teacher leadership if it is to be a successful strategy for improving opportunities for all students.

This study serves, for the researcher, as the first step in developing a full grounded theory approach which will comparatively analyze the impacts of rigorous curriculum on student achievement and perceived satisfaction through the study of additional IB programs in similar communities facing similar struggles. Additionally, there is potential to grow this notion to extend beyond the study of the International

Baccalaureate to include other models of rigorous curriculum (College in the Schools and Advanced Placement).

In conclusion, at a macro level, there are areas for future studies to expand the current research base and provide pointed strategies and treatment for influencing the achievement gap and studying secondary student achievement on a larger scale. It is also clear on a more granular level, that there are positive impacts for the students of Meadow Brook's International Baccalaureate program. These positive impacts grow from the firm foundation of cultural and structural growth that has occurred throughout the design and implementation of the International Baccalaureate. Additionally, the impact of distributed leadership and shared decision making through the design of the programming at Meadow Brook have shown that a commitment to sustaining and maintaining a program can weather growing pain, frustration, and resistance if it is right for students. This growth is presented through the learning stories and experiences of the staff and students who have been a part of this program over the past five years. Their stories paint a collective picture of struggle, frustration, growth, failure, success, and commitment.

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APPENDICES
Appendix 1

School Name	Location	Program,	Grades	Number interviewed: P=Principal C=Coordinator T=Teacher/Teacher Leader S=Student
Meadow Brook Senior High	NW Metro	IB DIPLOMA IB MIDDLE YEARS	11-12 10	P= 3 C=2 T=10 S=20
South View Junior High	NW Metro	IB Middle Years	6-9	P=1 C=2 T=5
East High School	Urban	IB DIPLOMA IB MIDDLE YEARS	9-12	NA
Saxburg Middle School	Urban	IB Middle Years	7-8	NA
Foster High School	NW Metro	IB DIPLOMA IB MIDDLE YEARS	9-12	NA
Foster Middle School	NW Metro	IB Middle Years	7-8	NA
Baxter High School	North Metro	IB DIPLOMA IB MYP	10-12	NA
Baxter Middle School	North Metro	IB Middle Years	7-9	NA
South Stevens MS/ HS	Urban	IB DIPLOMA IB MYP		NA

Appendix 1 (contd.) Demographic Information

Demographic Data	
Meadow Brook Senior High	
Grades:	10-12
Population:	1436
Free and Reduced Lunch:	61.6%
Special Education:	10.3%
English Language Learner:	13%
Graduation:	78.3%
Student Demographics:	
Black	32.9%
White (Caucasian)	24.2%
Hispanic	8.3%
Asian	33.8%
Native American	.8%
Adequate Yearly Progress (AYP)	
Reading	Yes
Math	No
Attendance	No
South View Junior High	
Grades:	6-9
Population:	653
Free and Reduced Lunch:	75.2%
Special Education:	16.7%
English Language Learner:	14%
Graduation:	N/A
Student Demographics:	
Black	47.5%
White (Caucasian)	11.8%
Hispanic	10.6%
Asian	29.4%
Native American	.8%
Adequate Yearly Progress (AYP)	
Reading	No
Math	Yes
Attendance	Yes

Appendix 2

Teacher Interview Protocol August 14, 2011

Respondent and title: _____

School Name: _____

Role: _____ Department/Subject: _____

Date: _____

Interviewer: _____

1. Introduction

- a. Purpose and scope of study
- b. Assure confidentiality

Confirm position. Department/grade level.

How long have you been in this position?

How long have you worked with the [district/school name]?

How long have you worked with the IB Program at [school name]?

What positions have you held in addition to the one that you currently have?

2. Your Role

- a. What is your personal role relating to these programs?
- b. What responsibilities does your department have relating to the International Baccalaureate Middle Years Program (MYP)?
- c. What responsibilities does your department have relating to the International Baccalaureate Diploma Program (DP)?
- d. What are the training priorities for teacher professional development around IB program development and student engagement in your building?

3. Supporting Program Development

- e. What type of direct or indirect supports does the building leadership (administration and program coordinators) provide to you and your colleagues around the development of the IB programs within the building?
 - i. Can you give me an example of the way in which leadership typically works with teachers, either directly or indirectly, regarding the IB programs?
 - ii. Does the school district ever provide support directly to the two IB schools? If so, what does that look like?
- f. What's different about the way that you teach? Take me through a daily lesson that follows the IB program.

- i. Were these changes difficult? Tell me about that.
- ii. How has this affected the way that you and your colleagues work together?
- iii. How has it impacted your own job performance/effectiveness?

4. Determining Team Priorities

- g. How are the priorities for your team's efforts to improve the way that you deliver the IB program curriculum to students?
- h. What professional development would have or has had the most influence on your team's improvement priorities?
- i. What areas is your team the least impactful? What is being done to address this concern?

5. Student Impact

- k. How have student's been affected by the implementation of the IB programs in your school?
- l. What has been the most impactful part of the program for students? Least beneficial?
- m. How does the program interact with/influence student learning?

6. Anything else?

- n. Is there anything else that you would like to mention about your team/your role in terms of the IB programs and their design/implementation?

Appendix 3

Student Interview Protocol

Respondent and title: _____

School Name: _____

Role: _____

Date: _____

Interviewer: _____

1. Tell me a little about your current endeavors.
2. What kind of student were/are you?
3. What do you believe are the most important things to learn in school?
4. You were/are an IB student. Tell me about the program and how you were involved.
5. What were your IB classes like? Take me through a typical day.
6. How did IB courses challenge you differently than non-IB classes?
7. Are IB classes for everyone? Tell me more about that.
8. Talk about your teachers. What is an IB teacher?
9. How do you feel that this program has impacted your learning as a student?
10. How has it prepared you for where you are today or where you will go in the future?
11. What suggestions might you have for the principals and teachers at your school to improve the IB program?

Appendix 4

Administrator/Coordinator Interview Protocol

Respondent and title: _____

School Name: _____

Role: _____

Date: _____

Interviewer: _____

1. Introduction

Purpose and scope of study

- a. Assure confidentiality

Confirm position. Department/grade level.

How long have you been in this position?

How long have you worked with the [district/school name]?

How long have you worked with the IB Program at [school name]?

What positions have you held in addition to the one that you currently have?

2. Your Role

a. What responsibilities does your team have relating to the International Baccalaureate Middle Years Program (MYP)?

b. What responsibilities does your team have relating to the International Baccalaureate Diploma Program (DP)?

c. What is your personal role relating to these programs?

d. What are the training priorities for teacher professional development around IB program development and student engagement in your building? How were those priorities created? How have they evolved over the implementation of the programs?

3. Supporting Program Development

a. What type of direct or indirect supports does the building leadership (administration and program coordinators) provide to teachers around the development of the IB programs within the building?

i. Can you give me an example of the way in which leadership typically works with teachers, either directly or indirectly, regarding the IB programs?

ii. Does the school district provide support directly to the two IB schools? If so, what does that look like?

b. Have there been any significant changes over the past three to five years in the way that you have asked teachers to design instruction?

i. What caused these changes?

ii. How has this impacted the culture within the building?

iii. How has it impacted your own job performance/effectiveness?

7. Determining Team Priorities

- a. How are the priorities determined for your staff's efforts to improve the way that the IB program curriculum is delivered to students?
- b. What professional development would have or has had the most influence on your staff's improvement priorities?
- c. In what areas does your staff need the most improvement? What is being done to address this concern?

8. Student Impact

- a. How have student's been affected by the implementation of the IB programs in your school?
- b. What has been the most impactful part of the program for students? Least beneficial?
- c. How does the program interact with/influence student learning?

9. Anything else?

- a. Is there anything else that you would like to mention about your team/your role in terms of the IB programs and their design/implementation?

APPENDIX 5
Diploma Achievement Data

Table 1: Meadow Brook IB Exam History

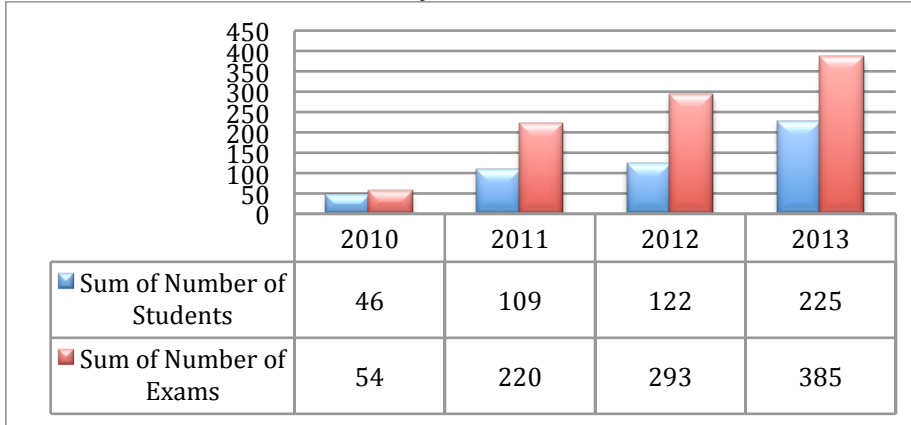


Table 2: Meadow Brook IB Course Participation (760 seats in IB courses)

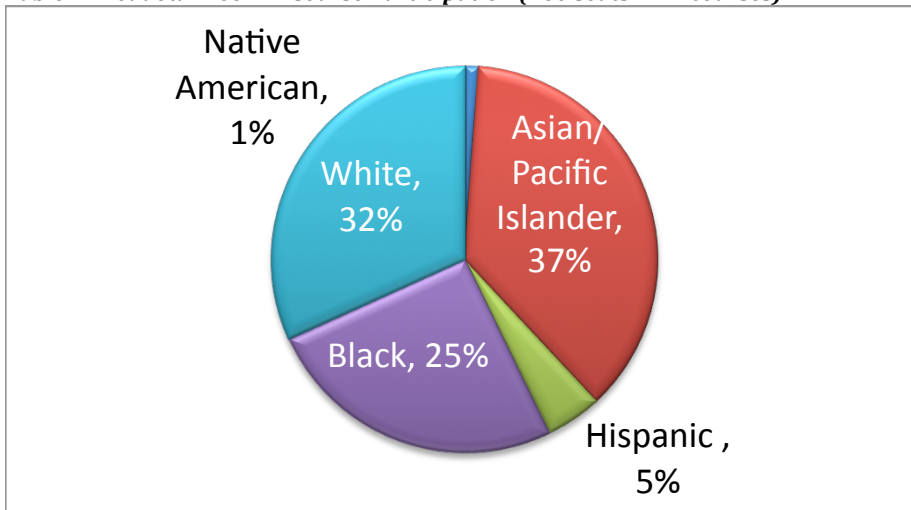


Table 3: Meadow Brook 2013 Exam Participation (385 exams - mostly seniors)

