A Case Study of How an International Baccalaureate Middle Years Programme and

Leadership Synergistically Promoted Student Learning and School Success

Submitted by

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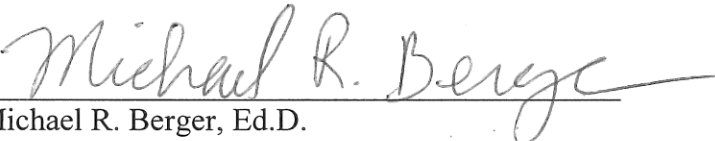August 29, 2014

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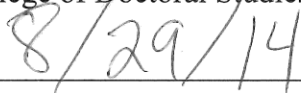
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Abstract

The purpose of this qualitative empirical single case study was to explore how the International Baccalaureate Middle Years Programme (IB MYP) influenced the success of one middle school in the state of Georgia. Vygotsky's theoretical framework supported the context of the research and the over-arching research questions, which were (a) How did the IB MYP influence students' academic performance? (b) How did the IB MYP contribute to cognitive development? (c) How did the IB MYP contribute to global literacy? (d) How did the leadership of an IB MYP contribute to a school's success? This study collected, coded, and thematically analyzed various data sources including interviews, documents, and a database to provide information on how the IB MYP contributed to this school's success. The data collection focused on how approaches to learning contributed to the development of academic performance. Second, the data focused on how social, emotional, and analytical reasoning contributed to cognitive development. Third, the data focused on how global competency contributed to global literacy. Fourth, the data focused on how the quality of leadership and the IB MYP revealed many areas of success other than just successful Adequate Yearly Progress (AYP) of student achievement on state standardized test scores. This study found approaches to learning supported cognitive development and global literacy enabled by the IB MYP, in combination with the school's leadership, led to the ultimate success of students in this one middle school in the state of Georgia. The success was demonstrated in various ways not originally envisioned by the researcher when designing the study.

Keywords: Qualitative, Empirical single case study, International Baccalaureate Middle Years Programme

Dedication

First, I would like to thank my Lord and Savior Jesus Christ who continually renewed my strength throughout this painful, yet challenging and inspirational journey. Isaiah 40:31 was one of the scriptures upon which I often reflected: "Those who hope in the Lord will renew their strength. They will soar like the wings of eagles; they will run and not grow weary, they will walk and not faint." Thank you, Lord, for your awesome word! Secondly, I owe my life to my dear husband, Kenny Arnold Johnson. I am grateful to have you as a supportive human being in my life. I love you, man of strength and wisdom! Last, but not least, to all my students who made me into a better person, I thank you for teaching me to become better at my passion in teaching you.

Acknowledgments

First, I would like to acknowledge Dr. Lodwick, who has been a life coach since my studies at Pennsylvania State University. Thank you for all the professional support you have provided over the years and for believing that I would become an educated human being from my teenage years. Then, I would like to acknowledge my doctoral dissertation committee, Dr. Maul, Dr. Rickey, Dr. Jazzar, and Dr. Bainbridge. I would like to extend my deepest gratitude to all of you for your professional adeptness, agility, and ingenuity. This empirical single case study is a testament of my life and passion for innovative international education. Dr. Maul, you did not give up on me when I know you wanted to so many times. Thank you for showing me what it truly means to balance brilliance and humanness. I am grateful to have you as my dissertation chair. Finally, I would be remiss not to credit my parents, grandparents, and all my ancestors who provided a path for me to become an educated and humble human being.

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Chapter 1: Introduction to the Study

Introduction

In the twenty-first century, global standards measure education. The U.S. public education system is not competitively keeping pace with nations around the globe, according to the Programme for International Student Assessment (PISA) (Klein, Levy, & Rice, 2012). Therefore, the researcher conducted a study on a comprehensive global curriculum, the International Baccalaureate Middle Years Programme (IB MYP), to discover innovative tactics and suggest ways to improve young learners' academic knowledge and skills. Thus, the purpose of this study was to determine how the IB MYP influenced the success of one middle school in the state of Georgia. The history of U.S. schools in comparison to schools around the world led to the problem statement as well as the purpose. The United States is a part of an ever-increasing global society.

The researcher expected to advance scientific knowledge, hence the significance of the study, the methodology, and the design. The methodology of the study was qualitative in nature, as this provided an in-depth understanding of the IB MYP phenomenon. The design was an empirical single case study consisting of four research questions and six data sources collected and coded, as well as thematically analyzed for interpretation and reporting. Prior authors' studies demonstrated the IB MYP's effectiveness in enhancing students' academic performance quantitatively. However, the researcher expected this study to extend prior authors' studies by clarifying the nature and phenomenon of the IB MYP. How and why does the IB MYP enable the success of the learner and the school?

The IB MYP has been successful on a global basis. The International

Baccalaureate Organization (IBO), rebranded in 2008 to the International Baccalaureate

(IB), created the Diploma Programme (IB DP) (Bunnell, 2011b). The original purpose of

the IB DP was to provide a pre-tertiary international curriculum for globally mobile

students, during the last two years of secondary school. The IB DP allowed students to

hold an internationally recognized diploma that major universities around the world

would recognize on successful completion (I. Hill, 2002). The IB grew in popularity with

schools in the United States because it focused on teaching students how to think and

learn (Bloom, 2012). However, how the IB MYP influenced the success of middle

schools in the state of Georgia was unknown. On national standardized tests in reading,

math, and science, only one-third of young learners in elementary and middle schools

demonstrated competency (Klein et al., 2012). Measured by global standards in the

twenty-first century, the United States sought to reform public education through

innovative and competitive ways to educate students with the necessary academic rigor

and knowledge to compete and succeed in global society. Klein et al. (2012) stated:

> According to the results of the 2009 Program for International Student
>
> Assessment (PISA), an international assessment that measures the performance of
>
> fifteen-year-olds in reading, mathematics, and science every three years, U.S.
>
> students rank fourteenth in reading, twenty-fifth in math, and seventeenth in
>
> science among students in industrialized countries. The results of the test,
>
> administered by the Organization for Economic Cooperation and Development
>
> (OECD), show that since the exam was first administered in 1999, some European

and Asian students have academically surpassed students in the United States. (p. 23)

Based upon the results of PISA, it appeared that educational systems around the world actively prepared young learners for pre-university global comprehensive curricula in order to compete in global society (Myers, 2010). Therefore, it was vital for the United States to discover innovative approaches to teaching and learning to improve young learners' academic performance. The researcher expected this study to provide an understanding of how and why one particular global comprehensive program, IB MYP, may be an effective strategy in realizing this goal of improved learner performance. Four research questions guided the data collection of the study.

Research Question 1 focused on how the IB MYP influenced students' academic performance. In an effort to respond to this question, the researcher selected a method and design that provided the opportunity to use several data sources (Yin, 2009). The collected data would determine the IB MYP's influence on students' academic performance and give insight into the next research question. The data from this question would help to describe the various approaches to learning used by the IB MYP that may then influence cognitive development and global literacy, ultimately leading to student and school success.

Research Question 2 focused on how the IB MYP contributed to cognitive development. Understanding how a program enables cognitive development is important in order to understand how the program can ultimately deepen knowledge and skills. In the 21st-century globalized society, attaining cognitive skills is vital (Yemini, 2012). This research focused on understanding how the IB MYP led to cognitive development.

Improved cognitive development is essential to developing new knowledge, skills, and capabilities including global literacy. This focus was important and provided insight into the next research question.

Research Question 3 focused on how the IB MYP contributed to global literacy. The researcher expected to present relevant data about how the IB MYP, through its approaches to learning, influenced cognitive development as well as enhanced global literacy. This focus would allow learners to achieve and participate successfully in a global society, enabling them to contribute to expanding the global economy (Acedo, 2012). Understanding how and why the IB MYP's approaches to learning focused on cognitive development as well as global literacy that influenced the performance of students and the success of the school led to the next research question.

Research Question 4 focused on how the leadership of an IB MYP contributed to a school's success. The research method was qualitative in nature, and the design was an empirical single case study. The reason for undertaking an empirical single case study was to investigate a process or to discover meaning in order to gain insight and an in-depth comprehension of an individual, group, or situation in a bounded time (Lodico, Spaulding, & Voegtle, 2010). Therefore, the objective of the researcher's study was to seek understanding of the nature and influence of an IB MYP in one middle school in the state of Georgia. Creswell (2009) indicated that qualitative research supports an inductive style centering on meaning to reveal the importance of the situation's complexity. In addition, a qualitative empirical single case study offered the opportunity to promote an in-depth holistic understanding of a phenomenon, such as an environment or a process (Airasian, Gay, & Mills, 2012). The expectation was that the

research questions and collected data, thematically analyzed as well as interpreted for reporting, would enhance the comprehension of the essence and meaning of the experience during a specific period.

Due to the uncertainty of global expansion, young learners in the United States have an acute need to think critically. Students who can think critically make comparisons of and connections between their own culture and another, relate to one another from a position of equality rather than from superiority, and thereby cultivate relationships with global peers (F. H. Jackson & Malone, 2009). The IB MYP aims to develop inquiring, knowledgeable, peaceful, and caring young people and lead them to a greater understanding of individuals worldwide (Wells, 2011). These goals help young people develop superior relationships and allow them to solve complex global topics from every professional sector, such as business, diplomacy, national security, and social services (F. H. Jackson & Malone, 2009). Therefore, the intent of the study was to comprehend the meaning of the educational experience.

The researcher expected this study to add to the existing body of literature and identify ways in which the IB MYP influenced the success of one middle school in the state of Georgia. This study would help to identify one potential global comprehensive program that may address some of the challenges of the U.S. education system to improve student achievement, thereby helping to close the achievement gap. Moreover, this study aligned with the country's national security priority to confront and protect five distinct challenges: "threats to economic growth and competitiveness, U.S. physical safety, U.S. intellectual property, U.S. global awareness, and U.S. cohesion and awareness" (Klein et al., 2012, p. 7). Identifying how the IB MYP contributed to global

literacy and cognitive development in this one middle school may identify the need to do more research on this comprehensive global program at the quantitative and qualitative levels. Further studies may effectively contribute to improvement in learner and school performance as well as to develop skills and knowledge needed to survive in global society.

Globalization affects the very core of every profession, including academic institutions. Carnoy (as cited in Kenon, 2009) contended that globalization has a major effect on content in worldwide educational systems. Therefore, the global revolution is changing the fundamental core of human relations and social life, with education as its first-line target of change. The U.S. educational reform efforts at the federal, state, local school district, and viable community levels require tactics that align with global changes to prepare the next generation. Gragert (2009) stipulated that young people across the country are unaware of 21st-century knowledge in world geography, foreign languages, and global economics. The lack of fluency in a second or even third foreign language greatly influences how young people conduct business and diplomacy as well as affects U.S. national security (Klein et al., 2012). Therefore, the researcher's study was necessary to help fill gaps in the existing literature.

The researcher expected to extend the existing body of knowledge about the IB MYP in this empirical single case study. In addition, the researcher hoped this study would provide a more in-depth understanding of the variety of approaches to teaching and learning used by the IB MYP that may enable cognitive as well as global literacy development. The majority of prior authors' studies demonstrated IB MYP effectiveness by measuring students' performance quantitatively. Remington (2000) compared two

curricula, of which one was the IB MYP and one was traditional. Remington revealed that students of the IB MYP achieved higher scores than did the controlled group on each of the five subtests of the California Achievement Test (CAT). Remington suggested that the IB MYP was another successful middle-school curriculum to educate adolescents.

The researcher's study was unique because it promoted an understanding of the phenomenon of the IB MYP. Additionally, the study also linked the way the overall model of the IB MYP went from providing innovative teaching and approaches to learning influencing cognitive development, global literacy, and ultimately to the success of students' performance beyond Adequate Yearly Progress (AYP). The researcher's study was also different as it further demonstrated Vygotsky's theoretical model of the Zone of Proximal Development (ZPD) and the More Knowledgeable Other (MKO). The innovative teaching and approaches to learning provided by using coaches and mentors enabled learners to apply their learning in real-life activities and community projects. This process of using mentors and applying knowledge in real-life situations enabled learners to interact further with others and to develop social and cognitive reasoning and ultimately global literacy.

This chapter provides an overview of the problem, background, and theoretical model. Global standards measure 21st-century education. The United States continues to seek comprehensive and innovative reform models for public education. This is necessary to educate students with academic rigor and knowledge to compete and succeed in global society. The researcher expected this study to provide an understanding of how and why one particular comprehensive global program, the IB MYP, may be an effective strategy in realizing this goal of improved learner performance. The researcher expected to

present relevant data about how the IB MYP approaches to learning focused on cognitive development as well as global literacy that influenced the performance of students and the success of the school.

Background of the Study

The focus of the study originated from a concern that U.S. schools were inadequate in comparison to schools around the world (Kessinger, 2011). In 1957, the Soviet Union launched Sputnik, which spurred a revolution in the United States to reexamine students' capabilities in math, science, and foreign languages (Kessinger, 2011). In response to Sputnik, the federal government passed the *National Defense of Education Act* in 1958. The purpose of the *National Defense of Education Act* was to invest in schools in an attempt to compete with countries around the world (Kessinger, 2011). The challenge of inadequacies on the world stage was not the only concern, however: national experts had educational apprehensions of deficiencies in student achievement levels.

In 1965, President Lyndon B. Johnson signed into law the *Elementary and Secondary Education Act*. This act aimed to reduce the achievement gap and to "provide every child with a fair, equal opportunity to an exceptional education" (Elementary and Secondary Education Act of 1965, p. 27). In 1969, the National Assessment of Educational Progress provided a tool to measure the educational achievement of students across the nation (Epstein, 2005). The creators of the National Assessment of Educational Progress envisioned a national test offering the opportunity to report scores to generate competition among states and local school districts to raise the quality of education (Epstein, 2005). The commissioner of education statistics, head of a division of the U.S.

Department of Education, was legally responsible for heading the National Assessment of Educational Progress to compare student achievement in states and track the achievement of math, science, reading, and writing of fourth-, eighth-, and 12th-grade students (Kessinger, 2011). Legislators used *the Elementary and Secondary Education Act* to reduce achievement gaps at the local level through national educational measurements designed to raise the quality of education.

Eighteen years after passing the *Elementary and Secondary Education Act*, the perceived decline in the educational system remained (Good, 2010). In 1983, Secretary of Education Terrell Bell submitted the National Commission of Excellence in Education report, entitled *A Nation at Risk: The Imperative for Education Reform*, to President Ronald Regan (Good, 2010). The report discussed the state of the U.S. educational system and confirmed its deficiencies. In 1994, President Bill Clinton reauthorized the *Elementary and Secondary Education Act* as the *Goals 2000: Educate America Act* to establish new national goals (Kessinger, 2007).

The *Goals 2000: Educate America Act* provided the framework for the next iteration, known as the *No Child Left Behind Act of 2001*, signed into law by President George W. Bush in 2002 (Lodico et al., 2010). The United States remains at risk and faces challenges in finding innovative and competitive ways to improve student achievement in the global age. Due to the challenges, competitors worldwide have overtaken the once unchallenged preeminence of the United States in commerce, industry, science, and technological innovations (National Commission on Excellence in Education, 1983). As innovations expand in the twenty-first century, the United States must develop an educational curriculum to compete with the interconnected world.

Since the advent of the *Elementary and Secondary Education Act*, achievement gaps have remained prevalent in schools nationwide, and they need resolution. In the National Commission on Excellence in Education report (1983), the Commission examined curricula of several developing countries around the globe and compared the standards and expectations of those schools to those of the United States (Shultz & Willard-Holt, 2004). The report indicated that the achievement in U.S. schools was much lower than in other countries around the world and made recommendations for the United States to create stronger curricula (Shultz & Willard-Holt, 2004).

The United States is a part of an ever-increasing global society. "The logic of globalization is changing and the disastrous financial crisis and its spread have hastened the decline of the U.S. and its relative position as global investor, peace-keeper, and world's sole super power" (Peters, 2011, p. 702). Globalization affects the sources of U.S. domestic strength and global leadership, of which education is the first-line target. Henceforth, an urgent need exists for an innovative and competitive global restructuring of the educational system (Klein et al., 2012).

Therefore, a didactic U.S. response to the global expansion of the twenty-first century is essential in order to raise educational standards as well as to become globally competitive (V. Stewart, 2007). Global literacy produces global citizenry, which is the conduit of attracting the best and most talented people to a country for economic competitiveness and, ultimately, for the creation of wealth (Kehm, 2005; Zakaria, as cited in Kenon, 2009). The IB provides tactics that allow students to gain a global education, which encourages an understanding and appreciation of other cultures, languages, and viewpoints (International Baccalaureate, 2012b). Although the *Elementary and*

Secondary Education Act aimed to reduce achievement gaps locally by measuring achievement nationally, in the twenty-first century, competitiveness demands innovative curricula to keep pace globally.

The IB MYP is a global program with apparent success in many different countries. The IB MYP, with over 30 years' of experience since its inception in 1980, provides procedures and means for students to become globally literate (Bunnell, 2011b). The design of the IB, created in Geneva, Switzerland in the 1960s, was originally for expatriate secondary school students of private schools preparing for university entrance examinations (Tarc, 2009). Today, it prepares students, ages three to 19, of all school types for global society.

The IB MYP began to influence learning in the United States in the 1970s. In 1977, the IB expanded and diversified its portfolio to establish the North American regional office located in New York (Bunnell, 2011a). Several factors led the IB to become popular in the United States, due in part to the successful United Nations International School experiment. In addition, the International Schools Examination Syndicate (ISES), also known as the IBO at that time, took on a missionary role in the early 1960s to promote the global curricula in the United States (Bunnell, 2011a). The arrival of early missionaries from ISES and the success of an IB public school in the United States were factors in its popularity (Bunnell, 2011a). The IB became successful due to the focus on global citizenry for a competitive workforce. As the world continues to shrink, global curricula are beneficial (Bunnell, 2011a), rendering global literacy, which is an essential ingredient to success in U.S. schools.

In the past, the United States has made efforts to promote international education. In 1919, during the aftermath of World War I, Nobel Peace Prize winners Nicolas Murray Butler, Elihu Root, and Stephen Duggan established the Institute of International Education (Institute of International Education, 2012a). The creators of the Institute of International Education believed that lasting peace accomplished through international educational exchange would foster international understanding between nations (Institute of International Education, 2012a). In 1945, a freshman senator from Arkansas, J. William Fulbright, introduced a Congressional bill calling for "the use of proceeds from the sales of surplus war bonds to fund the promotion of international good will through the exchange of students in the fields of education, culture and science" (U.S. Department of State, 2012a, para. 2). In 1946, President Harry S. Truman signed the *Fulbright Act*. Very few people perceived or foresaw the great achievements that would result from the *J. William Fulbright Act*.

Despite the establishment of the first Institute of International Education and the passage of the *J. William Fulbright Act*, another war stimulated comprehensive federal education legislation. In 1958, Congress passed the *National Defense Education Act* in response to the launching of Sputnik (Johanningmeier, 2010). The *National Defense Education Act* supported the production of highly skilled citizens needed in math, science, and foreign languages through scientific research applied to public education from K-12 (Johanningmeier, 2010). The government's intervention built and maintained the defense and economic competitiveness the nation needed, which also addressed the country's history of denying equality of educational opportunity to all citizens (Johanningmeier, 2010).

The need for international experts, especially in foreign languages, was not apparent at that time. Senator Fulbright persuaded Congress to pass the *Mutual Education and Cultural Exchange Act of 1961*, known as *Fulbright-Hayes*, to strengthen non-Western European language and area expertise in the United States (U.S. Department of Education [USDOE], 2012b). For over 50 years, the United States has established international institutions, passed laws to promote international good will, and provided comprehensive federal funding to improve education, especially in science, math, and foreign languages. Nevertheless, the country still lacks global literacy, especially in the area of the foreign language abilities that provide global perspectives, which are essential characteristics of a well-educated citizenry (F. H. Jackson & Malone, 2009). As the world moves from an industrial era to the global age of the twenty-first century, global knowledge and skills are crucial for survival.

Prior authors' studies in the field have identified the need for this empirical single case study. These previous quantitative studies focused on the impact of the IB MYP on student performance and test scores. Jordan (2009) conducted a study on the International Baccalaureate Primary Years Programme (IB PYP) to determine the impact of the English language arts test scores on the Palmetto Achievement Challenge Test (PACT). The study findings revealed that the rigor of the IB PYP had a significant positive impact on third-, fourth-, and fifth-grade students taking the PACT.

Remington (2000) led a study that compared students in two different middle-school curriculum designs. One school had the IB MYP and the other middle school had a traditional curriculum. Remington revealed that students of the IB MYP achieved higher scores than the control group on each of the five subtests of the CAT. Remington

suggested that the IB MYP was another successful middle-school curriculum to educate young adolescents.

Mayer (2010) conducted a case study on an International Baccalaureate Diploma Programme (IB DP). Mayer's study, on an urban high school in California, identified factors to implement the program successfully as well as the achievement of student outcomes. Mayer's study drew upon data that showed that high-quality academic programs operating in low-performing schools could benefit all students (Mayer, 2010). The results of Mayer's case study showed a successful implementation of the IB DP and the achievement of student outcomes, with an assortment of reform models imitated by state and federal governments, which addressed poor academic performance. Mayer's case study suggested that IB programs have garnered national recognition contributing to successful school reform programs in recent years across the United States.

Culross and Tarver (2011) conducted a study on the impact of the IB DP on the rigor of preparing learners for college and university. The study revealed that top colleges and universities perceived that students from an IB DP had a value-added education as an indication of success in post-secondary school. Students also received college-level credit. Thus, previous authors' studies showed that the IB offered rigorous curricula that produced successful results.

However, these prior research studies have not identified why and how IB programs lead to students' successful performance. Rather, they have identified that the program appears to impact student performance in a number of areas. The focus of the researcher's study is to develop an in-depth understanding of the IB MYP: how and why the IB MYP enables the success of students and ultimately the school. The study also

focuses on understanding how and why the program enables success in one middle school. Additionally, a comprehensive review of the literature on the IB MYP provides more in-depth understanding of the nature of the IB MYP, including the nature of its design, the various approaches to learning used, how it focuses on cognitive development, and ultimately how it influences global literacy through its multidisciplinary approach.

Problem Statement

It was unknown how the IB MYP influenced the success of one middle school in the state of Georgia. The low achievement levels in schools across the nation warranted new procedures to eradicate the learning gaps that were prevalent locally, nationally, and internationally. Goldring and Schuermann (2009) observed that globalization was increasingly evident in the world due to great demographic, social, technological, and economic shifts, which demand more now from U.S. schools to improve educational performance on a global scale than at any other point in history. Therefore, there was a need for the study. The goal of the study was to discover how the IB MYP influenced the success of one middle school in the state of Georgia in cognitive development and global literacy. The IB may offer innovative tactics that enhance cognitive development and global literacy in this one single middle school. Therefore, the researcher expected to discover tactics to contribute to learners' cognitive development and global literacy through reliable and valid data. This would offer a method to enrich learners' knowledge and skills to become competent globally and to support the nation's priorities to provide an equal educational opportunity, as well as to secure a future in global society.

The IB has four curricula and expects students to master core requirements as well as following a learner profile. The first curriculum is the Primary Years Programme for ages 3–12, which focuses on the development of the whole child both in and out the classroom (International Baccalaureate, 2012b). The second curriculum is the Middle Years Programme for ages 11–16, which provides academic challenges and life skills that assist students through the transitions of their adolescent years (International Baccalaureate, 2012b). The third curriculum is the Diploma Programme for ages 16–19, which meets the needs of highly motivated students who aspire to qualify for entry to leading universities around the world (International Baccalaureate, 2012b). The fourth curriculum is the career-related certificate, which offers career-related courses to prepare students for effective participation in the ever-changing global world (International Baccalaureate, 2012b). The learner profile has attributes intended to develop globally literate young people who recognize their common humanity and their shared guardianship of the planet to help create a better and more peaceful world (Wells, 2011). These attributes were "inquirers, knowledgeable, thinkers, communicators, principled, open-minded, caring, risk-takers, balanced, and reflective" (Wells, 2011, pp. 176–177). For the United States to keep pace with global peers, the educational system needs competitive and innovative curricula to equip learners with high levels of competence in knowledge and skills to compete globally.

The future of the United States rests on high-quality education. Hayden (2011) maintained that educational institutions are a part of globalization due to their central role in the development of the knowledge economy. In the twenty-first century, knowledge is the driving force and is distinct from previous economic orders in which financial capital

and material input were decisive factors of economic growth (Yemini, 2012). Yemini

further advanced that today, economic performance correlates with levels of quality

education and ownership of unique 21st-century skills. The schools across the country

need to keep pace with global society, and thus alignment of educational reform with

global awareness is critical.

Businesses have international concerns. With the continued rapid development of

technology, businesses as well as individuals must commonly participate in global

interests (V. Stewart, 2007). Businesses seek employees who can communicate in a

foreign language and collaborate with people as well as organizations from other cultures

(V. Stewart, 2007), suggesting that for the future of U.S. education, the country should

invest to discover innovative and competitive curricula. The IB appears to offer useful

strategies because it emphasizes a holistic approach toward students' academic, personal,

emotional, and social success, while at the same time encouraging global awareness and

participation.

Empirical studies have shown that the IB PYP, the IB MYP, and the IB DP

increase cognitive development.

A survey study on graduates of the International Baccalaureate Diploma

Programme postulates that 94% of graduates learn to think critically and flexibly

through the International Baccalaureate and 88% consider themselves more

readied for post-secondary courses than other high school students. (Hostrup,

Rollins, Stillisano, & Waxman, 2011, p. 172).

Therefore, this study is vital. The study provides ideas for the federal and state

governments as well as local school districts and viable communities to consider a set of

innovative tactics that may increase learners' cognitive development and globally literacy skills.

Purpose of the Study

The purpose of this qualitative empirical case study was to determine how the IB MYP influenced the success of one middle school in the state of Georgia. The research methodology was qualitative in nature. The design was an empirical single case study using thematic analysis and descriptive statistics. The design included four research questions, collected data, coded data, and thematically analyzed data for interpretation and reporting. The research location was the state of Georgia. The sample was one middle school that uses the IB MYP. The expectations of the study were to offer a set of strategies for federal and state governments as well as local districts and viable communities to consider using when implementing curricula in U.S. schools to improve student achievement. Understanding the nature and impact of an IB MYP in one middle school contributes to the national goal of improving academic achievement.

Creswell (2009) suggested that qualitative methods explore and comprehend individuals or groups ascribed to a human or social problem. This qualitative method involved interviewing, collecting data in the participant's setting, collecting documents on the IB MYP curriculum, thematically analyzing the data from specific to general themes, interpreting the data's meaning, and writing a final report to present the findings (Creswell, 2009). The design provided a strategy of inquiry, which was an empirical single case study, including descriptive statistics. An empirical single case study provides an in-depth understanding of a contemporary phenomenon in a real-life context (Yin, 2009). An empirical single case study relies on multiple data sources to converge in a

triangulated fashion (Yin, 2009). The descriptive statistics in qualitative research use numbers, as in quantitative research, to establish the significance of the research, documenting known facts and describing a sample (Sandelowski, 2001), thereby establishing the appropriateness of the method and design for the purpose of the study.

The population of the study was relevant to middle schools within the United States. The researcher identified a sample of one school within a public school district in Georgia that has been using the IB MYP for 3 years. In addition, school leaders who played a proactive leadership role, in this one school, enabled the IB MYP to contribute to the students' and school's success. Thus, a successful school was a criterion since the focus was to understand how the IB MYP enabled the success of the students and the school.

This research was necessary to advance the concepts and the focus. The education system across the United States constitutes a grave national issue due to educational failures (Klein et al., 2012). International competition, globalization of labor markets, and international trade all require higher educational skills, and young people across the country have not kept pace, as measured by the 2009 PISA (Klein et al., 2012). The researcher expected to identify practices that contribute to the improvement of cognitive development and global literacy in students, which may provide a set of strategies for the advancement of schools across the country. Klein et al. contended that investing in human capital through innovative education would determine the country's power in the future. Therefore, a failure to produce effective human capital undermines the country's national security.

Research Questions

The purpose of this study was to determine how the IB MYP influenced the success of one middle school in the state of Georgia. The method was qualitative in nature, and the design was an empirical single case study. The following research questions guided the study:

R1: How did the IB MYP influence students' academic performance?

R2: How did the IB MYP contribute to cognitive development?

R3: How did the IB MYP contribute to global literacy?

R4: How did the leadership of an IB MYP contribute to a school's success?

With multiple data sources available, the research was feasible. There were no prior authors' studies that measured students' academic performance quantitatively with the intent to understand the nature and phenomenon of how the IB MYP influenced the success of students and the school.

The data collection used a systematic process. There were six data sources. First, the researcher obtained site authorization letters to conduct interviews with the IB MYP local school-based principal, the IB MYP local school-based project coordinator, and the IB MYP local school-based foreign language teacher. The interviews consisted of note-taking, digital voice recording during teleconference interviews, receipt of electronic mail with follow-up information, and transcribing the voice recordings to verbatim records. Second, the local IB MYP school provided a curriculum document, including lesson plans. Third, the IBO provided curriculum documents. The fourth and fifth sets of data were publicly available media reports and empirical journal articles about the IB MYP. Finally, there was a public database, maintained by the Georgia Department of

Education, which provided year-to-year AYP data of student achievement on statewide, standardized tests in reading and math.

Advancing Scientific Knowledge

The researcher expected this study to add knowledge in two different national fields. First, the researcher expected the study to add knowledge about how a comprehensive global program, such as the IB MYP, could lead to improved cognitive development and acquiring global literacy skills that would influence the success of one middle school in the state of Georgia. Klein et al. (2012) contended that young people across the country have fallen behind their global peers, suggesting that schools across the country are not educating for the global challenges of the twenty-first century. Moreover, Anya (2011) stipulated that young people in the United States learn ways to facilitate a variety of modes in communication and gain greater cultural understanding, in valuing a foreign language, The coexistence created among different racial and ethnic groups demonstrates linguistic and cultural openness (Anya, 2011). Second, the researcher expected the study to add knowledge about how the leadership in this one middle school contributed to the success of students and the school. Therefore, it was necessary to investigate theories about how the learning environments enable success to the students and school.

Vygotsky's (1978) theory provided the theoretical framework for the study. Vygotsky's theoretical framework is holistic and broad. Vygotsky's model focuses on the two principles that led to the development of the four research questions: the MKO and the ZPD (Vygotsky, 1978). The ZPD depicts how the MKO coaches, guides, and encourages the learner, helping the learner to move from what is known to what is not

known (Vygotsky, 1978). Therefore, the process of the MKO's guidance leads to learning and cognitive development. Consequently, Vygotsky's combination of cognitive development and the role of social interaction within the environment suggested that language, together with social interaction, could help a child to reason. Therefore, the manipulation of language and social interaction with other people leads the learner to improve cognitive reasoning on a social and emotional level (Vygotsky, 1978).

The researcher's study confronts the nation's priority to reform education that meets the demands of globalization, thereby addressing a need. During each of the historical events of World War I, World War II, and the launching of Sputnik, scholars have conducted studies. These scholars have also made recommendations to address the need to develop remedial abilities, as well as skilled speakers of languages other than English. Wilson (2007) compared the effects of the IB MYP on seventh-graders' achievement, attendance, extracurricular involvement, and perception of life skills to those of their seventh-grade classmates who followed a traditional middle-school path. The author's findings revealed that the IB MYP brought about a significant improvement on the norm-referenced math achievement and produced higher language and reading scores. Students who studied the traditional path showed no significant improvement in reading, language, or math on norm-referenced test scores. Traditional students showed no significant difference in perceptions of life skills or behavior, but a significant difference was visible in extracurricular activities of students in the IB MYP over the traditional students. However, no previous studies showed how the nature and phenomenon of the IB MYP might influence cognitive development and global literacy to prepare students to become global citizens at the middle-school level.

Significance of the Study

The study is significant, as the United States must continue to discover innovative methods to improve student achievement nationwide, as well as to remain globally competitive. Consequently, the researcher expected to demonstrate how and why the IB MYP influenced the success of one middle school in the state of Georgia. Previous authors' studies showed how quantitative studies on the IB influenced students' performance by measuring standardized test results. For instance, Jordan (2009) conducted a quantitative study of the influence of the IB PYP English language arts test scores on the PACT scores of third-, fourth-, and fifth-graders. The investigation compared 13 other elementary schools in the district without the IB PYP from 2000–2008. Jordan revealed that the rigor of the IB PYP had a significant positive impact on third-, fourth-, and fifth-grade students' PACT scores.

Accordingly, this study is significant. The researcher expected to provide a more in-depth understanding of the phenomenon of how the IB MYP in one middle school in the state of Georgia influenced the performance of students and the success of the school. More importantly, the researcher expected the study to show how the approaches to learning used by the IB MYP contributed to cognitive development and global literacy. Additionally, the researcher expected to determine how and why these approaches to learning and their influence on cognitive development and global literacy may influenced students' academic performance and the success of the school. Moreover, the researcher expected to provide a more in-depth understanding of the structure and approach of this one particular multidisciplinary experiential global program for leaders to consider as

they look for ways of reducing achievement gaps in the nation's current educational system.

Therefore, the study is of value to national and state governments, as well as to local school districts and viable community leaders who may consider using the IB MYP to identify ways to improve students' academic performance, cognitive development, and global literacy. The researcher expected to extend previous authors' studies that demonstrated the IB MYP's effectiveness quantitatively. The researcher expected the study to clarify the nature and phenomenon of the IB MYP. Therefore, the researcher expected the results of the study to offer strategies for federal and state governments, as well as local school districts and viable community leaders, to consider when selecting and implementing a curriculum.

Additionally, the study is consistent with Klein et al. (2012), who indicated that in the twenty-first century, human capital determines a country's power. The United States needs people who can fulfill the requisites of its military, diplomatic services, intelligence services, and cyber security, as well as citizens to protect critical infrastructure. Accentuating the importance of identifying effective innovative strategies to develop cognitive and global literacy skills, as well as enabling improved student performance and school success, is essential.

Rationale for Methodology

The researcher's methodology was qualitative. The methodology used for the study arose from a choice of what to study, rather than being a methodological choice (Lodico et al., 2010). The qualitative research methodology differed from quantitative methods previously used to study the IB MYP; however, qualitative methodology is used

when the focus in on understanding a particular phenomenon in depth (Lodico et al., 2010). The methodology also relied upon participants' views of the situation studied, collected through open-ended questions (Creswell, 2009). Additionally, the methodology included data collection from six data sources coded and thematically analyzed. The interpretations of the data appear in Chapters 4 and 5. Creswell (2009) expressed the value of considering a continuum of possibilities in data collection and organizing the sources by their predetermined nature.

The literature had a gap concerning how the IB MYP influenced the success of middle schools in the state of Georgia. Hostrup et al. (2011) stipulated that there are few prior authors' studies that examined the IB and the value that its programs add to students' education. Therefore, the researcher expected this study to offer a set of innovative techniques and practices that influence students' cognitive development and global literacy. The fact that the United States has deliberated ways to advance in science, math, and foreign languages for over 50 years indicates that the topics of cognitive development and global literacy are worthy of inquiry (F. H. Jackson & Malone, 2009).

The location of the researcher's empirical case study was in the state of Georgia. It was a single middle school using the IB MYP. The study was worthwhile, as the researcher expected it to demonstrate how the IB MYP influenced the success of students and the school. Consequently, federal and state governments, as well as school districts and viable communities, may want to consider using the IB MYP as one of a set of strategies.

Nature of the Research Design for the Study

The design was an empirical single case study. A single empirical case study was appropriate because the objective was to understand the nature and influence of the IB MYP in one middle school. Therefore, the study sought to clarify a contemporary phenomenon, how the IB MYP influenced the success of one middle school in the state of Georgia, in a real-life context. An empirical single case study offered the opportunity to investigate a process and gain an in-depth understanding of an individual, group, or situation from the perspective of the participants (Lodico et al., 2010). Moreover, an empirical single case study requires a bounded system and thus limits the number of people interviewed (Lodico et al., 2010). This research consisted of formulating research questions, collecting data, thematically analyzing data, interpreting data, and reporting the results of the data. The researcher expected the study to contribute to the body of knowledge.

Prior authors' studies have demonstrated the success of the IB MYP quantitatively. D. R. Jackson (2006) revealed that the IB MYP improved student achievement in the area of English (reading, literature, and research) on the Virginia standard of learning (SOL) achievement test. Jackson compared the SOL test results of students participating in an IB MYP to those of non-IB MYP students. The purpose of Jackson's study was to determine whether the test scores of students who participated in a holistic program of study were different from their counterparts. One group of eighth-grade students was from the IB MYP and the other group of students was from a traditional path middle school. Jackson matched the groups' fifth-grade Virginia SOL scores and ethnicity. The Virginia SOL mean scores of the IB MYP group were higher

than the means of the total non-IB MYP group in all areas. The content showing the greatest difference was English (reading, literature, and research). Due to study skills embedded in the approaches to learning design of the IB MYP, reading scores showed the greatest difference (D. R. Jackson, 2006).

However, this study sought to clarify the nature and influence of an IB MYP in one middle school in the state of Georgia. The sample was one middle school that used the IB MYP, and the population was over 400. The data collection consisted of six sources. First, the researcher obtained site authorization letters to conduct interviews with the IB MYP local school-based principal, the IB MYP local school-based project coordinator, and the IB MYP local school-based foreign language teacher. The interviews consisted of note-taking, digital voice recording during teleconference interviews, receipt of electronic mail with follow-up information, and transcribing the voice recordings to verbatim records. The second set of data was a curriculum document, including lesson plans, which the local IB MYP school provided. The third set of data was curriculum documents that the IBO provided. The fourth and fifth sets of data were publicly available media reports and empirical journal articles about the IB MYP. Finally, there was a public database, maintained by the Georgia Department of Education, which provided year-to-year data of student achievement on statewide, standardized AYP tests in reading and math.

Additionally, the conceptual model in Figure 1 depicts how the four research questions related to each other and provided a basis for the researcher's empirical single case study design.
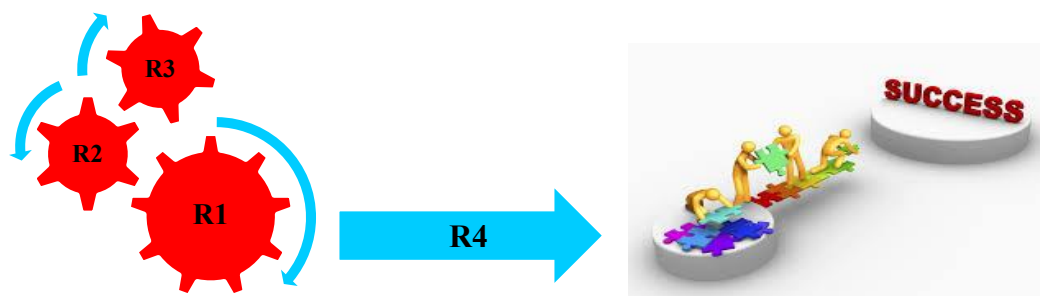
Figure 1. Conceptual model of the research questions.

The gears represent how a variety of approaches to learning with the IB MYP result in cognitive development and development of global literacy, interacting and ultimately leading to student and school success. Understanding the various approaches to learning used by the IB MYP was the focus of R1. Understanding how the IB MYP enabled cognitive development was the focus of R2. Understanding how the IB MYP enabled global literacy was the focus of R3. The first three research questions reflected Vygotsky's (1978) theoretical framework of social reasoning and language. The researcher's expectation was that the curriculum would influence cognitive development and global literacy. Moreover, R4 investigated how the combination of a variety of approaches to learning, approaches to cognitive development, and approaches to global literacy, as well as the school's leadership, influenced the learners' and school's success. Therefore, the basis for the study design was a combination of all four research questions structured in a way to understand the different components of this phenomenon and the nature of their relationship.

Definition of Terms

Defined terms provide a common understanding of technical terms, concepts, and phenomena that may be unknown within the empirical single case study or literature review. Therefore, the following terms used in this study have the following definitions:

Adequate Yearly Progress. "AYP is one of the cornerstones of the federal No Child Left Behind Act of 2001. It is a measure of year-to-year student achievement on statewide assessments" (Georgia Department of Education, 2012a, para. 1).

Case study. "A case study is an empirical inquiry that investigates a contemporary phenomenon in depth and with its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident" (Yin, 2009, p. 18).

Cognitive development. "Cognitive development is the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86).

Curriculum. Curriculum and instruction seek to provide rigorous and relevant standards for quality instruction that will help prepare students for high-school graduation and post-secondary college and career opportunities (Georgia Department of Education, 2012b).

Global literacy. This term refers to the application of global knowledge and skills to make students aware of the interconnectedness of the world and to encourage them to participate in the affairs of the worldwide society, such as in humanitarian efforts, resource preservation, and global warming (Karim, 2012).

Global/globalization. This refers to the "shift toward a more integrated and interdependent world economy" (C. W. L. Hill, 2011, p. 7).

International Baccalaureate (IB). The purpose of the IB is to provide an international curriculum accepted by higher learning institutions around the world (Dolby & Rahman, 2008, p. 689).

International Baccalaureate Organization (IBO). The International Baccalaureate Organization (IBO), rebranded in 2008 to the International Baccalaureate (IB) (Bunnell, 2011b).

International Baccalaureate Diploma Programme (IB DP). This is a rigorous international curriculum for secondary school. This pre-university course of study leads to examinations. Holders of the diploma can enter universities throughout the world (Carder, 2006, p. 107).

International Baccalaureate Middle Years Programme (IB MYP). This international curriculum has guiding principles for learning how to learn and for the development of students. The intent of the program design was to encourage moral development in students as well as a sense of responsibility to the world community and environment (Bunnell, 2011b, p. 262).

International Baccalaureate Primary Years Programme (IB PYP). This program emphasizes young students constructing models of knowledge fostered by structured inquiry. The students learn skills and knowledge in relevant contexts whereby they understand through their personal experience (Hallinger, Lee, & Walker, 2011, p. 126).

Leader. This term refers to any person who has a leadership role in a school setting, including the creation of curriculum documents, as well as providing information and implementation of a curriculum. In addition, the leader is responsive to all of the

needs of the school; support the International Baccalaureate philosophy, promote the International Baccalaureate Programme to the public and is enthusiastic. (Hallinger, Lee, & Walker, 2012a, p. 292)

Assumptions, Limitations, and Delimitations

There was an assumption that the IB MYP local school would voluntarily participate in an empirical single case study, understand the research questions, and respond candidly. Additionally, there was an assumption that the data would reflect the perspectives of the participants, as well as the reality of the context. As a school is a part of a whole system, there was an assumption that other factors may have influenced cognitive development of learners and global literacy at the local school site, not covered in the researcher's empirical single case study. The final assumption was that the results would provide innovative tactics for governments, local school districts, and viable communities to consider using to increase students' cognitive development and global literacy skills.

In sum, the following assumptions were present in this study:

1. The IB MYP local school site participants provided candid information to the research questions.

2. The perspectives of the participants and the context portrayed the reality.

3. The results of the empirical single case study offered a set of innovative strategies.

4. The local school site is a part of a whole system, and other factors may have influenced it.

In addition to the assumptions, there were limitations and delimitations of the researcher's study. The design was an empirical single case study with descriptive statistics. Therefore, the sample involved only one middle school in the state of Georgia, which limits a representation of all the IB MYPs in the state of Georgia. Additionally, the empirical single case study limited the scope to only the IB MYP, rather than other IB programmes, such as the IB PYP, IB DP, and International Baccalaureate Career-related Certificate Programme (IB CC). Moreover, the empirical case study was geographically located in the state of Georgia, which restricts an in-depth analysis across the United States and the world. Consequently, the results are not generalizable to schools across the country or world.

In sum, the following limitations and delimitations were present in the study:

1. The sample size was one single middle school.

2. The study was limited to one IB programme.

3. The study was limited to one geographical area.

4. The study is not generalizable.

Summary and Organization of the Remainder of the Study

This chapter introduced the researcher's empirical single case study, which was to determine how the IB MYP influenced the success of one middle school in the state of Georgia. Relevant background about the history of U.S. schools, measured against international standards in the twenty-first century, provided a rationale for the researcher's qualitative empirical single case study. A conceptual model presented the basis for the research design and depicted how four research questions create a holistic approach to understanding the phenomenon. The research questions reflected Vygotsky's

(1978) theoretical model of social reasoning and language. The empirical single case study took place in the state of Georgia. The sample was an IB MYP school. Consequently, the researcher expected the results of the study to offer strategies for national and state governments, as well as local school districts and viable community leaders, to consider when selecting and implementing a curriculum. Hayden (2011) stipulated that a curriculum should prepare young learners for a future not constrained by national boundaries and national issues as international developments heavily influence global society.

Chapter 2 contains the theoretical foundation of the study and a review of the literature. Evidence of events such as September 11, 2001, the second Gulf War in 2003, and recent terror attacks portrayed the need for understanding among nations as the world continues to expand. Global literacy, cultural awareness, and foreign language competency are national priorities to assist in remaining safe by protecting national security and maintaining a globally competitive position. This study aligns with the concept that the United States must be globally literate in order to be a global leader. Such literacy means that people need to understand cultures of other lands and peoples and to speak languages other than English. High-performing schools have comprehensive global learning programs, such as the IB MYP, which have contributed to student success based upon prior authors' studies (Bunnell, 2011b). National and state governments, as well as local school districts, should not overlook the possible relationships among increased achievement levels, enhanced cognitive development, and global literacy.

Chapter 3 discusses the research methodology and design plan. This plan incorporates the philosophy, strategy of inquiry, and specific methods that translate the

approach into practice. Chapter 4 provides the data analysis procedures, data analysis, and data results. Chapter 5 contains a summary of the study's findings and conclusions. Additionally, this chapter contains implications and recommendations for future research and practice.

Chapter 2: Literature Review

Introduction to the Chapter and Background to the Problem

In this chapter, the researcher reviewed the literature on the problem to address how the IB MYP influenced the success of one middle school in the state of Georgia. While scholars in the field have noted the structural changes that globalization has brought to education systems around the world, the effects of curriculum changes and classroom practices were less evident (Frey & Whitehead, 2009). In a world of increasing international complexity, a call for the development of global educational models is appropriate to develop and nurture global learners to compete in a modern society (Carber, 2009). The apparent achievement gaps in schools across the United States demand curricula that confront and eliminate learning gaps while preparing students to become global citizens. Measured by international education standards in the twenty-first century, 15-year-olds must demonstrate how well they can extrapolate learned knowledge and apply it to novel global situations (Schleicher, 2009).

As the United States seeks to discover innovative programs that improve cognitive development and global literacy, the IB may offer valuable strategies. In middle school, learners begin to develop a sense of self, establish a cultural identity, and grow beyond their family circle (Clauss, 2006). The middle-school learner is at an appropriate age to develop attitudes and benefits necessary to participate as a global citizen.

This empirical single case study is important to the U.S. national priority of a quality education. President Obama stipulated that in order to build a nation with economic growth and prosperity through health insurance, energy, and financial reforms, the country must do a better job of educating young people (McDonnell & Weatherford,

2011). Due to rapid changes imposed by globalization, high levels of global knowledge and skill determine success (Schleicher, 2009). Peters (2011) contended, "The philosophy of globalization and winning the future can be expressed in one word—education—and the philosophy of education is Race to the Top" (p. 703).

In 2008, the Secretary of Education, Margaret Spellings, stipulated that the federal Department of Education's mission was to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access (USDOE, 2012c). In addition, the country's national security interests were for its citizens to become highly educated and globally literate as the world's population becomes increasingly interconnected and diverse. President Obama contended that the PISA for 15-year-olds would provide critical information on student achievement in comparison to countries around the world, where students also take the exam to prepare youth for the global environment (Robelen, 2012). The exam, given every three years, assesses students in reading, science, and math. The nation would benefit from the creation of curricula that respond to the global demands to enable young people to compete and succeed.

The context of the study was that how the IB MYP influenced the success of one middle school in the state of Georgia was unknown. The next section in the literature review contains the theoretical foundation for the researcher's study. The following section includes a literature review that identifies themes and trends, as well as gaps that formulate a synthesis of the known and unknown of the study. The final section is a summary of Chapter 2, leading into Chapter 3.

Historically, global events and laws enacted have mandated an innovative, comprehensive, global educational program in the United States. The IB MYP provides ideas and techniques to innovate globally responsive curricula in the United States. The federal government enacted the *No Child Left Behind Act* of 2001 to improve student achievement by holding states to high standards of educational accountability, based primarily on standardized test scores (*No Child Left Behind Act of 2001*, 2002b, p. 1889). The *No Child Left Behind* Act of 2001 included foreign languages as an indispensable course of study, thereby providing a global literacy component. However, English language arts, reading, math, and sciences were the only subjects vital in several sections of the law, as accountability programs. As a result, states and local school districts focused on English, math, and science skills because of the governmental pressure to meet performance indicators. Although the *No Child Left Behind Act of 2001* provided substantial data on a student's level of progress, achievement remained deficient. In addition, these courses of study did not provide students with the global literacy skills necessary for the twenty-first century.

To understand this phenomenon it is important to use a theoretical foundation appropriate to understanding how a curriculum using a multidisciplinary approach to learning enables student performance and success. For this reason, the theoretical foundation selected was the learning theories provided by Vygotsky. Lev Vygotsky, Russian psychologist and social theorist, believed that interaction with the sociocultural environment occurs through language, which influences cognitive development (Kozulin, 1986; Vygotsky, 1978). The philosophy of the IB encourages students to use the theory of knowledge to develop cognitively, reflect on significant cultural shifts worldwide, and

interact with the sociocultural environment in order to participate as global citizens. Historical events have identified the need for young people to attain global literacy and cognitive development across the nation in order to remain competitive as a country.

The literature review provides a framework for the qualitative study. Creswell (2009) postulated that the literature review informs the results of studies, relates to larger studies, and provides an ongoing dialogue in the literature, filling the gaps and extending prior research. Airasian et al. (2012) stated that the literature review demonstrates the underlying assumptions of the research questions central to the research study. Yin (2009) observed that a research topic determines the precision of the study's questions.

Therefore, the literature review in this chapter includes a comprehensive discussion of published works on the topic and evaluation of the strengths and weaknesses to formulate questions for further research. The investigation identifies omissions in the literature. The contributions to the existing knowledge further address the need of the nation's educational system to enhance cognitive development and global literacy.

Theoretical Foundation

Vygotsky was a Russian psychologist who pioneered developmental psychology. Vygotsky's interests were primarily in the development of language and its relationship to thought, and he combined cognitive development and the role of social interaction with the environment (Vygotsky, 1986). Vygotsky (1978) proposed that language, along with environmental social interaction, helps a child to reason. However, two fundamental principles further explicate Vygotsky's theory: the MKO and the ZPD (Vygotsky, 1978). The skilled person is the MKO, such as a parent or a teacher. The MKO has a higher

ability than the learner has. The MKO and the ZPD integrate. "The Zone of Proximal Development is the distance between a learner's ability to solve a problem or a task independently and the learner's potential comprehension when given guidance by a More Knowledgeable Other" (Vygotsky, 1978, p. 78). The learning that occurs is in the ZPD. Vygotsky's model supports the assumption in the current investigation that a learner's interaction with the environment delineates cycles of maturation, allowing others to view the current developmental achievements of a learner as well as those still in the process of maturing (Vygotsky, 1978).

Current research stipulates that specific factors contribute to cognitive development and transfer or enable the development of other skills. Vygotsky's model supports the assumption that cognitive development transfers in the ZPD (Vygotsky, 1978). The IB MYP provides a medium in which the MKO and the ZPD take place. Learners demonstrate mastery through interaction in organized debates, hands-on experimentation projects, investigations, and problem-solving activities. Therefore, Vygotsky's model was appropriate for the study.

The problem under investigation exists due to a need to address an achievement gap that exists between schools across the country and schools in foreign lands. The federal government enacted the *No Child Left Behind Act of 2001* to improve the educational system by providing accountability systems, flexibility, and school choice, so that no child remains behind (*No Child Left Behind Act of 2001*, 2002a, p. 1776). However, the *No Child Left Behind Act of 2001* lacked essential components for the United States to remain globally competitive. Dunne and Edwards (2010) commented that global competency and intercultural communications were prerequisite skills to

developing globally literate people. In addition, Myers (2010) wrote, "International education programs and schools are ideally situated to prepare youth to make sense of the complexities of current world realities by studying globalization. This aim is particularly important because globalization receives little attention within most national official curricula" (p. 153). The IB MYP offered practices for U.S. schools that led to reducing the achievement gap and improving cognitive development and global literacy.

The nature and structure of the IB MYP supports cognitive development and global literacy. Hughes (2009) identified two philosophical standards and practices used by any school authorized to deliver the IB. Schools are committed to developing students with qualities, attributes, and characteristics of the IB learner profile and the mission statement (Hughes, 2009). In 1994, the IB MYP began (Hallinger et al., 2011). The curriculum design targets 11–16 year olds and includes eight disciplines combined with a personal project (Hallinger et al., 2011).

Three fundamental concepts of the IB MYP further reflect its philosophy: intercultural awareness, holistic learning, and communication (International Baccalaureate, 2012f). The five areas of interaction assist teachers and students in focusing on the subject content so the topic becomes real. Community and service, human ingenuity, environment, health, and social education are approaches to learning for areas of interaction (International Baccalaureate, 2012g).

The development of the research questions, which emerged from a review of the literature in the field as well as the philosophy of the IB, guided the study and provided further insight. R1 inquired about how the IB MYP influenced students' academic performance. R2 asked how the IB MYP contributed to cognitive development. Seigler

(1996) stipulated that knowledge creation, viewed as occurring through a complex interplay between existing knowledge and new information, gathered interaction with the external world and produced innovation needed in the global society. The question suggested that the U.S. educational system must provide interaction and understanding of existing knowledge and new knowledge with the external world to produce innovative people. R3 asked how the IB MYP contributes to global literacy. R4 inquired how the leadership of an IB MYP contributed to a school's success, which played an essential part in the entire process.

Review of the Literature

The literature revealed that historical events have identified the need for the U.S. educational system to improve cognitive development and global literacy for students to remain competitive with their international peers. For example, Frey and Whitehead (2009) observed that U.S. public school curricula must adhere to national standards, despite local and state autonomy. Carber (2009) contended that in order to confront the archaic U.S. education standards, there is a need to nurture an internationally minded leadership base for the future. In a global era, public school students should have internationally oriented programs as the world continues to grow interconnected at an increased rate and thereby partake in solving international complexities. Therefore, the United States needs to discover innovative solutions to succeed and remain a global leader (Carber, 2009).

The evidence of both the *National Defense Education Act of 1958* and the national report of 1983, *A Nation at Risk*, delivered a wakeup call to the country's educational system. The National Defense Education Act gave precedence to the need for

global literacy by accentuating the urgency of learning foreign languages as well as improving math and science skills. The stark realities of *A Nation at Risk* described the actualities of plummeting student performances, which resulted in functionally illiterate young people and the growth of international competition (USDOE, 2012c).

As the country sought techniques and innovations to support and prepare all learners for achievement, the literature expounded upon curricula that strengthened elements of global citizenship as an approach to learning, rather than an addition to curricula (Davy, 2011). The mission of the U.S. Department of Education was to promote student achievement and prepare for global competitiveness by fostering educational excellence and ensuring equal access to all students (USDOE, 2008). The IB offered a solution to schools nationwide in achieving this goal.

The literature contains articles synthesizing themes and trends from the literature which support the research questions and methodology of this empirical study. The first theme is the historical background of the education system as related to the need for developing global citizens and global literacy. The second theme reveals the significance of the top priority of the United States, which is to safeguard its national security and promote critical skills for young people to remain globally competitive. The third theme describes the history of the United Nations. The fourth theme addresses cognitive development. The final theme describes global literacy, for which the IB MYP offers a model.

History of the U.S. education system. Historically, laws, government initiatives, and worldwide events have driven the need and support for a global education in the U.S. public education system. In 1867, the government created the Department of Education to

assist states in establishing effective school systems by collecting information on schools and teaching (USDOE, 2012a). In 1890, the passage of the second *Morrill Act* gave land grants to colleges and universities and in 1917, the *Smith-Hayes Act* gave federal aid to vocational schools (USDOE, 2012b).

Established after World War I, the Institute of International Education encouraged lasting peace and greater understanding between nations. The Institute believed that international educational exchange formed the strongest basis for fostering such understanding (Institute of International Education, 2012a). The aftermath of World War II led to a significant expansion of federal support for education. The *Lanham Act* in 1941 and the *Impact Aid* law of 1950 provided payments to school districts for communities affected by military presence and other federal installations (USDOE, 2012b). The 1944 GI Bill authorized postsecondary education assistance that sent nearly 8 million World War II veterans to college (USDOE, 2012b). Subsequently, in 1946, the *Fulbright Act* became law, allowing the proceeds from the sale of war surplus to finance educational exchange (Institute of International Education, 2012b). The establishment of international institutions and the passing of laws represented important ideological, social, and political factors needed to promote not only local education, but also international and intellectual cooperation across the world.

In 1957, the Soviet Union launched Sputnik, which stimulated the U.S. Congress to pass the *National Defense Education Act* in 1958 (USDOE, 2012a). This comprehensive educational legislation helped to ensure support for elementary as well as secondary education in foreign languages, math, and science (USDOE, 2012a). Additionally, loans were available to college and vocational-technical training students,

as were graduate fellowships (USDOE, 2012a). The passing of this act ensured that highly trained individuals would be available to assist the nation in competing with the Soviet Union in scientific, technical, foreign language, and area studies (USDOE, 2012a).

During the Civil Rights era in the 1960s, the minority population became more engaged in the political and economic process. In 1965, President Lyndon B. Johnson signed into law a major education reform for the nation "to strengthen and improve educational quality and educational opportunities in the nation's elementary and secondary schools" (Elementary and Secondary Education Act of 1965, p. 1). Carber (2009) contended that President Lyndon B. Johnson's ideals were in accordance with the United Nations' *Universal Declaration of Human Rights of 1949* that called for equitable education for all children, whether wealthy or economically disadvantaged. Lindahl (2006) further postulated that the United Nations' *Convention on the Rights of the Child of 1959* and the *International Covenant on Economic, Social, and Cultural Rights of 1966* entitled children to receive a free and compulsory primary, secondary, and technical education available and accessible to all. These rights progressively move children toward higher educational knowledge and skills (Lindahl, 2006).

In 1983, the Department of Education released a report on the status of the public education system since 1965. The report declared, "The educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people" (Gardner, 1983, p. 5). This alarming reality signaled a nationwide commitment to standard-based reform, and in the late 1980s and early 1990s, President George H. W. Bush endorsed the governors, who emphasized the need for

national standards by supporting America 2000 (Kessinger, 2007). The America 2000 agenda began with six goals and became eight goals in 1994.

America 2000 passed in the U.S. Congress as the *Goals 2000: Educate America Act* under President Bill Clinton. At that time, Congress adopted AYP as a standard. Both of these bills became the lynchpins of the *No Child Left Behind Act of 2001*. In 2009, President Barack Obama signed the *American Recovery and Reinvestment Act*:

> The overall goals of the American Recovery and Reinvestment Act (ARRA) are
> to stimulate the economy in the short term and invest wisely, using these funds to
> improve schools, raise achievement, drive reforms and produce better results for
> children and young people for the long-term health of our nation. (USDOE,
> 2012d, para. 1)

The *American Recovery and Reinvestment Act* waived the *No Child Left Behind Act of 2001* as well as the use of high-stakes testing as the sole determiner of student achievement, especially in third, eighth, and 12th grades. In 2010, the implementation of the Common Core State Standards was in place as a new standard to prepare learners for college and career readiness to promote competiveness in the global society. Pufahl and Rhodes (2011) contended that there are U.S. policy makers, business leaders, major research organizations, educators, and parents who have advocated for an educational system that prepares learners to become competent world citizens who can communicate effectively through foreign languages. However, ambivalence toward foreign languages has negatively affected elementary, secondary, and post-secondary foreign language programs. In order to make effective change toward preparing learners for global competitiveness, there is a need for more than rhetoric.

Although the national assessment of educational progress continued to provide data on student achievement, educators had concerns about curricula providing achievement in a competitive global society. The researcher expected the study to provide insight on how U.S. schools can improve. Historical laws, government initiatives, and global events have supported the need for the researcher's study. The IB MYP offers techniques to improve achievement in the nation's public school systems. To support themes, trends, research questions, methodology, and findings for an all-inclusive discussion of an empirical single case study, considering the historical perspective of the IB and its influence in the United States, the researcher's study was vital.

Five years after Congress passed the *Elementary and Secondary Education Act of 1965,* the International Baccalaureate (IB) established its first school in the United States as a private school in New York as well as opening other offices around the world. The nature and structure of the IB is to provide students with an international education. Learners are encouraged to understand and appreciate languages along with their related cultures (International Baccalaureate, 2012i). In the mid-1970s, the IB opened four regional offices to work with schools in North America, Latin America, Asia-Pacific, and Africa-Europe-Middle East (International Baccalaureate, 2012c). The IB originally developed the IB DP to prepare globally mobile students for university studies and to develop a common set of external examinations for students in schools throughout the world (International Baccalaureate, 2012c). In 1994, the creators designed the IB MYP to meet the needs of adolescents between the ages of 11 and 16. The framework for middle schools offers academic rigor that encourages learners to embrace and understand

connections between traditional subjects and the real world, as well as to become critical and reflective thinkers (International Baccalaureate, 2012e).

In the twenty-first century, life places many challenging demands on learners transitioning through adolescence. Students are at a crucial period of personal, social, physical, and intellectual development and question their uncertainty (International Baccalaureate, 2012e). The design of the IB MYP is to help learners to discover a sense of belonging in an ever-changing, interrelated world and to foster a positive attitude toward learning (International Baccalaureate, 2012e). Given the complexities of an interconnected world, the philosophy of the IB MYP offers three fundamental concepts to prepare students to become global citizens.

The three concepts support and strengthen all areas of its curricula. The concepts are intercultural awareness, holistic learning, and communication (International Baccalaureate, 2012e). An octagonal paradigm illustrates the IB MYP's academic courses. Students are required to study their native language, a foreign language, humanities, science, mathematics, arts, physical education, and technology (International Baccalaureate, 2012e). To approach the learning of these subjects, five areas of interaction provide a framework for learning within and across the academic subjects: human ingenuity, environments, health, social education, and community and service. In the final year of the IB MYP, students engage in a personal project that allows them to demonstrate the understanding and skills developed throughout their middle-school experience (International Baccalaureate, 2012f). However, the cornerstone of the IB is its philosophy.

Scholars in the field have provided a comprehensive discussion of the IB core philosophy on one of its interdisciplinary courses, the theory of knowledge. Peterson (2003) contended that the theory of knowledge assists students in posing questions that underlie the nature of knowledge as presented in the school's disciplines and daily life. Van Oord (2007) maintained that true international curricula are different and diverse when applications of lessons are inside as well as outside of the classroom. Courses such as theory of knowledge, world cultures, world religions, peace and conflict studies, and environmental systems create a fusion of opportunities for students to acquire skills in environmentalism, conflict management, global ethics, interfaith awareness, and global citizenship (van Oord, 2007). In analyzing the IB's philosophy, the kind of knowledge diffused and propagated cannot omit "the true nature of a truly international education that is determined as much by its epistemology as by the content being taught" (van Oord, 2007, p. 382). Such comprehensive discussions highlight the research questions regarding the nature and structure of the IB MYP from the perspective of the developers of the organization.

National security. Although the United States enacted the *National Defense of Education Act i*n 1958 as a response to Sputnik, new programs began to address the high levels of knowledge needed in math, science, foreign languages, and culture. Twenty-five years later, America continued to face a daunting reality. The influential report *A Nation at Risk* proclaimed mediocre educational performances still existed. If an unfriendly foreign power had attempted to impose the lack of educational achievement on the United States, the nation might have viewed it as an act of war, considering its mediocre educational knowledge about the world.

U.S. national security largely depended on the intelligence, analytic capacities, and proficiencies of its people more than ever in a world that had grown increasingly dangerous (Southern Education Foundation [SEF], 2009). Today, the nation's top priority must be on developing cognitive skills and globally literate people. F. H. Jackson and Malone (2009) believed that to confront national challenges with the economy and national security, the educational system must strengthen foreign languages and cultural awareness by learning to interact with the world community.

In 1991, President George H. W. Bush signed into law the *National Security Education Act t*o address the task of the country becoming globally aware (National Security Education Program, 2012a). Senator David L. Boren authored the *National Security Education Act* and designed a program called the National Security Education Program, which was born from the postmortem analysis of Desert Storm (National Security Education Program, 2012a). The program design represented a post-Cold War investment vital to national security. The purpose of the program was to enhance expertise in foreign languages and cultures to increase the nation's capacity to deal effectively with the world.

The National Security Education Program has five objectives. The first objective is to meet necessary resources, accountability, and flexibility of national security education needs of the United States as they change over time (National Security Education Program, 2012b). In the *National Security Strategy Report* of May 2010, President Obama declared that the strength and influence of a nation abroad begins by recognizing and taking the necessary steps at home (The White House, 2010). This vital acclaim began with resources that educate children around the country to compete in an

age that considers depth of knowledge capital and thus a priority for influencing global markets (The White House, 2010). A major resource that provides flexibility to enhance national security education is research and development (The White House, 2010). Research and development enables innovation, which is at the core of America's fundamental power. Accountability measures provide capabilities to build and integrate the advancement of interests ultimately shared with other countries and peoples (The White House, 2010).

In a collective search for viable and innovative solutions to address a plethora of increasingly complex global issues critical to national security, a 21st-century education should be a top priority (Zúñiga-Brown, 2011). The second objective articulates a critical need to increase the quantity, diversity, and quality of teaching and learning in the fields of foreign language, area studies, and other vital international fields (National Security Education Program, 2012b). While teachers are primarily responsible for assisting learners to succeed in the global economy and thus need to teach in the context of globalization, there is a need to support teachers in the knowledge, skills, attitudes, and perspectives for such actions (Zhao, 2010). However, the culture of teacher education programs, which are responsible for equipping teachers, has been traditionally oriented to meet local and or national contexts (Grumet, 2010). An example of this reality is the No Child Left Behind Act of 2001, which stipulated accountability measures that have further encouraged teacher education programs to emphasize success on a few subjects and their achievement scores, reducing the emphasis on international content (Zhao, 2010). Therefore, teacher education programs need realignment in order to meet the

needs of education in the global age, which allows the United States to produce learners to live successfully and peacefully in the twenty-first century.

A resilient national security education depends on the country's rethinking approaches toward participatory education between existing government agencies and complex civilian networks through integrating applications of multidisciplinary and constructivists' conceptual frameworks (Zúñiga-Brown, 2011). Thus, the third objective expresses the need to produce an increased workforce for national security responsibility in agencies and departments of the United States Government (National Security Education Program, 2012b). Policy-makers, educators, businesspersons, and leaders alike need to adapt policies and practices of public education in globalization (Frey & Whitehead, 2009). The Organization for Economic Cooperation and Development stated that governments need to respond to the expectations of the global marketplace by equipping future citizens with the necessary competencies and skills in their respective educational systems (Munro, 2007).

Many educational policy-makers, curriculum developers, administrators, and influential international educators support the importance of continuity between curricula and life beyond school in this twenty-first century. They debate over the relationship of continuity and what it means for their respective practices (Munro, 2007).The United States is already equipped with a vast amount of human resources in classrooms around the nation filled with invaluable sociocultural and linguistic information, due to forces of migration, globalization, and technology (Zúñiga-Brown, 2011). Leaders must realize that investing in a collaborative effort affords a greater opportunity to find creative and innovative ways to problem-solve critical issues of national security.

The U.S. approach to addressing the academic achievement gap, which reflects lower-income minority students, may assist the country to face crisis levels that directly influence not only external, but also internal national security (Zúñiga-Brown, 2011). Expanding global knowledge, perspectives, and experience, in conjunction with other federal programs, which is the fourth objective, may provide generations of students the means to learn the benefits of reciprocity. This provides them with necessary tools to become globally responsive citizens and to secure America's position in the global society (Zúñiga-Brown, 2011) on which the U.S. citizenry, government employees, and leaders rely (National Security Education Program, 2012b).

Globalization is a reality, leading to structural changes in political, economic, and social life, and therefore there is a need for global knowledge and skills in education. The last objective persuaded the federal government to advocate the cause for international education and thus improve the education system to secure its national security. There are opportunities to understand the relationship between language, culture, and thought, which is evident in the theoretical framework of Vygotsky (Munro, 2007). More importantly, these opportunities manifest themselves in the minds, ideas, and thought processes of people. Deeply embedded in them are different perspectives to harness new insights and integrate essential information and knowledge for a better world (Zúñiga-Brown, 2011).

After over 20 years of the National Security Education Program, scholars in the field have contended that the country's educational system has failed to provide millions of low-income students with the necessary skills to function well in our technology-driven information and energy age (SEF, 2009). Due to the nation's educational failures,

millions of citizens have inadequate resources and finances, a situation that compromises the country's economy, democratic governance, and national security (SEF, 2009). In spite of the report, *A Nation at Risk*, which drew attention from the vast majority of citizens and spurred the inception of the National Security Education Program, few changes or reforms occurred in the U.S. educational system. In 1994, President Bill Clinton signed the *Goals 2000: Educate America Act* into law. The decree declared that every school in the country would ensure that students prepare for responsible citizenship in the nation's modern economy (U.S. Department of State, 2012b). To measure student success, an accountability system would track whether students demonstrated competency in English, math, science, foreign language, economics, art, civics and government as they completed fourth, eighth, and twelfth grades (U.S. Department of State, 2012b).

The ongoing efforts have not realized the vision of the founding fathers of the United States. More than two centuries ago, the second President of the United States, John Adams, wrote a memorable challenge for the nation's educational system to provide knowledge in order to raise the lower ranks of society nearer to the higher ranks. He declared, "The education of a nation, instead of being confined to a few schools and universities for the instruction of the few, must become the national care expense for the formation of the many" (SEF, 2009, p. 13).

In 1944, President Franklin D. Roosevelt gave a State of the Union Address about the right to education. He recognized that education in the United States was a right and urged the people to accept it through national commitment (Lindahl, 2006). The commitment supported Article 26 of the United Nations' 1948 *Universal Declaration of*

Human Rights, which declared that everyone has a right to education (Lindahl, 2006). Over 50 years, since Sputnik, the U.S. educational system has remained in peril, leaving national security and economic competitiveness susceptible to insurgency. The research questions of the study about how the influences of the IB MYP contribute to global literacy and cognitive development have emphasized such concerns.

The *Goals 2000: Educate America Act* brought greater scrutiny to school accountability at the turn of the millennium. The United States quickly learned that sensitivity to the rest of the world still needed work. On September 11, 2001, an international threat brought pain to the United States that caused more agony than any other power had managed to perpetrate since the attack on Pearl Harbor (Strategic Task Force on Education Abroad, 2003, p. 9). As tickers rolled across the bottom of television screens requesting speakers of Arabic, Farsi, and Pashto, once again the nation made a painful public admission about how little knowledge it had of the Arab and Muslim world (Strategic Task Force on Education Abroad, 2003). Earlier, in 2001, President George W. Bush had proposed a reauthorization of the *Elementary and Secondary Education Act,* known today as the *No Child Left Behind* Act of 2001. Nonetheless, the Act did not stress the importance of the United States becoming sensitive to the rest of the world.

During the course of the next 10 years, numerous laws and government initiatives aimed to improve counter-insurgency efforts and global literacy. With funding from the U.S. State Department, the Bureau of Educational and Cultural Affairs sponsored a program to foster cultural understanding between the Muslim world and the United States (Kennedy-Lugar Youth Exchange & Study Program, 2012). In October 2002, the Kennedy-Lugar Youth Exchange and Study Program began (Kennedy-Lugar Youth

Exchange & Study Program, 2012). The program design provided scholarships for young people aged 15–17 from Muslim populations to reside in the United States for one academic year. The expatriates engaged in activities to learn about American society and values, acquired leadership skills, and shared information about their homeland and their culture (Kennedy-Lugar Youth Exchange & Study Program, 2012).

In 2007, the program expanded to provide similar experiences for U.S. students aged 15–18 to reside for one academic year in a Muslim country. The Kennedy-Lugar Youth Exchange and Study Program evolved from a generalized recognition that U.S. public diplomacy efforts neglected many countries around the world, a stark reality in the aftermath of September 11, 2001 (Kennedy-Lugar Youth Exchange & Study Program, 2012). The recognition became a key component of a renewed commitment to focus on youth building relationships between the United States and countries around the world, particularly those with Muslim populations. The Bureau of Education and Cultural Affairs of the U.S. Department of State and the U.S. exchange community made a commitment to ensure that young people around the globe become interdependent and interconnected for better cultural and language understanding.

In 2006, the U.S. Department of State sponsored the National Security Language Initiative for Youth. The purpose of the program was to provide a broader, government-wide, presidential initiative, to prepare young people to become global leaders and learn less commonly taught languages (National Security Language Initiative for Youth, 2012). The program offered full merit-based scholarships to high-school students to engage in one academic year overseas (National Security Language Initiative for Youth, 2012). More than ever, people in the United States needed to have foreign language skills and

cultural knowledge to engage in international dialogue abroad (National Security Language Initiative for Youth, 2012). This program is another way to establish and promote foreign languages aimed to protect national security.

Although these programs are in place, the United States must gain momentum to engage fully in comprehensive global curricula for schools around the country. Due to ever-changing technological advances, education is one of the most critical components to economic advancement (SEF, 2009). Developing the necessary human capital in globalization can create an interconnected world with a competitive economic marketplace. Nobel laureate Gary Becker asserted that synergies between new knowledge and human capital equate to economic growth. Therefore, countries showing significant economic growth have invested in education and training (SEF, 2009).

History of the United Nations. World War I demonstrated the way nations were distrustful and intolerant. National leaders began tentative steps toward global cooperation (United Nations, 2012a). Nations first established international organizations to address specific concerns (United Nations, 2012a). After World War I, the Treaty of Versailles, which promoted international cooperation to achieve peace and security among nations, established the League of Nations (United Nations, 2012a). Although the League of Nations resolved disputes under its auspices, it did not prevent World War II (United Nations, 2012a).

In 1945, representatives from countries around the world convened in San Francisco to draw up a charter named the United Nations Charter, coined by President Franklin D. Roosevelt, to pledge governments to form an Alliance (United Nations, 2012a). Since October 24, 1945, the United Nations has maintained international peace

and security, developed friendly relations among nations, achieved international cooperation, and has been a center for harmonizing the attainment of common ends among the actions of nations (United Nations, 2012b). As a result of the establishment of the United Nations, several specialized agencies developed under its umbrella, with the same goals.

History of the United Nations Education, Scientific, and Cultural Organization (UNESCO). After World War I, national leaders began to develop tentative plans toward global cooperation, which led to the foundation of the United Nations (I. Hill, 2010). In the 1920s, the League of Nations and the International Labor Office established an office in Geneva, Switzerland, staffed by people from many countries around the world (I. Hill, 2010). The parents who served at the League of Nations and International Labor office were concerned about the education of their children, so the organizations established the International Bureau of Education to respond to the educational views of concerned parents (I. Hill, 2010).

In 1925, the International Bureau of Education officially opened as a non-governmental organization whose aims were to serve as a coordinating center for institutions and societies concerned with education around the world (United Nations Education, Scientific, and Cultural Organization [UNESCO], 2012c). Unlike the League of Nations, the United Nations gave substantial grants to schools during its first 25 years. Jean Piaget, who was a professor of psychology, became the first director of the International Bureau of Education, headquartered in Geneva (UNESCO, 2012c). The International Bureau of Education provided a segue for the establishment of UNESCO, formed after World War II, with its headquarters in Paris, France (UNESCO, 2012c). On

November 16, 1945, UNESCO became a means to build peace in the minds of people by promoting international, intellectual cooperation in the fields of education, science, and culture.

UNESCO in twenty-first century. In the twenty-first century, the world is more global. The preamble of the UNESCO constitution declares, "Since war begins in the minds of men, it is in the minds of men that the defenses of peace must be constructed" (UNESCO, 2012a, para. 1). This declaration petitions nations around the world to collaborate and contribute to peace and security through education, science, and culture to promote respect and fundamental human rights and freedoms (UNESCO, 2012a). Literacy is a fundamental human right as well as a foundation for lifelong learning that empowers the improvement of health, income, and relationships with the world (UNESCO, 2012b).

Zhao (2010) wrote that globalization has transformed people's daily lives, work, and entertainment and made salient people who live thousands of miles away. Literacy has constantly evolved with the advances of technology, and in the twenty-first century, Internet usage, text messaging, and other multifaceted communication venues provide opportunities for greater social and political participation (UNESCO, 2012a). Lindahl (2006) posited that in recognition of the increasing rate of technological advancement, as well as scientific and social change, education must extend beyond basic literacy skills to lifelong learning. A community that is literate becomes dynamic, exchanges ideas, and engages in civil debates.

Scholarly discourse about the twenty-first century has set the agenda for many local and national educational policies to accentuate the importance of a world-class

education. Acedo (2012) accentuated the importance of world-class education, attracting national and local education reform due to its implication to respond to evolving global challenges. Zhao (2010) contended that in the past, education has served the purpose of the local community or the nation by preparing learners to become workers for the local economy and passing on local values. Traditional U.S. educational institutions may face significant challenges to prepare learners to survive in a global society.

Education is an outcome of a democratic process. People must become disposed toward it by experiencing values such as care, consideration, patience, and respect toward others (Morentin, 2011). Today, society lives in an interconnected and interdependent community. UNESCO's philosophy of focusing on education for peace and intercultural understanding allows learners to become cognizant of globalization and the need for an educational perspective extending across national frontiers (Acedo, 2012). People live in distant lands, belong to different local communities, and have different religious beliefs that nonetheless affect one another (Zhao, 2010). A nation that builds social responsibility and democratic coexistence in accordance with UNESCO's philosophy plays a role in an open and multicultural society (Morentin, 2011).

Adams (2012) noted that the introduction of international tests for educational achievement has set new standards for quality education. Lindahl (2006) contended that the United Nations' *Millennium Declaration of 2000* commits all 189 UN member states to achieve millennium development goals by 2015, which include improving early childhood care and education. In addition, these goals will ensure all children have access to a free, compulsory, quality education and achieve a 50% reduction in levels of illiteracy. The goals will further achieve equality in primary and secondary education.

Literacy is no longer local or national; it is global. Historically, literacy has been a universal and ideological set of skills in which transferability to different contexts is easy, such as decoding symbols from a text; literacy skills are autonomous from the context in which they are derived (Corus & Ozanne, 2011). In today's globalized society, in contrast, global literacy access through technology is more prevalent and thus vital to survival.

Acedo (2012) believed that countries around the world seek to create educational systems that produce graduates who can successfully participate in and contribute to an ever-expanding global economy. U.S. schools still do not fully prepare young learners for the realities of a global society, which begins with global literacy. Spring (2008) posited that learners should be educated to adapt continually to a world of lifelong learning in which the application of knowledge and skill innovation occurs daily.

Tochon (2009) stated, "The world's literary and artistic works have been written in various languages. Some elements do not have equivalents in other languages" (p. 657). Thus, a monolingual view of the world unavoidably limits perspective. Some aspects of people's lives and culture seem to be universal truths, until they encounter another way of thinking. Viewing one's value system through the eyes of others is, put simply, valuable (Tochon, 2009). Knowledge and skill proficiencies in other languages characterize global citizenship, which builds intercultural sensitivity and produces understanding that leads to trust between people and to promotion of partnerships, as well as lasting peace between nations (Tochon, 2009).

International standardized measurements administered by the Organization for Economic Cooperation and Development confirmed the poor standing of U.S. students

when it ranked the United States 23rd in science among 30 countries in 2006 (SEF, 2009). Due to U.S. learners scoring behind many of their counterparts across the globe, especially in science, math, and foreign languages, students clearly lacked essential literacy skills to compete economically (SEF, 2009). In 2003, nearly half of China's graduates were in the fields of engineering, manufacturing, and construction, which was more than most of the globe's advanced economies, including the United States and 29 European countries (SEF, 2009).

The ability of the United States to lead in diplomacy and to combat counter-insurgencies has diminished due to a dearth of globally well-educated citizenry in languages and cultural proficiency. Language and cultural adeptness is vital not only for the United States to protect itself from adversaries, but also to cultivate relations with global partners (F. H. Jackson & Malone, 2009). On the other hand, how the United States plans to address the current educational levels of students and prepare them globally remains unknown. The twenty-first century requires global competency.

Resnick, Stein, and Coon (2008) voiced that some of the most crucial skills needed in the global marketplace are critical thinking, self-reflection, multiculturalism, and flexibility. Although national public educational systems attempt to promote such skills, the improvements are slow and on a small scale (Resnick et al., 2008). The need to cultivate U.S. students to achieve global literacy lies in comprehensive global learning curricula that offer in-depth learning to handle worldwide complexities.

Cognitive development. In the area of cognitive development, evidence from studies supports a relationship between learning a foreign language and cognitive development. Consistent with Vygotsky's model, studying different languages provides

the learner with increased awareness of linguistic operations (Cummins, 1983). The regular use of more than one language has executive control function benefits, including metalinguistic awareness, problem-solving, creativity, working memory, and switching attention skills (Abreu, Bialystok, Cruz-Santos, Martin, & Tourinho, 2012).

The cognitive and affective education skills derived from Voltaire's *Micromégas*, for which Voltaire traveled the world to develop his mind and heart using languages, supports the development of global citizenry (I. Hill, 2007). "Bilingualism is the rule and not the exception" (Bialystok, Craik, Green, & Gollan, 2009, p. 91). Therefore, the suggestion is that as the world becomes more global, countries support cultural and linguistic diversity as the norm for citizenry. Bialystok (2008) asserted,

Bilingual children have an enhanced ability to control the use of their knowledge in performance, especially where competing or distracting information must be resisted. The source of the advantage, on the present view, is the experience of controlling attention to the relevant language system in the face of competition from the other language, which is simultaneously active but irrelevant to the current language task. This experience boots those control processes, making them more efficient for other uses, even nonlinguistic ones. (p. 215)

Bilingual children have the ability to inhibit attention to irrelevant information, which enhances their ability to pay attention (Tochon, 2009) and thus provides them with an advantage over monolinguals in some tasks. Therefore, bilingualism has a positive impact on attention control. In addition, bilingual children develop cognitive abilities as their working memory increases. Tochon stipulated that bilinguals integrate and organize

information in both languages. The ability of attention control and cognitive development also increases meta-cognitive and problem-solving skills.

Attention control. Scholarly discourse has suggested that bilinguals have an advantage over their monolingual peers. Compared to monolinguals, bilingual speakers have the ability to control their attention when they engage in linguistic and nonverbal tasks (Adesope, Lavin, Thompson, & Ungerleider, 2010). Adesope et al. determined that the regular practice of bilingual learners concurrently holding two languages in their minds without interference may explain greater attention control. Due to the bilingual learners' ability to control their attention, other benefits may accompany the advantages, such as working memory.

Working memory. The bilingual learner's management of two languages concurrently may place demands on working memory (Adesope et al., 2010). Bilinguals' working memory resource management occurs through inhibitory processing (Adesope et al., 2010). Adesope et al. provided evidence suggesting bilinguals who have tasks that require greater attention control have a better working memory than do their monolingual peers. Such abilities provided bilinguals with other benefits, such as metacognitive awareness.

Metacognitive awareness. Metacognitive awareness is present in a learner who has the mental ability to strategize learning (Adesope et al., 2010). The capacity of a bilingual learner to appropriately contextualize the process of learning vocabulary, syntax, phonology, and morphology in more than one language provides extended learning and increased opportunities. Cummins (1983) echoed the work of Bruck, Lambert, and Tucker (1974) that bilingual learners compare and contrast syntax and

vocabulary in both languages with incipient contrastive linguistics. Some advantages include the aptitude to divert thinking abstractly and to reason symbolically, which leads to enhanced problem solving (Adesope et al., 2010).

Problem-solving skills. Bilinguals develop greater flexibility with respect to critical thinking that applies to problem solving, which may be due to their capacity to choose between two languages (Adesope et al., 2010). Such enhanced problem-solving skills are more prevalent in tasks involving executive control (Adesope et al., 2010). Bamford and Mizokawa (1991) contended that students who learn a foreign language show greater creativity and problem-solving skills than do their monolingual peers. Bamford and Mizokawa's research adds to the body of cognitive development knowledge with regard to problem solving. Learning a foreign language has been essential in developing the critical thinking skills described in Bloom's taxonomy of thinking processes (Cooper et al., 2008).

Cognitive development and language programs. Vygotsky recognized language as a cultural tool in the twentieth century. Vygotsky saw that the cognitive process—language, thought, and reasoning—developed through social interaction (Vygotsky, 1978). Language represents values in societies' cultures, transmitted in narratives through individuals and groups as a form of communication. Language and thought are interdependent manifestations of culture (Vygotsky, 1978). The connection between language and cognition is fundamental to the teaching and learning process in language classrooms. Researchers in the field added data about an important knowledge base for the potential of foreign language study to enhance students' cognitive functioning.

Taylor-Ward (2003) found that foreign language study benefits elementary and secondary students. Taylor-Ward conducted a study about the relationship between studying a foreign language in the Louisiana Elementary School Foreign Language Program and students' achievement on measures of the Iowa Tests of Basic Skills as well as the Louisiana Educational Assessment Program for the twenty-first century, compared to those who did not study a foreign language. Taylor-Ward found that elementary foreign language study improves students' cognitive skills as well as other academic areas. The investigation also found that students who studied a foreign language outperformed students who did not study a foreign language on the Iowa Test of Basic Skills as well as the Louisiana Educational Assessment Program for the twenty-first century (Taylor-Ward, 2003).

In 2008, a study in Pennsylvania discovered the relationship between foreign language study in elementary schools and achievement in reading and math (H. J. Stewart, 2008). H. J. Stewart's study looked at the growth of achievement in reading and math for students who studied a second language in a sustained program in elementary schools and compared it with the growth of achievement in reading and math for elementary school children who did not have a foreign language curriculum (H. J. Stewart, 2008). H. J. Stewart's study concluded that students who study a second language have a greater probability of attaining a more native-like pronunciation. Students who studied a foreign language were more likely to succeed in further foreign languages after elementary school. These students also develop increased reasoning skills and cognitive abilities as well as demonstrating increased achievement in other

disciplines and on standardized tests, and they showed increased awareness and tolerance of differences between cultures.

In 2004, Shultz and Willard-Holt showed that students who took a foreign language in middle school scored higher on achievement tests by the time they were in 11th grade than did students who did not take a foreign language (Shultz &Willard-Holt, 2004). Shultz and Willard-Holt postulated that if researchers could replicate the results on a larger scale and middle-school foreign languages appeared in more curricula across the nation, perhaps young learners across the United States would have a better chance to compete in global society.

Cooper et al.'s (2008) study on the relationship between foreign language learning and verbal ability in English as measured by the scholastics aptitude test determined increased cognitive skills. The study compared two groups of high school students. One group studied a foreign language. One group did not study a foreign language. Students who took a foreign language outperformed students who did not. Cooper et al. postulated that students who take a foreign language develop and practice the critical thinking skills described in Bloom's taxonomy. They were able to transfer these skills to standardized tests. The results of Cooper et al.'s study suggested that a second language learner creates new ways of thinking and new mental organizations.

Therefore, prior authors' studies have revealed that foreign language programs in elementary and secondary schools contribute to students' cognitive development and academic achievement in other content areas. Under *No Child Left Behind*, foreign language was a core content; it was not, however, an accountability program like English, mathematics, science, and social studies and thus received less attention in the curriculum

in schools across the country (Taylor-Ward, 2003). In today's global society, innovative cross-curriculum programs that have a mandatory foreign language component produce highly skilled learners, which are necessary to encourage globally literacy. The IB designers provided innovative learning strategies for students to have a depth of knowledge and to have the ability to solve multifaceted problems. The IB encourages global literacy to enhance students' knowledge and skills, allowing them to become active and compassionate learners as well as successful participants in a global society. The design of the IB, created in Geneva, Switzerland in the 1960s, was originally for expatriate secondary school students of private schools preparing for university entrance examinations (Tarc, 2009). Major universities around the world recognize successful completion of the IB DP (I. Hill, 2002).

The IB has four curricula. The first curriculum is the IB PYP for ages 3–12, which focuses on the development of the whole child both in and out the classroom (International Baccalaureate, 2012b). The second curriculum is the IB MYP for ages 11–16, which provides academic challenges and life skills that assist students through the transitions of their adolescent years (International Baccalaureate, 2012b). The third program is the IB DP for ages 16–19, which meets the needs of highly motivated students who aspire to qualify for entry to leading universities around the world (International Baccalaureate, 2012b). The fourth curriculum is the IB CC, which offers career-related courses to prepare students for effective participation in the ever-changing global world (International Baccalaureate, 2012b).

The IB expects every learner to master each of its program requirements. The design of the IB PYP assists learners to develop six themes that incorporate local and

global realities in 21st-century society (International Baccalaureate, 2012h). The first three themes focus upon who learners are, where they are in place as well as time, and how they express themselves. These themes develop the nature of self, human relationships, and community as well as culture that incorporates the history and explorations of the human race and the interconnectedness of people (International Baccalaureate, 2012h). The last three themes center on how the world works, how we organize ourselves, and sharing the planet. These trans-disciplinary themes help students to see their relevance to the world while at the same time learners reflect upon their responsibility and become involved in the depth of learning (International Baccalaureate, 2012h).

The design of the IB MYP helps learners to discover a sense of belonging in an ever-changing, interrelated world and to foster a positive attitude toward learning (International Baccalaureate, 2012e). Given the complexities of an interconnected world, the philosophy of the IB MYP offers three fundamental concepts to prepare students to become global citizens: intercultural awareness, holistic learning, and communication (International Baccalaureate, 2012e). An octagonal paradigm illustrates the IB MYP's academic courses. Students study their native language, a foreign language, humanities, science, mathematics, arts, physical education, and technology as requirements (International Baccalaureate, 2012e). To approach the learning of these subjects, five areas of interaction provide a framework for learning within and across the academic subjects: human ingenuity, environments, health, social education, and community and service. In the final year of the IB MYP, students engage in a personal project that allows

them to demonstrate their understanding and skills developed throughout their middle-school experience (International Baccalaureate, 2012f).

The design of the IB DP helps learners to master all three core requirements. The first step was to develop a coherent approach to learning that transcended and unified the academic areas and encouraged appreciation of other cultural perspectives (International Baccalaureate, 2012a). In order for students to become knowledgeable inquirers and to value worldwide viewpoints, students are required to take a course that represents the core of the IB. The theory of knowledge course encourages students to reflect on the huge cultural shifts worldwide around the digital revolution and the information economy (International Baccalaureate, 2012a). The extent and impact of the changes vary greatly in different parts of the world, but everywhere their implications for knowledge are profound. Studying the theory of knowledge encourages critical thinking about knowledge itself and can help young people to make sense of the world (International Baccalaureate, 2012a).

The second expectation of students is to develop an extended 4,000-word essay, which has proven to be a valuable stimulus for discussion—especially in countries where extended interviews are required for employment and/or for entry into a university. IB students have to investigate a topic of special interest, usually one of the student's six IB DP subjects, and this acquaints them with the independent research and writing skills expected at university. Writing the essay promotes high-level research and writing skills, intellectual discovery, and creativity, resulting in approximately 40 hours of work. It provides students with an opportunity to engage in personal research on a topic of their choice, under the guidance of a supervisor (International Baccalaureate, 2012a).

The last expectation of students is to get involved with creativity, action, and service (CAS). CAS is at the heart of the IB DP. Students engage in a range of activities that take place alongside their academic studies throughout their academic career. CAS encourages students to be involved in activities as individuals and as part of a team that take place in local, national, and international contexts (International Baccalaureate, 2012a).

The design of the IB career-related certificate consists of elements from the IB DP courses. Students in this program choose a career-related course that is most relevant to local conditions and needs of the student (International Baccalaureate, 2012d). The core of the IB career-related certificate forms a bridge with the rigors of the IB DP requirements, providing the student with a rich experience (International Baccalaureate, 2012d).

In addition to mastering core requirements, each curriculum follows the IB learner profile. The learner profile has attributes intended to develop globally literate young people who recognize their common humanity and their shared guardianship of the planet to help create a better and more peaceful world (Wells, 2011). The attributes are "inquirers, knowledgeable, thinkers, communicators, principled, open-minded, caring, risk-takers, balanced, and reflective" (Wells, 2011, pp. 176–177). For the United States to keep pace with global peers, the educational system needs competitive and innovative curricula to equip learners with high levels of competence in knowledge and skills to compete globally.

Influence and impact of global education programs. Various studies have measured the impact of global education programs such as the IB MYP. Jordan (2009)

conducted a quantitative study to determine the impact of the IB PYP on the English language arts test results on the PACT scores of third- to fifth-graders. The investigation compared 13 other elementary schools in the district without the IB PYP from 2000–2008. Jordan's study revealed that the rigor of the IB PYP had a significant positive impact on third-, fourth-, and fifth-grade students on the PACT.

In a prior study by Wilson (2007), the IB MYP provided global curricula that reflected the reality and the need to understand other cultures, a need evident in neighborhoods and schools around the country. Although two groups of students were equally prepared for average and above average performances on achievement tests, students in the IB MYP scored significantly higher on norm-referenced achievement tests in English, reading, and math than did most students from traditional assessment programs. Wilson showed that the IB MYP improved cognitive development in students. The three fundamental concepts of intercultural awareness, holistic education, and communication prepared learners for global society. Clauss (2006) contended that as young learners, aged 10 to 15, transition through middle school, they begin to develop a sense of self, form opinions of others, and establish friendships.

Kilpatrick (2010) conducted a case study on two high schools that implemented and attempted to institutionalize global education by exploring what was perceived to work or not to work in meeting the goals of their understanding and interpretation of global education. Kilpatrick suggested that policy makers and educators continue to advocate a global dimension in education. Additionally, Kilpatrick stipulated that there is a need for a clear sense of global comprehensive education, practical implementation, successes, and challenges in order to make it a sustainable and equitable reality in

schools, especially since few studies have examined how U.S. schools are implementing education for global competence.

Previous studies have shown that one potential area influencing cognitive development is the development of a second language. When learning a foreign language, global literacy and cognitive development increases, which improves intellectual agility. Prior research studies have revealed that bilingualism has a positive effect on literacy (Tochon, 2009). The ability to understand the print and reading systems in one language transfers reading principles across to other languages (Tochon, 2009). As globalization progresses, the challenges of the world call for the United States to consider and embrace foreign language learning in the twenty-first century as a human and national necessity (Cooper et al., 2008). The United States must continue to seek methods and ideas to improve the educational system in order to produce citizens who can fulfill the requisites of global citizenry to protect national security, foreign diplomacy, the intelligence service, cyber security, and critical infrastructure (Klein et al., 2012).

Additional questions arise to address the need for comprehensive global curriculum models to improve global literacy and cognitive development as a means to reduce the achievement gap in the United States. What are the necessary steps to prepare higher education teacher programs for the global classroom? How do national standards, such as the common core, align with the realities of the global world? How do international educational institutions and government initiatives involve elementary and middle school students in their programs?

Since the inception of the Department of Education in 1867, its mission has been to establish effective school systems. However, despite laws enacted and government

initiatives, young learners remain behind their global peers, which is evident in the 2009

PISA. In addition, this study has indicated that war prompted the U.S. engagement in the

promotion of learning languages and cultures. Even with the U.S. establishments of

international educational institutions and other international agencies providing

educational exchanges, there remains an achievement gap in schools across the United

States. Globalization has leveled the playing field, and to become a successful participant

requires global literacy in order to develop the cognitive skills necessary to address the

challenges and complexity of the twenty-first century.

Summary

Although prior authors' studies exist about the effectiveness of the IB MYP, this

study is different as it contains information to help fill gaps that emerged during the

review of literature. Prior authors' studies explored the impact of the IB MYP on student

performance. However, they did not explore how and why the IB MYP enables the

development of the skills and knowledge measured in testing, nor did they identify how

and why the IB MYP leads to student and school success. This study explores how the IB

MYP learning experiences influence cognitive development and global literacy, which

clearly reflect Vygotsky's (1978) theoretical foundation of social reasoning and language.

Additionally, Tochon (2009) stipulated that in Europe, the criteria of global citizenry

included mastering the languages in the countries in which one intends to work. This

suggests that global literacy knowledge has become a matter of finding a job and

maintaining survival. Moreover, the researcher expected this study to extend prior

authors' studies on the topic. While prior authors' studies have indicated the IB MYP's

effectiveness quantitatively, the researcher's study sought to clarify the phenomenon of

the IB MYP. The purpose of the researcher's study was to determine how an IB MYP influenced the success of one middle school in Georgia.

Additionally, this study addressed the challenges that globalization brings to the U.S. educational system. As the United States has sought creative and innovative curricula due to globalization, the researcher expected the study to offer a set of strategies on how leaders across the country may want to consider meeting the needs of learners in an increasingly culturally diverse world. School leaders across the country need to comprehend the implications of globalization and to develop effective curricula to work with culturally and linguistically diverse populations. The literature review indicates that schools across the United States focus on standardized testing that does not adequately address the needs of students to compete globally and develop cognitively. The development of global literacy and cognitive skills for the twenty-first century is crucial.

After exploring the literature and theoretical foundations coupled with the research questions, the next step for this empirical single case study is to apply the methodology. Chapter 3 discusses the research methodology and design plan. This plan incorporates the philosophy, strategy of inquiry, and specific methods that translate the approach into practice. Yin (2009) stipulated that

> the case study inquiry copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result it relies on multiple sources of evidence, with data needing to converge in a triangulated fashion, and as another result it benefits from the prior development of theoretical propositions to guide data collection analysis. (p. 18)

      Chapters 4 and 5 contain discussion of the findings of how the IB MYP influenced the success of one middle school in the state of Georgia. Chapter 4 provides the data analysis procedures, the data analysis, and data results. Chapter 5 contains a summary of the findings and conclusions. Additionally, this chapter contains implications and recommendations for future research and practice.

Chapter 3: Methodology

Introduction

The purpose of the qualitative empirical single case study was to determine how the IB MYP influenced the success of one middle school in Georgia. The researcher's focus originated from a concern that U.S. schools were inadequate in comparison to schools around the world (Kessinger, 2011). The objective of the designers of the IB was to develop a standard curriculum "for internationally mobile students preparing for university" (International Baccalaureate, 2012i, para. 2). The program grew in popularity in the United States due in part to the belief that "the curriculum seeks to teach students not just what they need to know, but how to think and learn" (Bloom, 2012, para. 1). The design chosen was an empirical single case study. "A case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Yin, 2009, p. 18). The study has a qualitative methodology with a descriptive approach, including descriptive statistics. The study includes triangulation of data to provide improved validity in linking observations to the research questions. The study provides an in-depth understanding of the IB MYP in its context.

Statement of the Problem

It was unknown how the IB MYP influenced the success of one middle school in the state of Georgia. U.S. schools have not kept pace with their global peers, despite comprehensive educational reform since 1965 (Klein et al., 2012), and students' performance in basic math and English language skills remain far below educational standards. Therefore, the United States must discover innovative ways for schools to

become globally competitive. The IB has developed comprehensive global curricula emphasizing a holistic approach toward students' academic, personal, emotional, and social success while encouraging intercultural awareness to participate in a global society. "The curriculum . . . helps students think critically, synthesize knowledge, reflect on their own thought processes, and get their feet wet in interdisciplinary thinking" (Gardner, as cited in Gross, 2003). Moreover, the IB approach reflects Vygotsky's theoretical framework, which is holistic and broad. Vygotsky (1978) proposed that a combination of language and the experience of interacting with people led to cognitive reasoning on a social and emotional level, which supports the researcher's empirical single case study.

Research Questions

The purpose of this study was to determine how the IB MYP influenced the success of a middle school. The guiding research questions for the researcher's study were:

R1: How did the IB MYP influence students' academic performance?

R2: How did the IB MYP contribute to cognitive development?

R3: How did the IB MYP contribute to global literacy?

R4: How did the leadership of an IB MYP contribute to a school's success?

Several types of collected data answered the research questions. Yin (2009) stipulated that "the case study inquiry . . . relies on multiple sources of evidence, with data needing to converge in a triangulated fashion" (p. 18). The Georgia Department of Education public database provided year-to-year AYP data of student achievement on statewide-standardized tests in reading and math. The researcher expected that the AYP

results from the public database would indicate improvement of students' academic performance after implementation of the IB MYP. The curriculum documents from the IB MYP local school and the IBO, as well as media reports and empirical journal articles, reflected how the IB MYP contributed to cognitive development and global literacy. Moreover, the interviews provided information on how the IB MYP influenced students' academic performance, cognitive development, and global literacy. These interviews also identified leadership contributions to the IB MYP relative to how it improved the success of the students and the local school site.

There were six data sources. The first data source consisted of interviews with the local school-based principal, the IB MYP local school-based project coordinator, and the IB MYP local school-based foreign language teacher. The second data source was the local IB MYP school curriculum document, including lesson plans. The third data source was the IBO curriculum documents. The fourth and fifth data sources were publicly available media reports and empirical journal articles about the IB MYP. Finally, there was a public database, maintained by the Georgia Department of Education, which provided year-to-year AYP data of student achievement on statewide, standardized tests in reading and math. Coding and thematic analysis of the data sources were a part of the process. The empirical single case study approach is aligned with the research questions as it seeks to clarify the experience from the perspective of the participants.

Research Methodology

The researcher's methodology was qualitative in nature. Qualitative research is a means to explore and understand the meaning of a social context (Creswell, 2009). The method consists of designing research questions, collecting data, coding data,

thematically analyzing data, interpreting data, and reporting data results (Creswell, 2009). The researcher's design was a single case study that included descriptive statistics. "As in quantitative research, numbers are used in qualitative research to establish the significance of a research project, to document what is known about a problem, and to describe a sample" (Sandelowski, 2001, p. 230). The empirical single case study integrated quantitative information into the data collection, data analysis, interpretations, and reporting. This study classification was intrinsic. "Intrinsic case studies are often more descriptive than interpretive, focusing on the specific characteristics of the person or program studied, the context in which the case is embedded, and the unique process involved in the case" (Lodico et al., 2010, p. 158).

The researcher's methodology was qualitative. The methodology used for the study followed from the choice of what to study, rather than being a methodological choice (Lodico et al., 2010). The qualitative research form differs from the other methods, but it is common. The methodology also relied upon participants' views of the situation studied, collected through open-ended questions (Creswell, 2009). Additionally, the methodology included data collection from six data sources coded and thematically analyzed. The interpretations of the data appear in Chapters 4 and 5. Creswell expressed the value of considering a continuum of possibilities in data collection and organizing the sources by their predetermined nature. Therefore, the methodology was appropriate.

Research Design

The research design was an empirical single case study including descriptive statistics. "A case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries

between the phenomenon and context are not clearly evident" (Yin, 2009, p. 18). Although this empirical inquiry was qualitative in nature, descriptive statistics summarized the data. The numerical data provided "systemic evidence for diversity that may be overlooked by both the researcher and participants themselves" (Maxwell, 2011, p. 479). The purpose of choosing an empirical single case study was to gain an in-depth understanding of the phenomenon of the IB MYP of one middle school in the state of Georgia.

An empirical single case study, meeting all of the conditions for testing the theory, can confirm, challenge, or extend the theory. An empirical single case study can also determine whether a theory's propositions were correct or whether some alternative set of explanations might be more relevant (Yin, 2009, p. 47). The research process involves designing questions, collecting data, and analyzing the data (Creswell, 2009). Coding the data was necessary for systemic data analysis to improve reliability (Schneider, 2005). The purpose of thematic analyses was to unearth themes salient in documents at different levels (Attride-Stirling, 2001). The interpretations from the analyzed data follow in Chapters 4 and 5 (Creswell, 2009).

The rationale in choosing a qualitative empirical single case study was appropriate. Qualitative researchers identify with a social constructivist worldview (Creswell, 2009). Social constructivists seek to understand meaning in the world, which varies in multiple situations and leads investigators to look for complexity of views, rather than just placing views into categories (Creswell, 2009). Qualitative researchers rely heavily upon the viewpoints of study participants (Creswell, 2009). The strategy of the inquiry was a case study.

The research methodology and design aligned. Both the method and design of the research have a social constructivist worldview that seeks to develop meaning from the perspective of participants involved in the study (Creswell, 2009). The methodology and the design gave an in-depth understanding of the meaning of the experienced phenomenon from the perspective of the participants. The research methodology and design were appropriate because the sample was at a single location and facilitated an in-depth understanding of the setting. The method and design combination encompassed the use of multiple data sources to give converging lines of inquiry a process of triangulation.

Population and Sample Selection

The setting for the researcher's study was a single middle school in the state of Georgia. The single middle school used the IB MYP and had over 400 students. The interviewed participants in the project consisted of the IB MYP local school-based principal, the IB MYP local school-based project coordinator, and the IB MYP local school-based foreign language teacher.

Several criteria helped in selecting participants and a school's curriculum. Lodico et al. (2010) suggested that "the researcher examines . . . and selects a purposeful sampling strategy to select participants who are able to provide information essential for the study" (p. 163). Schools that were authorized to use the name of the IB and that were state funded were eligible for the selection process. A principal who led a school curriculum volunteered to participate in the process. The criteria for selecting a curriculum included a mandatory foreign language component. The curriculum provided a holistic approach to global literacy and had formal evaluation processes in place.

An invitation letter about the case study went to authorized schools that use the IB in the state of Georgia. Schools that used the IB MYP were the focus. Participants who accepted the invitation received consent forms stipulating the purpose of the study, risks, potential benefits, confidentiality, and withdrawal privilege. Reading the informed consent in detail with the participants ensured comprehension of the process.

The population for this study was public middle schools in Georgia who use the IB MYP. A single school was selected for the sample because the focus was on an in-depth understanding of the phenomenon within a single school. The target sample size of one school was appropriate for the investigation because the aim was to develop an in-depth analysis of the phenomenon of how and why the IB MYP influenced the success of the learners and the school. The research involved interviews with the leaders within the school. The school had four people in leadership roles: a principal, two assistant principals, and the IB MYP project leader. The principal identified the leaders to be interviewed based on their roles and understanding of their IB MYP. The two leaders who participated in the interviews were the IB MYP local school-based principal and the IB MYP local school-based project coordinator. Additionally, the IB MYP local school-based foreign language teacher involved in the program was interviewed.

In addition to interviews, data were collected through a content analysis of articles and media pieces on the IB MYP. Based on the search, 20 empirical journal articles, 10 media reports, five curriculum documents from the IBO, one curriculum document, including lesson plans, from the local IB MYP school and the Georgia Department of Education database comprised the final sample. Due to the various studies on this

program, it was important to do this content analysis to gain a better understanding of the phenomenon of how the IB MYP influenced the success of learners and the school.

Sources of Data

This qualitative case study was conducted through a content analysis of six key data sources. The data sources included (1) Interviews at the IB MYP local school site, the IB MYP local school-based principal, the IB MYP local school-based project coordinator, and the IB MYP local school-based foreign language teacher; (2) The local IB MYP school curriculum documents, including lesson plans that came from the IB MYP local school-based project coordinator; (3) The IB curriculum documents that came from the head of IB MYP development in the Haag, Netherlands; (4) The media reports that came from the website; (5) The empirical journal articles that came from the website and (6) The Georgia Department of Education Adequate Yearly Progress of student achievement on statewide assessments archival database that came from the website. All of the sources were used to develop the thematic analysis and descriptive statistics presented in Chapter 4.

Interviews at the IB MYP local school site. Interviews represented a critical and valuable data source. There were interview questions created. They are in Appendix D, E, and F. Creswell (2009) postulated that researchers use a protocol, an instrument for collecting data, to gather information. Thus, the objective of the interviews was to develop an in-depth understanding and meaning of the experience from the perspective of the participants. The interview data sources were from the IB MYP local school-based principal, the local school-based IB MYP project coordinator, and the local school-based IB MYP foreign language teacher. The interview with the IB MYP local school-based

principal revealed how leadership contributed to the success of the program. The interview with the IB MYP local school-based project coordinator contained information related to how the coordination of curriculum design contributed to the success of the program. Finally, the interview with the IB MYP local school-based foreign language teacher helped to explain how cognitive development and global literacy contributed to the success of students participating in the world as global citizens.

The local school-based IB MYP curriculum documents. The local school-based IB MYP curriculum documents, including lesson plans, outlined academic activities that appeared to contribute to the improvement of students' cognitive development and global literacy. Yin (2009) contended, "the case study inquiry . . . relies on multiple sources of evidence, with data needing to converge in a triangulated fashion" (p. 18). Therefore, the combination of these data sources answered how cognitive development and global literacy contributed to students' academic performance.

The IB curriculum documents. The IB curriculum documents focused on interdisciplinary approaches to learning in a global context rather than a national or local, context, which led to how the IB MYP contributed to global literacy. In addition, learning focused on introducing concepts which provided opportunities for inquiry. Inquiry-based learning is critical in an interconnected global society in order to comprehend culture, technology, economics, and policymaking. This approach enables the IB MYP to foster cognitive development and ultimately students' academic performance.

The media reports. The media reports provided information about authentic global project activities published on IB MYP. These reports provided information about how leaders within and outside of the school setting contributed to students' cognitive

development and global literacy, which, inadvertently contributed to students' academic performance. Therefore, the media reports were vital a source of data to understand how learners inquire about the real world as they apply their knowledge to their communities.

The empirical journal articles. The empirical journal articles provided actual information that was observed or researched regarding the IB MYP. A content analysis of these empirical journal articles contributed to the data. The focus of the empirical journal articles was to describe the nature of and the impact of the IB MYP.

The Georgia Department of Education AYP of student achievement on statewide assessments archival database. The math and reading test scores for sixth-, seventh-, and eighth-grade students was provided by the Georgia Department of Education AYP of student achievement on statewide assessment archival database. The evidence from the math and reading test scores revealed how the IB MYP influenced the performance of students in one middle school in the state of Georgia. This information showed how the IB MYP contributed to cognitive development.

Validity

Two types of validity were useful to describe and justify the procedures: internal and external validity. The internal validity concerned the rigor of the empirical single case study. The external validity concerned the researcher, participants, and the reader (Creswell & Miller, 2000). Validation procedures involved multiple data sources that developed converging lines of inquiry, a process of triangulation (Yin, 2009). The compiled data provided rich findings. Member checking, a process of allowing participants to view and correct their interview transcriptions, determined the accuracy of accounts before analyzing the data and also helped support external validity (Yin, 2009).

Data validity. Creswell (2009) indicated that qualitative researchers achieve validity by authenticating the accuracy of the study findings and the procedures employed. Yin (2009) reported that validity has two steps. The first is to define terms of specific concepts and relate them to the original objective of the study. The second is to match the identified concepts to operational measures by citing published studies that make the same match. Roberts and Priest (2006) described validity as a measure of "how well the research tool measures the phenomenon under investigation" (p. 44).

A structured approach to collecting data established validity. The creation of interview questions established through open-ended and general inquiry was based upon information from gaps in the literature review. The interviews consisted of note-taking by researcher. The researcher used a digital voice recording during teleconferencing. In addition, there were receipts of emails with follow-up information. There were transcriptions of the voice recordings to verbatim records. The interviewed participants reviewed the transcribed interviews to verify and modify the data as part of the process of establishing validity. None of those interviewed made any changes and all confirmed its accuracy.

Reliability

Ensuring that the study is reliable required documenting every phase. Checking the digital recorder to be certain it functioned properly was an important step. The investigator accurately transcribed participants' recorded interviews and ensured no errors were present. Care and accuracy were of priority in the coding process and in crosschecking documents.

Data reliability. The data collection approaches for the population of the case study were reliable. To ensure reliability, the researcher's approach in tracking procedures and processes and collecting and interpreting the data was consistent (Lodico et al., 2010). Yin (2009) suggested that qualitative researchers establish a case study protocol, document steps and procedures, and maintain a database. Some of the reliable data-collection tools included a digital recording device for interviewing participants. The use of a public database provided additional reliability. The reliability of the data allows other researchers to follow the same procedures.

Data Collection Procedures

Securing approval to conduct the empirical single case study was the first important step in data collection. First, the researcher obtained a site authorization letter to conduct interviews with the participants (see Appendix C). Thereafter, the Institutional Review Board of Grand Canyon University approved the research (see Appendix A).

The data collected were from multiple sources. The first set of data sources consisted of interviews with the IB MYP local school-based principal, the IB MYP project coordinator, and the IB MYP foreign language teacher. The interviews provided information on the day-to-day experiences of the IB MYP. The second data source was the local IB MYP school curriculum document, including lesson plans. This curriculum document had data on expected student learning outcomes concerning cognitive development and global literacy. Additionally, the local IB MYP school curriculum document offered data on how daily lesson activities executed goals to improve cognitive development and global literacy.

The third set of data source was the IBO curriculum documents. The curriculum documents from the IBO had data on expected student learning outcomes concerning student cognitive development and global literacy. The fourth and fifth data sources were publicly available media reports and empirical journal articles about the IB MYP respectively. The media reports and empirical journal articles provided data on community activities that involved the IB MYP as well as results from prior studies of the IB MYP. Finally, there was a public database, maintained by the Georgia Department of Education, which provided year-to-year AYP data of student achievement on statewide, standardized tests in reading and math.

A data collection procedure was necessary to garner a rich set of various data sources. Interviews took place first through e-mail, followed-up with a teleconference call. Therefore, the interviews were not face-to-face. The participants involved in the interviews were the IB MYP school-based principal, the IB MYP project coordinator, and the IB MYP foreign language teacher. They were located in the state of Georgia. The participants of the study sent documents to the researcher, including the school-based curriculum, including lesson plans, which came from the IB MYP local school-based project coordinator. These documents arrived via e-mail after the follow-up interviews.

Moreover, the researcher processed the last four data-collection sources in a consistent manner. The researcher analyzed publicly available media reports and empirical journal articles retrieved and printed from various publicly available websites and the curriculum documents from the IBO. The data from the public database were available through the Georgia Department of Education online archival website. Printing

the information was necessary, as was storage of these documents in a secure location in the researcher's office.

Several measures helped to ensure validity and reliability throughout the data-collection process. The triangulation of data collected assisted in corroborating the facts of the study, based upon the four research questions. The overall quality of the evidence was enhanced by convergence due to a process of triangulation (Yin, 2009). Yin (2009) suggested the researcher create a case study database for organizing and documenting the data collected. One of the components of this database was notes taken during interviews. The notes were in several forms. The researcher dated, printed, and classified transcriptions of the interviews in a dossier. The notes from the entire interview process underwent systematic organization and categorization for later retrieval.

The data-collection procedures put in place through the case study database ensured validity and reliability of the investigation. A second element of the database was publicly available media reports, empirical journal articles, and the IB MYP school-based curriculum document, including lesson plans. The researcher retrieved publicly available media reports and empirical journal articles electronically in portable document format (PDF). The IB MYP school-based curriculum document, including lesson plans, arrived electronically from the IB MYP project coordinator and underwent conversion into a PDF. The researcher downloaded the PDFs to a flash drive for classification and storage. The compilations of hard-copy documents required categorization, placement in a folder, and filing. Some documents required forwarding, with cross-referencing via notes. All documents required organization, categorization, and filing for later retrieval.

The third component of the database was information retrieved and compiled from a public database related to the research. After collection, retrieval, compilation, and classification, the researcher stored the data in an electronic file folder. All of these components created a database for organizing and documenting the data collected.

Data Analysis Procedures

Document analysis. According to Lodico et al. (2010), data collection and analysis are an inductive process in qualitative research, and the data analysis for the empirical single case study followed a systematic process. Once all of the collected and compiled data were complete, interviewees undertook member-checking reviews of the transcripts, but requested no changes. Then, the researcher compiled, read through, and reviewed all of the six data sources. Thereafter, the researcher created a codebook, structured by each research question. This showed how each data source applied to each research question. Next, the researcher completed coding and thematic analysis through open and axial coding data based upon the research questions. This process had four steps. Combining related codes to develop a set of themes was the first step. Naming and describing each theme to reflect synthesizing the coded data was the second step. Appendix K provides a table of the codes synthesized to themes. Interpreting and reporting the findings relative to the research questions was the third step. The researcher used descriptive statistics to create charts and summaries of various data.

Each research question required collecting relevant data. The interviews from participants and a public database added to the relevant data about R1, which asked about how the IB MYP influenced students' academic performance. The curriculum documents, including lesson plans from the school-based IB MYP project coordinator;

the public database; and the interviews of participants contributed to the data collection

process for R2. R3 inquired about factors of the IB MYP that contributed to global

literacy. Publicly available media reports and empirical journal articles as well as the

participants' interviews contributed to R4, which inquired about how the leadership of an

IB MYP contributed to school success. The interviews of the participants added to the

relevant data collected for this question.

Descriptive statistics. The use of descriptive statistical analysis summarized the

data. Quantitative data in qualitative research can assist with identifying patterns that are

not readily apparent, adding in-depth understanding of the setting or participants in the

study (Maxwell, 2011). The data collection from the public database underwent a

systematic data analysis procedure to examine how the IB MYP affects school success,

including AYP. Reviewing the data provided a general sense of the information.

Following the review, the data required coding for thematic analyses and categorizing.

Descriptions of the data followed. Upon building themes for hypotheses, the numerical

results provided concepts and interpretations compatible with comprehending

participants' emic perspectives and constructs, thereby ultimately providing an

understanding of the case study phenomenon (Maxwell, 2011). The final step was

reporting the results of the data analyses.

Research questions. Both non-statistical data analysis and thematic analysis

helped to develop the answers to each research question. Lodico et al. (2010) stipulated

that data collection and analysis are inductive processes in qualitative research.

Therefore, the media reports; the empirical journal articles; the curriculum documents,

including lesson plans from the IB MYP local school-based project coordinator; the

curriculum documents from the IBO; and the interviews all followed the same data analysis steps. All documents underwent preparation, organization, and systematic, individual review to assess the general flow and structure of the data. Full engagement of the reading began before coding. The factors contributing to cognitive development and global literacy, referenced in the research questions, emerged from the curriculum document, including lesson plans of the IB MYP local school and the curriculum documents from the IBO. The interviews from participants addressed all the research questions. Yin (2009) contended, "the case study inquiry . . . relies on multiple sources of evidence, with data needing to converge in a triangulated fashion" (p. 18). After examination of all the documents, coding thematic analysis and categorization began. The constructs of detailed descriptions of the case study provided a portrayal of the experience. Themes that emerged from the data provided reflections of lessons learned in the case study to interpret and report the data.

Data analysis summary. Alignment among the research questions, the methodology, the type of data collected, and the data analysis were critical aspects of analysis. The methodology of the investigation was qualitative in nature and included descriptive statistics. The design was an empirical single case study. The approach was to comprehend the phenomena of the nature and impact of the IB MYP in one middle school.

Creswell (2009) indicated that a single case study is an empirical inquiry that explores the processes, activities, and events guiding the investigation. The methodology appropriately addressed the research questions, which sought an in-depth understanding of the meaning and experience from the perspective of the participants interviewed and

the data collected. The research questions aligned with the data collected to answer the

problem statement of the investigation. The data analysis responded to the research

questions, which provided themes for interpretations and a final report.

Ethical Considerations

Ethical processes were of the utmost importance to protect the identity of human

subjects, as well as to protect data in communications with all participants. Ethical

considerations are vital in conducting data collection and analysis (Creswell, 2009).

Careful measures ensured confidentiality and anonymity. In the initial participation letter,

the participants learned of the privacy of the participants' names, contact information,

and data collected.

The participants' authorization letters to conduct research at the site were

contingent upon receipt of the approval from the Grand Canyon University Institutional

Review Board. Subsequently, the informed consent form outlined confidentiality of the

participants and the data collected. All data were under safeguard during the entire data-

collection process. The data collected for the empirical single case study will remain in a

locked file cabinet located in the researcher's office for a period of three years. At the end

of three years, data destruction will begin by shredding paper copies and deleting all

electronic data from the computer.

Each interviewed participant received an assigned code that appeared on all

material relating to the participant in place of the actual name. No one has access to the

actual participant names except the researcher. Encountering ethical concerns during the

data collection process was normal. The research involved collecting data about humans

from humans, and therefore ethical procedures were necessary (Creswell, 2009). One

critical process in assessing human rights violations with respect to the participants in the study was the empirical single case study reviewed by the Institutional Review Board of Grand Canyon University (Creswell, 2009). Informed consent letters developed by the researcher ensured respect of the participants and the research site.

Measures to secure the data collected and analyzed in a locked office file cabinet helped to ensure confidentiality. There were no conflicts of interests encountered during the case study. The investigator had no prior affiliation with the IB and no former knowledge of the school site before conducting the case study. Maintaining the Grand Canyon University research protocol throughout the study was of primary importance.

Limitations

Limitations applied to the study. The research design was an empirical single case study, and the methodology was qualitative in nature. The researcher's study was limited to one case rather than multiple cases. The empirical single case study was not quantitative in nature and did not involve mixed methods. There were limitations concerning the sample in terms of size, population, and procedure. The sample was limited to the United States, and information from various country analyses did not appear. The study took place in the state of Georgia, in one middle school in one district, so multiple state or school analyses did not appear. Finally, the study was under limited time constraints, thereby forgoing longitudinal studies.

The data approaches and data collection processes had limitations. The only faculty and staff members from the IB MYP local school in Georgia targeted for the sample were the IB MYP local school-based principal, the IB MYP local school-based project coordinator, and the IB MYP local school-based foreign language teacher.

Data collection interviews did not include any other school, district, or state officials, which limited the study. Documents involving survey instruments limited the researcher's study.

The data analysis process had limitations. Data analyses have multiple levels of examination in practice (Creswell, 2009). The steps presented to analyze the data did not always take place in the order specified because the stages are interrelated. Although there were only a few participants, the researcher relied upon the ability to hypothesize, think, imagine, create, and digest the contents to abstract a connection and make interpretations (Airasian et al., 2012). The researcher had limited experience with analyzing and synthesizing data. Therefore, the researcher was the sole person to analyze the data, thereby limiting the process of multiple analysts.

The existing limitations were unavoidable and did not affect the results negatively. The ethical elements associated with conducting the investigation did not affect the results negatively. Creswell (2009) stated that as qualitative researchers analyze and interpret data, issues may arise that call for solid ethical decisions. The data analysis followed a systematic process and incorporated anonymity of individuals. Although the researcher relied on intellect to comprehend the data, ethical stances were in place to provide an accurate account of the information. While the researcher was unable to determine a timeframe for the data analysis, premature judgment did not occur due to the processing in place.

Moral researchers are obligated to conduct investigations that are not harmful to participants. This study brought about good results. Even though the researcher was the sole person to analyze the data, an experienced team including the dissertation

chair, the researcher's committee, and Grand Canyon University's Institutional Review Board reviewed the study to ensure that the research followed protocols. Although the study had limitations, they did not affect the results negatively.

Summary

This chapter contained a discussion of the research design and methodology. Creswell (2009) explained that the research design is the plan to conduct research. The plan incorporates philosophy, strategies of inquiry, and specific methods that translate the approach into practice. The research method was qualitative in nature, and the research design was an empirical single case study. Airasian et al. (2012) postulated that the purpose of qualitative case study research is to comprehend a setting, a process, or an activity from the perspective of the participants involved in the investigation. The intent of the empirical single case study was to discover how the IB MYP influenced the success of one middle school in the state of Georgia. To address the problem statement, a methodological framework involving data collection, analysis, and interpretation followed a systematic process.

The data-collection procedures in place for the empirical single case study began with preparation and organization of the data. Reviewing the data helped to gain an initial sense of the flow and structure of the data collected. Next was coding and thematic analysis of the data, followed by thorough and comprehensive descriptions of the participants and the documents to convey the meaning of the research. The next step was to determine patterns that emerge into themes to draw upon lessons learned in the study. The last step was interpretation and reporting of the data. Interpreting data entails conceptual and integrated thinking more than data analysis because it involves

identifying and abstracting important understandings from the detail and complexity of the data (Airasian et al., 2012).

Following important procedures helped to affirm validity and reliability in the study. Validity in qualitative research gauges the data collected to the intent of the measured outcome (Airasian et al., 2012). The use of multiple data sources to corroborate evidence allowed the development of converging lines of inquiry, which is a process of triangulation (Yin, 2009). To affirm the accuracy of the findings in the study, member checking was the technique applied (Creswell, 2009). As the study was qualitative in nature, descriptive statements relevant to the context of the study were important to the results. Explanations of the neutrality and objectivity of the data were among the results (Airasian et al., 2012). One element of ensuring the reliability of the study was ensuring the same procedures were used consistently across all parts of the study (Yin, 2009). Careful transcription ensured that the transcripts from the interviews contained no errors.

Anticipated ethical issues were a part of the case study process. Research involved collecting data from humans about humans (Creswell, 2009), and the researcher was responsible for protecting the confidentiality of the interviewed participants. In addition, the researcher had an obligation for the authenticity and credibility of the report. Due to the selection of the problem statement from which the research questions emerged, selection of a meaningful problem to benefit individuals was vital (Creswell, 2009).

More importantly, before the collection of data from the research site, members of the Grand Canyon University Institutional Review Board granted permission after ensuring alignment with federal regulations to protect against human rights violations

(Creswell, 2009). Participants received and signed informed consent letters before they engaged in the interviews, thereby protecting the rights of the participants (Creswell, 2009). During data collection, analysis, and interpretation, participant codes gave protection to the individuals interviewed. Member checking helped to ensure the accuracy of transcripts. Documents were stored and secured in a locked file cabinet under the protection of the researcher.

Agreements are in place for ownership of the completed report. The researcher followed the protocol to safeguard the entire project and will discard the results after three years to prevent misappropriation. In matters of ethics, few absolutes exist. The researcher needed to identify broader social principles that are integral to a researcher, as well as to a contributing member of the community, and this dictated an ethical stance (Airasian et al., 2012).

Limitations were present in the study. The objective of the researcher's study was to seek an in-depth understanding of real-life experiences, so relying upon the participants for data was necessary. Limits in capturing the full richness of the research site arose because the board of education, the district superintendent, the curriculum specialists, and other positions, such as core subject teachers, support staff, business partners, parents, and students, did not participate in the interview process. Therefore, other documents concerning the study were not a part of the process.

No video recordings, pictures, or observations were used in the study. Although systematic processes were in place for data analyses, the stages were not linear, but rather were integrated, and the researcher relied on critical thinking skills, creativity, intuition, and intellect to understand the data (Airasian et al., 2012). Given the investigator's

abilities and the amount of data to analyze and synthesize, determining the length of time necessary to complete tasks was difficult (Airasian et al., 2012). In addition, the researcher was the sole person to analyze the data.

The purpose of the study was to determine how the IB MYP influenced the success of one middle school in the state of Georgia. The implications of the research results provided tactics for planning future programs of this nature for more schools in the United States. The data collection and analysis are in Chapter 4. The summary, conclusions, and recommendations are in Chapter 5.

Chapter 4: Data Analysis and Results

Introduction

This chapter provides an overview of the study methodology, research questions, data collection, and data analysis. The chapter analyzes and presents data relating to the research questions. The chapter summarizes the data analysis results and presents a summary of findings related to the research questions. The purpose of this study was to determine how the IB MYP influenced the success of one middle school in the state of Georgia. Determining success factors offers a set of strategies that leaders may want to consider when implementing curricula to improve achievement gaps.

The education system across the United States faces a grave national security threat due to educational failures (Klein et al., 2012). International competition, globalization of labor markets, and international trade all require higher educational skills. However, young people across the country have not kept pace with their peers in other nations, as measured by the 2009 PISA (Klein et al., 2012). The IB designers' objectives were to develop a standard curriculum "for internationally mobile students preparing for university" (International Baccalaureate, 2012i, para. 2). The IB curriculum became popular in the United States due in part to the belief that "the curriculum seeks to teach students not just what they need to know, but how to think and learn" (Bloom, 2012, para. 1). Four research questions guided the empirical single case study.

R1: How did the IB MYP influence students' academic performance?

R2: How did the IB MYP contribute to cognitive development?

R3: How did the IB MYP contribute to global literacy?

R4: How did the leadership of an IB MYP contribute to a school's success?

The conceptual model below depicts how the four research questions related to each other and provided a basis for the researcher's empirical single case study design.
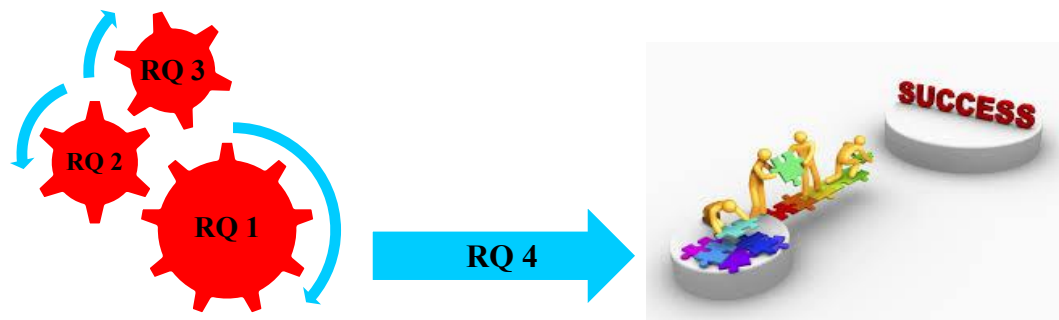
Figure 2. Conceptual model of the research questions

The gears represent how a variety of approaches to learning, cognitive development, and development of global literacy interacted and ultimately led to the school's success. Understanding the variety of approaches to learning used by the IB MYP was the focus of R1. Understanding how the IB MYP enabled cognitive development was the focus of R2. Understanding how the IB MYP enabled global literacy was the focus of R3. The first three research questions reflected Vygotsky's theoretical framework of social reasoning and language. The researcher's expectation was that the curriculum would influence cognitive development and global literacy. Moreover, R4 investigated how the combination of a variety of approaches to learning, cognitive development, and global literacy, as well as the school's leadership, influenced the learners' and school's success. Therefore, the basis for the researcher's empirical single case study design was a combination of all four research questions structured in a way that promotes understanding of the different components of this phenomenon and the nature of their relationship.

The methodology of the study was qualitative in nature, and the design was an empirical single case study, which involved data collection and thematic analysis to identify emerging specific or general themes and patterns. The case study is an appropriate design to develop an in-depth understanding of a contemporary phenomenon in a real-life context (Yin, 2009). The study examined the impact of the IB MYP on a single middle school in Georgia. This empirical single case study relied upon six data sources to converge in a triangulated fashion.

Descriptive statistics provided numeric data of the demographics and performance from a public database. This qualitative research used numbers, as in quantitative research, to summarize data by quantifying and visualizing known facts to describe the sample and some of the data collected. This approach of using numbers and visualizing data was appropriate for a case study (Sandelowski, 2001). It focused on identifying and understanding specific characteristics of the IB MYP.

Establishing the validity and reliability of this empirical single case study involved using a number of processes. The process of triangulation, which involved using multiple data sources, provided external validity. Yin (2009) described validity as "identifying correct operational measures for the concepts being studied" (p. 40). In addition, validity defines "the domain to which a study's finding can be generalized" (Yin, 2009, p. 40). Use of a variety of processes ensured the reliability of the study results. Yin stipulated that reliability occurs when "the operations of a study–such as the data collection procedures–can be repeated, with the same results" (p. 40). The tracking of processes and procedures during every phase, as well as collecting data and using a digital recorder, helped establish reliability for the study. The coding process of

interviews and other data sources used a systematic process based on a standard open and axial coding approach, which involved the creation of a codebook that summarized the coding process and the collected data. Additionally, another individual, who was the Chair for the dissertation committee and who has extensive research experience in the academic and business worlds, reviewed the coding of each of the documents.

The rest of Chapter 4 provides a summary of the data collection processes and the demographics of the study, providing some insight on the setting. The next section summarizes the data by research question. The data analysis section summarizes the results by research question from coding the data using open and axial coding that thematically analyzed the data. Chapter 5 provides the summary, conclusions, and recommendations.

Descriptive Data

This section provides the descriptive data of the study. A narrative summary combined with descriptive statistics describes the demographics of the sample in the study. The summary includes a description of the school and the interviewed participants. The setting for the study was the state of Georgia. The study involved a school within a small city in Georgia, including two members of the administration and a foreign language teacher within the selected school. Additionally, it involved a content analysis of a series of documents, including 20 empirical journal articles, 10 media reports , 5 curriculum documents from the IBO, 1 curriculum document, including lesson plans from the local IB MYP school site, and one database from the Georgia Department of Education.

One single middle school, which uses the IB MYP, was the focus of this study. It was a public school with an enrollment of over 400 students in the sixth, seventh, and eighth grades. The student population was 80% African-American, 15% Caucasian, and 5% other, as illustrated in Figure 3.
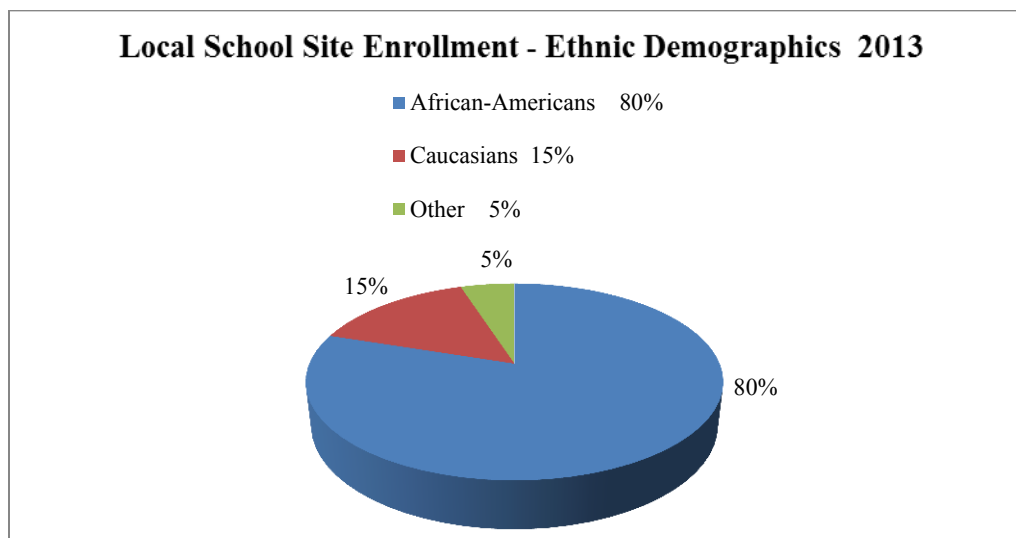
Figure 3. Local school site enrollment–ethnic demographics 2013

There were several criteria for selecting the participants and the school's curriculum. First, the school, which was state-funded, had authorization to use the name of the IB. Second, the principal played a leadership role in implementing the program. Third, the curriculum included a mandatory foreign language component and provided holistic approaches to global literacy. Fourth, a formal evaluation process was in place. Additionally, the program had been in place for three years. All of these criteria were important because they led to a rich set of data for this study.

There were six data sources for the empirical single case study as illustrated in Figure 4. The interviewed participants consisted of the IB MYP local school-based principal, the IB MYP local school-based project coordinator, and the IB MYP local school-based foreign language teacher. In addition to the interview data, there were 10

media reports; 20 empirical journal articles; five documents from the IB; one curriculum document from the school site, which included lesson plans; and the Georgia Department of Education database. These data are further described in a table in Appendix L.

Data Sources

School Curriculum 1
3%

Database 1
3%

Interviews 3
7%

Media documents 10
25%

IB documents 5
12%

Empirical Journals 20
50%
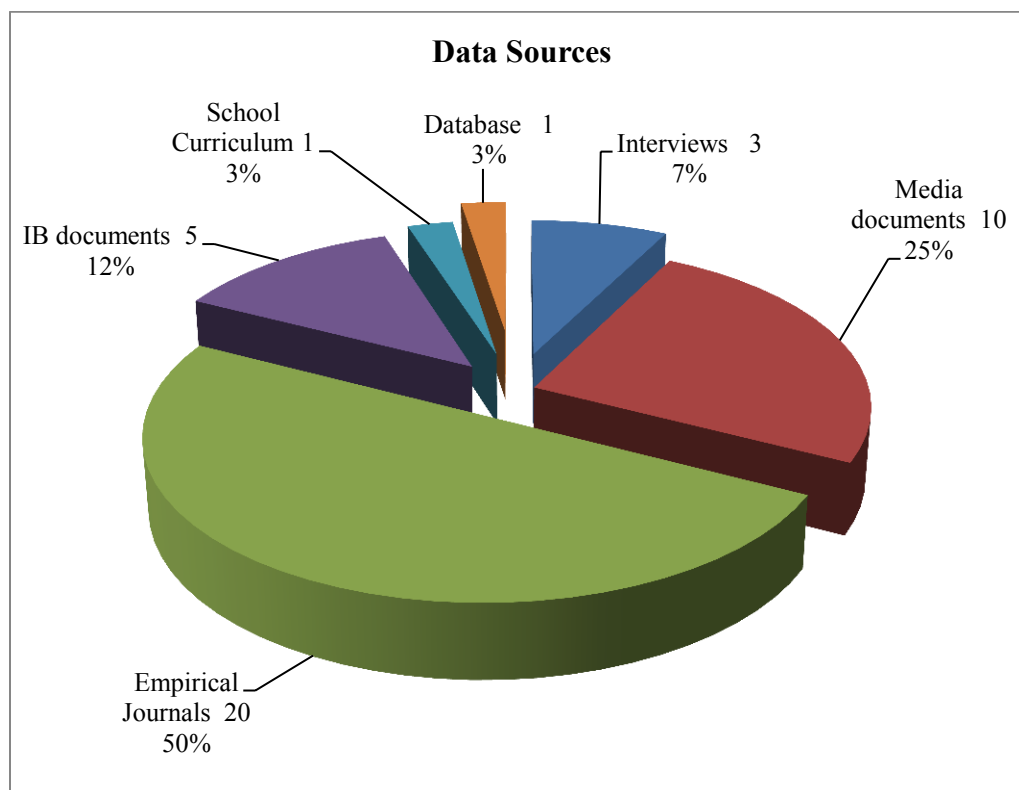
Figure 4. Data sources

Thematic analysis across the six data sources addressed each of the four research questions. The coded data for R1 focused on specific approaches to learning. The coded data for R2 focused on cognitive development, including the social, emotional, and analytical arenas. The coded data for R3 focused on identifying examples of the development of global literacy. The coded data for R4 focused on identifying the various ways the leadership of the IB MYP may have contributed to the success of the learners and the school.

A number of codes and resulting themes emerged for each research question from the analysis of the data illustrated in Table 1. For R1, 22 codes emerged. For R2, three

codes emerged. For R3, seven codes emerged. For R4, 31 codes emerged. Not all of the

data sources contained data relevant to each of the research questions. Using the process

of open and axial coding, combining similar and related codes within research questions,

led to the creation of themes to address each research question. For example, combining

similar and related codes led to the development of themes to address R1. This same

process applied to R2, R3, and R4. Appendices G, H, I, and J provide the list of the

original codes for each of the research questions.

Table 1 illustrates the complexity of the data as well as the systematic process

used to analyze the data. For each of the research questions, a number of different data

sources provided information to code each research question, as illustrated in Columns 2

and 5. The number of individual codes that emerged from the data sources, relevant to

each research question, ranged from three for R2 to 31 for R4. After combining similar

codes for each research question, a number of themes emerged to address each question.

Appendix K provides a table of how codes were synthesized to themes based upon

research questions.

Data Analysis Procedures

A diverse set of data sources provided rich data analyses to address the research

questions. The objective of this qualitative analysis was to determine how the IB MYP

influenced the success of one middle school in the state of Georgia. Four research

questions guided the study. The six data sources included documents from the IB on the

IB MYP curriculum strategy, including its structure and approaches. In addition, there

was a document on the curriculum's implementation from the IB MYP local school site.

There were publicly available media reports and empirical journal articles that
contributed to the data sources. There were interviews with participants that implemented

Table 1

Data Analysis

Research Question	Number of data sources illustrating codes	Number of Codes	Number of Themes Emerging from Codes	Data Source Providing Data
R1	5	22	6	• Interviews • Media reports • IB documents • Local School Curriculum Documents • Empirical Journal Articles
R2	4	3	3	• Interviews • Media reports • IB documents • Empirical Journal Articles
R3	4	7	3	• Interviews • Media reports • IB documents • Empirical Journal Articles
R4	6	31	9	• Interviews • Media reports • IB documents • Local School Curriculum Documents • Empirical Journal Articles • Public Database

the IB MYP at the local school, and a public database provided additional data sources as
well. The variety of these sources contributed to the richness of the data and the large
volume of data coded to answer the research questions. Appendix K provides tables with
codes synthesized to themes.

The methodology was qualitative in nature with an empirical single case study
design. This approach provided the information needed to describe the phenomena,
which were the nature and the influence of the IB MYP. The data analysis included
thematic analysis of the interviews and various sources of publicly available information

on the IB MYP and the school in the study. A narrative, tables, and graphs summarize the results. Although this research studies only one middle school and one curriculum, the IB MYP curriculum, delivered worldwide, is 20 years old. This study examined this single curriculum in the context of its implementation in a middle school and included a variety of data sources relevant to the school, the curriculum, and the views of many different stakeholders and researchers. The IB originated as a pre-university program, following World War II, over 40 years ago. It has gone through a number of evolutions and now has four programs. The IB MYP, which emerged in 1980 but officially commenced in 1994, is one of the IB's leading programs.

The collection and analysis of the data for this empirical single case study utilized a systematic process. According to Lodico et al. (2010), data collection and analysis are an inductive process in qualitative research. First, there was preparation of the data, organization of the data, and the separation of data types. The collected data from each source were separately stored from one another. The publicly available data were separately stored from the interviews. The storage of the media reports was independent from the curriculum designs of the IB. The school-based curriculum, including lesson plans, had separate storage areas as well. The processes involved with the interviews included note-taking and digital voice recording during teleconference interviews. In addition, there was receipt of e-mails with follow-up information and transcribing the voice recordings to verbatim records. The interviewed participants reviewed the transcribed interviews to verify and modify the data as part of the process of establishing validity. None of those interviewed made any changes, and all confirmed the transcripts' accuracy. Next, there was an initial exploration of the compiled data. The process of

reading and examining the data provides a sense of the substance of the data (Lodico et al., 2010). After reviewing all of the data, a process of coding and thematically analyzing the data took place.

This process involved coding the data and identifying a set of themes that emerged from the coded data. Lodico et al. (2010) provided the steps to analyze the data. In the first step of this thematic analysis process, highlighting words and phrases identified vital aspects of the data. In the second step, there was coding of the data and then naming the codes, which entered the codebook. In the third step, combining the related codes, led to the development of a set of themes for each research question. In the fourth step, a description of each theme developed and reflected the coded data. The fifth and final step involved interpreting and reporting the findings relative to the research questions.

The coding of a diverse set of data sources collected, considering the specific needs, answered each individual research question. Codes began with the research question number. The codes for R1 focused on the various approaches to learning used by the IB MYP to influence students' academic performance. The data sources related to this question were interviews from participants and media reports. In addition, there were documents from the IB and empirical journal articles. There was also a curriculum design document from the IB MYP school site, which included lesson plans. The public database did not provide relevant data.

The coding for R2 focused on the specific ways in which the IB MYP contributes to cognitive development. The data sources related to this question were interviews from

the participants. There was also a curriculum design from the creators of the IB. In

addition, there were media reports and empirical journal articles related to R2.

The coding for R3 focused on the specific ways the IB MYP contributes to global

literacy. The data sources related to this question were participant interviews and the

documents from the creators of the IB. Moreover, there were media reports and empirical

journal articles that provided relevant data.

The coding for R4 focused on identifying the various ways in which the

leadership contributed to the success of the learner as well as the school. The data sources

related to this question were interviews from the participants. There were also curriculum

documents from the creators of the IBO. In addition, there were curriculum documents

from the IB MYP school site, which included lesson plans, related to R4. Moreover, there

were media reports and empirical journal articles that contributed to the data. In addition,

relevant data from the Georgia Department of Education AYP database provided the

schools' AYP ratings from the academic years of 2007–2008 until 2010–2011. The IB

MYP at the local school site ran for the academic years of 2010–2011, 2011–2012, and

2012–2013.

Each of the data sources generated a number of different codes. The same codes

emerged in multiple data sources, as shown in Table 2. However, not all the codes

emerged in all of the documents. The total number of codes that emerged during the

coding process across all documents for the four research questions was 63. These 63

codes ended up generating 21 themes. Appendix L provides a table of data sources.

The total number of codes that emerged during the coding process for R1 was 22

from across the various documents. For R1, five different codes emerged from the

interviews. Three different codes emerged from the IB MYP curriculum document at the school site. No codes emerged from the AYP database source. Eight different codes emerged from the IB documents. Seven different codes emerged from the media reports, and eight different codes emerged from empirical journal articles.

The total number of codes that emerged during the coding process for R2 was three from across the various documents. For R2, three different codes emerged from interviews. Three different codes emerged from the IB documents. Two different codes emerged from media reports, and three different codes emerged from empirical journal articles. The IB MYP school curriculum documents and the AYP database source had no codes.

The total number of codes that emerged during the coding process for R3 was seven from across the various documents. R3 had five different codes emerge from interviews. No codes emerged from the IB MYP school curriculum documents and from AYP database source. Six different codes emerged from the IB documents. There were also three different codes that emerged from media reports and seven different codes that emerged from empirical journal articles.

The total number of codes that emerged during the coding process for R4 was 31 from across the various documents. Thirteen different codes emerged from interviews. Four different codes emerged from the IB MYP school curriculum document. Three codes emerged from AYP public database. Six different codes emerged from the IBO documents. Twelve different codes emerged from media reports, and 15 different codes emerged from empirical journal articles.

Table 2

Occurrences of the Codes across the Different Data Sources

	Number of data sources	Number of codes for R1	Number of codes for R2	Number of codes for R3	Number of codes R4
Documents from within the school					
Interviews with School Leaders/Teachers	3	5	3	5	13
Curriculum Documents	1	3	0	0	4
Documents external to the school					
AYP Database	1	0	0	0	3
IB Documents	5	8	3	6	6
Media	10	7	2	3	12
Empirical Journal Articles	20	8	3	7	15

Validity came from multiple data sources that developed converging lines of

inquiry, a process called triangulation (Yin, 2009). The compiled data provided rich

findings. Member checking involved allowing participants to view and correct their

interview transcriptions to ensure accuracy of accounts before analyzing the data, which

also helped support external validity. The reliability of the study necessitated

documenting every phase. Checking the digital recorder to be certain it functioned

properly was an important step. The investigator accurately transcribed participants'

recorded interviews and ensured no errors were present. Care and accuracy in the coding

process and in crosschecking documents was precise, including a review of code

checking by the dissertation chair.

The qualitative empirical single case study approach appropriately addressed the

research questions, which sought an in-depth understanding of the meaning and

experience from the perspective of the participants interviewed and the data collected.

Yin (2009) indicated that a single case study is an empirical inquiry that explores the

processes, activities, and events guiding an investigation. The data collection aligned with

the research questions to answer the problem statement of the investigation. The data analysis responded to the research questions, which provided themes for interpretations and reporting in the study.

Results of the Analysis of the Data

This section presents the collected, organized, and analyzed data in a non-evaluative and unbiased manner in relation to the research questions. Quantitative data in this qualitative research study assisted with identifying patterns that would not have been readily apparent. This numerical dimension added an in-depth understanding of the setting and participants in the study (Maxwell, 2011). The data collection from the public database underwent a systematic data analysis procedure to examine how the IB MYP influenced the school success, including AYP. Reviewing the data provided a general sense of the information. Following the review, the data required coding for thematic analyses and defining each theme. Summarizing of the data for each theme within tables followed. Upon building themes for research questions, the results provided concepts and interpretations compatible with comprehending participants' emic perspectives and constructs, thereby ultimately providing an understanding of the case study phenomenon (Maxwell, 2011).

For qualitative studies, it is important to provide a complete picture of the constant and ongoing coding to arrive at a set of themes about the subject. In this study, themes emerged from documents and interviews. Themes emerged by research questions reflecting data presented in the interviews as well as data from documents and a database. Yin (2009) contended, "the case study inquiry . . . relies on multiple sources of evidence, with data needing to converge in a triangulated fashion and as another result benefits

from the prior development of theoretical propositions to guide data collection analysis"

(p. 18). The following sections illustrate the results of the coding and thematic analysis

that identified and defined the theme to answer each of the research questions. Discussion

of the results summary, conclusions, and recommendations are in Chapter 5.

Thematic analysis of R1. The first research question, how did the IB MYP

influence students' academic performance, produced a series of 22 codes. The resulting

six themes that emerged address R1. The themes were multidisciplinary curriculum,

inquiry-based and experiential approaches to teaching and learning, real-world

experiential activities, technology-enabled learning, coaching and mentoring for learning,

and individual responsibility and accountability. The following series of tables

summarizes each theme. Table 3 summarizes themes that emerged for R1.

The first emerging theme was a multidisciplinary curriculum, shown in Table 3,

which involved using a variety of disciplines, rather than a single-discipline approach to

learning in every content class. For example, a history class includes more than history. It

may provide the human ingenuity of the history of mathematics theory. History may also

discuss the global culture of the mathematicians who developed the theory. In addition,

parts of the discussion of this multidisciplinary concept may be in a foreign language. As

a result, this history class involves areas of interaction in multiple content classes that

include the disciplines of mathematics, global literacy, and a foreign language. Therefore,

> Educators must move away from the teacher-directed, encyclopedic, rote-learning
>
> approach to a child-centered pedagogy, which promotes dialogue, critical
>
> questioning, lateral thinking, interdisciplinary awareness, and interdependent
>
> (teamwork-oriented) learning. The teacher should provide the "tools for seeking

and processing knowledge, rather than [. . .] the actual knowledge itself." (I. Hill, 2012, pp. 352–353)

In the literature, Zúñiga-Brown (2011) stipulated that a resilient national security education depends on the country's rethinking approaches toward participatory education between existing government agencies and complex civilian networks through integrating applications of multidisciplinary and constructivist conceptual frameworks. Table 3 provides further examples of quotations from the various sources that support the multidisciplinary curriculum theme. As one observes these quotations, a feeling of the importance of a multidisciplinary curriculum emerges.

The second theme that emerged, as illustrated in Table 4, was inquiry-based experiential approaches to learning. This approach identified how courses used inquiry-based experiential approaches to learning. This approach involved asking questions and giving opinions, as a part of the experiential approaches to learning. This approach focused upon how to develop students' curiosity and thinking when learning new concepts.

Table 3

Multidisciplinary Curriculum Theme

R1.T1: Multidisciplinary curriculum involves using a variety of disciplines, rather than a single-discipline approach to learning that links across every content class.	
Media	"Quinn used the study of electricity as an example of IB learning. To accompany the history and math behind electricity, his class discussed how much energy could be saved if everyone in the world switched just one bulb to an energy efficient variety" (Healy, 2008, p. 1). "Students enrolled in the two-year IB Diploma Program must take a sequence of subject classes, plus a Theory of Knowledge class, and write a 4,000-word research paper on an approved subject of their choice. Diploma candidates must also participate in 150 hours of what IB calls Creativity, Action, and Service, which includes extracurricular arts, sports, and community service" (Cech, 2007, pp. 22–24).
IB Documents	"The study of sustainability is inherently interdisciplinary and requires a holistic treatment. In order to understand and address the challenges that arise from the interaction between human and environmental systems, students must learn to integrate scientific/quantitative data with the more qualitative approaches of politics, sociology and ethics" (IBO, 2012a, p. 5). "Science, technology, engineering and mathematics: Increasingly, thinking about rights involves an interdisciplinary approach that requires understanding complex scientific, technological and environmental developments. The protection of human rights is closely related to innovations that reduce poverty" (IBO, 2012b, p. 4).
Local School Curriculum Document	"Use of themes/units across year one and year two of the programme; implementation of the IB MYP including: Approaches to learning, Community Service, Environment, Health, and Social Education, as well as Human Ingenuity for grades 6-8, IB learner Profile" (Local School in Georgia Curriculum Document [LSGCD], 2013, p. 60).
Empirical Journal Articles	"Educators must move away from the teacher-directed, encyclopedic, rote-learning approach to a child-centered pedagogy, which promotes dialogue, critical questioning, lateral thinking, interdisciplinary awareness, and interdependent (teamwork-oriented) and independent learning. The teacher should provide the 'tools for seeking and processing knowledge, rather than [. . .] the actual knowledge itself'" (I. Hill, 2012, pp. 352–353). "A curriculum needs to have coherence and articulation across the stages of learning—it needs to be 'joined up'. It should not appear like a drip feed of discrete subjects throughout a student's education in which the relevance of each subject to the whole is lost " (I. Hill, 2012, p. 353). "While the importance of knowledge, which leads to a culture générale—still a valued acquisition in French education— should not be denied, schools can no longer, if they ever could, impart a body of concepts, details, and facts, and leave it at that. Knowledge is now everywhere; it is literally in the air. Students need skills, which will enable them to process this knowledge: to know what they need, where to find it most readily and reliably, how to judge its validity, what to discard, and what to spend time reading or viewing" (I. Hill, 2012, pp. 353–354).

Interviews	"I love comparing the native material to the target material so that our students can better appreciate what is being learned" (Local School in Georgia interview [LSG], 2013).
	"Yes, mainly through the areas of interaction of learning because they can connect to any subject and any part of the world" (LSG, 2013).

Table 4

Inquiry-Based Experiential Approaches to Learning Theme

R1.T2: Inquiry-based experiential approaches to learning: Construction of courses is based on the use of an inquiry-based experiential approach, which involves asking questions, giving opinions, and experimenting during learning.

Media	"The curriculum focuses on kids experimenting and asking questions as the starting points for learning" (Wall, 2011, p. 1).
IB Documents	"Through inquiry, action and reflection, IB programmes aim to develop a range of competencies and dispositions that include skills for thinking, for working with others, for communicating, for managing self and for research" (IBO, 2012c, p. 5).
	"Students are required to engage in a collaborative transdisciplinary inquiry process that involves them in identifying, investigating and offering solutions to real-life issues or problems" (IBO, 2011, p. 2).
	"The MYP requires inquiry, action and reflection through disciplinary study in sciences and humanities as well as through interdisciplinary studies in ecology, sustainability, environmental policy and ethics" (IBO, 2012a, p. 6)
	"Sustained inquiry forms the centrepiece of the written, taught and assessed curriculum in IB programmes. IB programmes feature structured inquiry both into established bodies of knowledge and into complex problems. In this approach, prior knowledge and experience establish the basis for new learning, and students' own curiosity provides the most effective provocation for learning that is engaging, relevant, challenging and significant" (IBO, 2012c, p. 4).
Interviews	"Yes, the curriculum allows teachers and students the flexibility. Teachers implement units of work that are creative usually giving students a choice of an end product. More inquiry-based lessons are being taught and students are allowed to discuss topics in depth" (LSG, 2013).
	"The difference is that we do more self-based assignments/projects per topic" (LSG, 2013).

"Through inquiry, action and reflection, IB programs aim to develop a range of

competencies and dispositions that include skills for thinking, for working with others,

for communicating, for managing self and for research" (IBO, 2012c, p. 5). In the

literature, Peterson (2003) contends that the theory of knowledge assists students in posing questions that underlie the nature of knowledge as presented in the school's disciplines and daily life. In addition, this approach provides experiencing various ways of learning to celebrate the many ways in which people work together to construct meaning as well as to make sense of the world (Peterson, 2003). Above, in Table 4, examples of quotations from various sources support inquiry-based experiential approaches to learning.

A third theme emerged in the area of experimental learning. This theme, illustrated in Table 5, was real-world experiential activities. This theme provides a variety of real-world experiential activities in the classroom as well as through community service projects, environmental activities, and global social activities. An example would be a foreign language teacher taking his or her students outside to complete an assignment, in the target language, for an hour, about gardening. Students learn gardening vocabulary, wrestle with the vines, pluck tomatoes off the vines, and eat fresh tomatoes for the first time. This approach offers students many opportunities to reflect upon and eventually produce a creative project that demonstrates the skills they have developed through approaches to learning during their academic journey. In the literature, van Oord (2007) maintained that true international curricula are different and diverse when applications of lessons are inside as well as outside of the classroom.

This theme also provides for differentiation of learning and expressions to meet students' individual needs as the activity may focus upon a topic that inspires them. The personal nature of the project is important; the project should be based around a topic that motivates and interests the student. The process of completing

the personal project contributes to the development of students in different ways.

It is a student centered, age-appropriate project that helps students construct their

own conceptual understandings. It is a commitment to developing independent,

lifelong learners as reflected in the IB learner profile. (IBO, 2011, p. 2)

In Table 5, further examples of quotations from the various sources support real-world

experiential activities. In addition, this theme illustrates how students investigate,

identify, reflect on, and offer solutions to real-life issues or problems.

Table 5

Real-World Experiential Activities Theme

R1.T3: Real-world experiential activities: Provides a variety of experiential activities in the classroom as well as through community service projects, environmental activities, and global social activities.	
IB Documents	"As students move into the Diploma Programme (DP), the personal project provides preparation for this IB programme" (IBO, 2011, p. 2).
	"The personal nature of the project is important; the project should be based around a topic that motivates and interests the student. The process of completing the personal project contributes to the development of students in different ways" (IBO, 2011, p. 2).
Empirical Journal Articles	"CAS aims at developing students' creative, physical and social skills. Experiential learning through cooperation is key in the CAS requirement, which hopefully leads to 'a sense of responsibility towards all members of the community' and 'the development of attitudes and traits that will be respected by others, such as determination and commitment, initiative and empathy'" (van Oord, 2007, p. 381).
Interviews	"Yes, such as the personal base project that is an ongoing process throughout the five years" (LSG, 2013).

The fourth theme, reflected in Table 6, was technology-enabled learning. This

theme reflects using a variety of contemporary technologies, such as virtual learning, to

enable learning across the curriculum. In the literature, Zhao (2010) wrote that

globalization has transformed people's daily lives, work, and entertainment. Literacy has

constantly evolved with the advances of technology, and in the twenty-first century,

Internet use, text messaging, and other multifaceted communication venues provide

opportunities for greater social and political participation (UNESCO, 2012a). Lindahl

(2006) posited that in recognition of the increasing rate of technological advancement, as

well as scientific and social change, education must extend beyond basic literacy skills to

lifelong learning. Widening access, by the use of innovative technology, promotes

students' learning at all levels—locally, nationally, and internationally.

> In the 21st century, education is technology driven. Bunnell (2010) stipulated,
>
> using the ePals Distributed Learning Platform . . . will ultimately enable the
>
> members of the worldwide IB community to connect, share and collaborate. . . .
>
> This may prove to be an unexpected by-product of children in one country
>
> making contact with their peers in other countries, hence promoting a greater
>
> sense of a global community. (p. 356)

EPals serves as an online workspace, through webpages such as blogs, wiki space, file

exchanges, and the like, combined with communication tools such as e-mail which, in

effect, create an online space. In this virtual world, educators develop collaborative and

authentic learning activities. The workspace allows learners to congregate and talk about

a common topic, which enables vigorous and real-time collaboration, allowing learners to

embark on true, 21st-century, global learning. Therefore, technology-enabled learning

provides students with the opportunity to interact globally without leaving their own

country. Additionally, providing virtual learning in a curriculum centers upon a paradigm

for preparing learners for higher education. As a result, attributes of a constructivist

learner that are self-directed develop, and this is the wave of the educational future.

Further examples of quotations provided from the various sources, in Table 6, support

technology-enabled learning.

Table 6

Technology-Enabled Learning Theme

R1.T4: Technology-enabled learning: Uses a variety of contemporary technologies such as virtual learning (Internet = e-mail, Skype, GoToMeeting) to enable learning.	
IB Documents	"The process journal is a generic term used to refer to the documentation that students develop. However, the media for documenting the process can vary depending on student preferences. It can be written, visual, audio or a combination of these and might include both paper and electronic formats. Students will be familiar with the practice of documenting process in the arts and technology subject groups, for example, and can draw on techniques used in these and other subjects" (IBO, 2011, p. 14).
Empirical Journal Articles	"Any curriculum that wishes to be taken seriously as a pre-HE vehicle needs to expose its students to online distance learning, which is likely to be encountered later in life"(Bunnell, 2008, p. 334).
	"In respect of online provision of the IB DP, this may prove to be an unexpected by-product of children in one country making contact with their peers in other countries, hence promoting a greater sense of a global community" (Bunnell, 2010, p. 356).
	"Specifically, the 2004 Strategic Plan made reference to the widening of access through the 'use of innovative technology including e-learning', and the IB Director General stated 'we will use technology to help us leverage programmes globally'" (Bunnell, 2008, p. 329).
	"IBO is 'now launching a new wave of development' as it strives to become a 'learning organization'. This seemed timely. Commentators were contending that distance learning is the student centred paradigm for future learning, while about one-third of HE institutions in the US were offering online learning" (Bunnell, 2008, p. 330).
	"Garrison et al. (2003) stated that online learning had the advantage over traditional forms of distance learning in facilitating critical communities of learning; while the study by Bullen (1998), at university level, concluded that computer conferencing should be considered by distance educators as a way of facilitating interaction and critical thinking and overcoming some of the limitations of correspondence-style learning" (Bunnell, 2008, p. 338).
	"In June 2009 it was announced that the IB has selected ePals, Inc. to implement and manage a customized hosted learning community for IB students, educators, alumni, and other stakeholders. The aim is to create by July 2010 an innovative collaborative communication tool, using the ePals Distributed Learning Platform, which will ultimately enable the members of the worldwide IB community to connect, share and collaborate. . . This may prove to be an unexpected by-product of children in one country making contact with their peers in other countries, hence promoting a greater sense of a global community" (Bunnell, 2010, p. 356).

The fifth theme, shown in Table 7, was coaching and mentoring for learning. This theme describes how teachers, guidance counselors, and peers serve as coaches and mentors for all aspects of learning. This teaching methodology includes a variety of specific ways in which teachers can scaffold new learning in the ZPD to help learners understand concepts. The psychologist Vygotsky (1978) described a ZPD within which new learning can take place if there is support. The ZPD lies beyond the zone of prior knowing, which is where a learner can work independently without support. Anything outside the ZPD is not yet able to be learned (IBO, 2008, p. 6). The ideal scenario behind this theme is to pair a student with an MKO professional, such as a teacher or mentor, who guides and advises the student throughout his or her educational journey. In addition, members of community organizations also take on guiding roles for students.

> Some very large schools rely on students working with members of the community who have a supportive role. In these cases, the community member guides and supports the student through the process; however, he or she does not assess the project. (IBO, 2011, p. 8)

Therefore, members of the community support students' academic endeavors by showing students how their education is relevant to community service, especially as it relates to personal projects required by the IB program. In Table 7, below, further quotations support the coaching and mentoring theme.

The sixth theme, illustrated in Table 8, was individual responsibility and accountability. This theme identified various approaches used to focus on building individual accountability in areas such as individual performance, ethics, sustainability, and global responsibility. An example of this theme would be that the IB curriculum

fosters students to recognize and develop universal human values. "An IB education empowers young people for a lifetime of learning, independently and in collaboration with others. It prepares a community of learners to engage with global challenges through inquiry, action and reflection" (IBO, 2012c, p. 4). This happens by stimulating students' curiosity and inquiry to produce a spirit of discovery and enjoyment of learning responsibly as well as ethically.

Table 7

Coaching and Mentoring for Learning Theme

R1.T5: Coaching and mentoring for learning: Teachers, guidance counselors, and peers serve as coaches and mentors for all aspects of learning. Teaching methodology includes a variety of specific ways in which teachers can scaffold new learning in the ZPD to help learners understand text.	
IB Documents	"Some very large schools rely on students working with members of the community who have a supportive role. In these cases, the community member guides and supports the student through the process; however, he or she does not assess the project. If schools use such a role it is important that students still receive guidance from a supervisor in the school relating to the personal project objectives and assessment" (IBO, 2011, p. 8).
	"The purpose of the supervisor is to support the student during the completion of the project. Because of varying scheduling demands, MYP schools have developed many models for organizing the personal project" (IBO, 2011, p. 8).
	"The psychologist Vygotsky (1978) describes a zone of proximal development (ZPD) within which new learning can take place if there is support. The ZPD lies beyond the zone of prior knowing, which is where a learner can work independently without support. Anything outside the ZPD is not yet able to be learned" (IBO, 2008, p. 6).
Empirical Journal Articles	"Because of the large population of gifted learners in [the] AP and IB program, a strong need exists to integrate both counseling (emotional and career) and mentoring programs into AP and IB programs" (Vanderbrook, 2006, p. 145).
	"Increasingly, most of the girls' feelings and beliefs about their classes were not tied to AP or IB programs' curriculum, but rather to the teachers of these classes" (Vanderbrook, 2006, p. 145).

Table 8

Individual Responsibility and Accountability Theme

R1.T6: Individual responsibility and accountability: Various approaches are used to focus on building individual accountability in areas such as individual performance, ethics, sustainability, and global responsibility.	
IB Documents	"The personal project is a significant student-directed inquiry produced over an extended period, completed during year 5 of the MYP. It holds an important place in the MYP and reflects the student's experience of the programme. . . . The process of completing the personal project contributes to the development of students in different ways. It is a student centered, age-appropriate project that helps students construct their own conceptual understandings. It is a commitment to developing independent, lifelong learners as reflected in the IB learner profile" (IBO, 2011, p. 2).
	"Principled action, as both a strategy and an outcome, represents the IB's commitment to teaching and learning through practical, real-world experience. IB learners act at home, as well as in classrooms, schools, communities and the broader world. Action involves learning by doing, which enhances learning about self and others. IB World Schools value action that encompasses a concern for integrity and honesty, as well as a strong sense of fairness that respects the dignity of individuals and groups. Principled action means making responsible choices, sometimes including decisions not to act" (IBO, 2012c, p. 4).
Empirical Journal Articles	"The IB argues for a continuity of educational values and practices across its programmes. The *IB Learner Profile* is described as 'the IBO mission statement translated into a set of learning outcomes for the 21st century'" (Cambridge, 2010, p. 200).
	"In addition, the girls said outstanding teachers possess overall intelligence, passion for their subject, and passion for teaching. According to the participants, outstanding teachers also use humor in the classroom" (Vanderbrook, 2006, p. 141).
	"Many students indicated that teachers led you more 'by the hand' in primary. One parent echoed these comments that students had greater ownership of their work and that they were more responsible for their own learning compared to primary. . . . I think that the MYP program gives them an insight into being responsible for what they do and for being responsible for learning. . . . Also I think it's got a lot to do with the way that the teachers treat the students as well" (O'Boyle, 2009, p. 47).
Interviews	"It has taught the students to be responsible for [their] own learning" (LSG, 2013).
	"One positive impact that has been implemented is more responsibility for one's academic achievement, such as homework" (LSG, 2013).

Another example of this theme would be the personal project that students are

required to complete by year 5 of the IB curriculum. "The personal project is a significant

student-directed inquiry produced over an extended period, completed during year 5 of

the MYP. It holds an important place in the MYP and reflects the student's experience of

the programme" (IBO, 2011, p. 2). The personal project enhances individual work ethic, as well as making the student aware of local, national, and international responsibility. Students have a choice of what type of personal project they would like to do and therefore are responsible for researching that particular topic.

> The process of completing the personal project contributes to the development of students in different ways. It is a student centered, age-appropriate project that helps students construct their own conceptual understandings. It is a commitment to developing independent, lifelong learners as reflected in the IB learner profile. (IBO, 2011, p. 2)

Students in turn become accountable for completing the project under the supervision of an MKO because they are responsible for their own learning. In Table 8, there are quotations that further support the individual responsibility and accountability theme.

Thematic analysis of R2. The second research question asked how the IB MYP contributed to cognitive development. Three codes emerged, each of which identified a separate theme. The themes that emerged were social intelligence, emotional intelligence, and analytical intelligence. The first theme developed, shown in Table 9, was social intelligence. This theme speaks to developing social reasoning by working with others. The IB curriculum promotes educational opportunities that encourage healthy relationships as well as shared responsibility.

> The approach also focuses on community service and a compassion for others. In the classroom, students are taught meaningful questions in order to build a foundation for future learning. The emphasis is on global understanding, critical-thinking skills and interdisciplinary learning. (Healy, 2008, p. 1)

In addition, IB promotes effective collaboration while working in teams. Exploring issues about human rights helps students to prepare for living responsibly in free societies. An example would be

> democratic classrooms that embody the living practice of human rights. Students can flourish in a climate where they practice mutual respect amid differences, where they are free to express opinions and ideas, and where they practice tolerance and conflict-resolution skills. (IBO, 2012b, p. 4)

Therefore, the social intelligence theme involves students talking about real-life controversial issues in social, ethical, and global spheres through team activities, engagement in community, and environmental activities. Additionally, the literature stipulates that education is an outcome of the democratic process, to which people must become disposed by experiencing values such as care, consideration, patience, and respect toward others (Morentin, 2011). As a result, students learn the importance of respecting human rights and developing the negotiating skills needed to live in diverse communities. Students also learn positive attitudes and behaviors and thus avoid using their power to bully or harass others, in person or online. In Table 9, further quotations illustrate the development of social intelligence.

Table 9

Develops Social Intelligence Theme

R2.T1: Develops social intelligence – Developing social reasoning by working with others and addressing controversial issues, including working through team activities, engagement in community, environmental activities, and dialogue on global social issues.	
Media	"The approach also focuses on community service and a compassion for others. In the classroom, students are taught meaningful questions in order to build a foundation for future learning. The emphasis is on global understanding, critical-thinking skills and interdisciplinary learning" (Healy, 2008, p. 1).
IB Documents	"The IB learner profile brings to life the aspirations of a community of IB World Schools dedicated to student-centered education. IB programmes promote the development of schools that create educational opportunities that encourage healthy relationships, individual and shared responsibility and effective teamwork and collaboration" (IBO, 2012c, p. 3). "Engaging education about rights can involve democratic classrooms that embody the living practice of human rights. Students can flourish in a climate where they practice mutual respect amid differences, where they are free to express opinions and ideas, and where they practice tolerance and conflict-resolution skills" (IBO, 2012b, p. 4 – Human Rights).
Empirical Journal Articles	"Finally, the CAS requirement is worth mentioning since it provides IB students with a slightly different approach to education. CAS aims at developing students' creative, physical and social skills" (van Oord, 2007, p. 381).
Interviews	"Interdisciplinary planning has helped too: as we implement the learner profile, students and staff are more tolerant, giving, caring, and supportive of one another" (LSG, 2013).

The second theme that emerged, shown in Table 10, was develops emotional intelligence. This theme demonstrates the development of emotional reasoning by becoming aware of how to identify, assess, and mange one's own emotions, as well as a team or group and a community. One of the aspects of the IB curriculum focuses on an appreciation of others' culture. "By encouraging students to consider multiple perspectives, intercultural awareness not only fosters tolerance and respect, but also aims to develop empathy and understanding, and the acceptance of others' rights in being different" (IBO, 2012c, p. 4). I. Hill (2006) further stipulates that

Comparison with one's own culture, an important reference point, facilitates an

appreciation of others. While the existence of a number of layers of understanding

is recognized, it is here assumed that the attainment of the affective dimension is the ultimate goal as students are exposed to intercultural understanding in different settings. (p. 12)

I. Hill (2007) further postulates that the cognitive and affective education skills derived from Voltaire's *Micromégas*, for which Voltaire traveled the world to develop his mind and heart using languages, support the development of global citizenry by managing one's emotions in different cultural contexts.

The IB prepares learners for the global knowledge economy. Cambridge (2010) stipulated that "cognitive, psycho-emotional, socio-cultural and ethical predispositions [are] desirable qualities to be developed for employment in the global knowledge economy" (p. 208). Therefore, IB emphasizes developing skills for emotional intelligence. I. Hill (2006) stipulated, "intercultural understanding involves cognitive and affective learning, and is only successfully undertaken when a positive disposition towards other cultures is developed" (p. 14). Further quotations support this theme, as seen in Table 10.

Table 10

Develops Emotional Intelligence Theme

R2.T2: Develops emotional intelligence: Developing emotional reasoning through becoming aware of one's own emotions and managing one's own emotions in individual, team, group, and community activities.	
IB Documents	"By encouraging students to consider multiple perspectives, intercultural awareness not only fosters tolerance and respect, but also aims to develop empathy and understanding, and the acceptance of others' rights in being different" (IBO, 2012c, p. 4).
Empirical Journal Articles	"So, intercultural understanding involves cognitive and affective learning, and is only successfully undertaken when a positive disposition towards other cultures is developed" (I. Hill, 2006, p. 14). "The first published examination of the social-emotional functioning of IB students found that they reported levels of mental health that were comparable or superior to that of their general education peers, despite elevated stress" (Suldo, Shaunessy, Michalowski, & Shaffer, 2008, p. 960). "Cognitive, psycho-emotional, socio-cultural and ethical predispositions [are] desirable qualities to be developed for employment in the global knowledge economy. Cognitive predispositions include capacities for problem-solving, self-reflection, critical thinking, and knowledge applied to production, creativity and innovation, cognitive multiculturalism, self-learning and life-long learning, polyvalence and multitasking" (Cambridge, 2010, p. 208). "Second, the 'IB Learner', in spite of its universal outcomes, continues to involve a diverse set of children within a complex set of emotional and cultural forces" (Bunnell, 2010, p. 354).
Interviews	"I do feel IB has had a positive impact on our school culture. There is more interaction among teachers, everyone's ideas are welcomed when planning and collaborating. Students and teachers actively communicate. The school is more open to diversity. Expectations are high. There is a sense of community and everyone has a voice and everyone is important" (LSG, 2013).

The third theme that emerged was develops analytical intelligence. The ability to think critically across all content areas as well as in real life situations was the theme focus. In most U.S. public schools, standardized tests are multiple-choice driven. However, the IB MYP has a holistic view that aims to teach learners critical-thinking skills. Culross and Tarver (2011) stipulated that "they perceived IB as focusing more on global issues, requiring higher level thinking skills, applying learning, developing links between concepts, and covering a broader spectrum of topics" (p. 235). Therefore, the IB trains its learners in epistemology and thus teaches learners to investigate and distinguish

justified belief from opinion, which are higher-level thinking skills. Moreover, Bunnell (2010) postulated that "IB is preparing children for the twenty-first century, an age of complexity, a time when problems are more difficult to solve, and they require critical thinking, a key aspect of the IB Learner Profile" (p. 357).

Therefore, the IB develops inquiring, knowledgeable, and caring young people who can apply critical thinking skills in any context. For instance, van Oord (2007) postulated that students who took a history course in the IB curriculum would take a comparative approach to history. Since history entails a broad range of topics, students use various historical examples from different regions to compare and contrast (van Oord, 2007). For example, students would do research on the rise of a single-ruler party in one country and compare it to another country (van Oord, 2007). Through researching or oral presentations, various links to concepts develop. As a result, analytical skills about the two countries from different parts of the world become a norm to learning. As students apply this type of learning on a broad range of topics, analytical intelligence develops.

Additionally, within the IB MYP, students take a compulsory foreign language, which previous research has suggested brings about an increase in critical thinking skills. Cooper et al. (2008) looked at the relationship between foreign language learning and verbal ability in English as measured by the scholastics aptitude test. Cooper et al. compared two groups of high-school students. One group studied a foreign language. One group did not study a foreign language. Students who took a foreign language outperformed students who did not. Cooper et al. postulated that students who take a foreign language develop and practice the critical thinking skills described in Bloom's

taxonomy. They are also able to transfer these skills to standardized tests. The results of

their study suggest that a second language learner creates new ways of thinking and new

mental organizations. In Table 11, further quotations support the develops analytical

intelligence theme. The theme appears to prepare learners for the complexities of global

society.

Table 11

Develops Analytical Intelligence Theme

R2.T3: Develops analytical intelligence: Develops the ability to think critically across content areas as well as in real-life situations.	
Media	"The curriculum is developed by a committee of international educators, though schools are given flexibility to shape much of that content. Students are required to study their home language, a foreign language, courses in social sciences such as history and economics, math, science, and the arts" (Cavanagh, 2006, p. 1). "Nevin Shenouda, a 17-year-old [of] Egyptian heritage who sat up front, said she was also drawn to the program for the challenge, and compared it favorably with Advanced Placement classes, which friends outside the district have taken. IB makes you think, she said" (Cech, 2007, pp. 22–24).
IB Documents	"At some point, a child has enough language so that in addition to it being a communicative tool, it is also a flexible resource for further learning and cognitive growth. Language itself, rather than direct concrete experience, can be used to negotiate new meanings and construct knowledge about the world" (IBO, 2008, p. 5). "Critical reflection is the process by which curiosity and experience can lead to deeper understanding. Reflective thinkers must become critically aware of their evidence, methods and conclusions. Reflection also involves being conscious of potential bias and inaccuracy in one's own work and in the work of others" (IBO, 2012c, p. 5).
Empirical Journal Articles	"They perceived IB as focusing more on global issues, requiring higher level thinking skills, applying learning, developing links between concepts, and covering a broader spectrum of topics" (Culross & Tarver, 2011, p. 235). "IB is preparing children for the twenty-first century, an age of 'complexity', a time when problems are more difficult to solve, and they require critical thinking, a key aspect of the 'IB Learner Profile'" (Bunnell, 2010, p. 357).
Interviews	"Our students are beginning to take on more responsibilities for their learning and becoming critical thinkers" (LSG, 2013). "One Area of Interaction specifically contributes to cognitive development. It is Approaches to Learning. This is designed to help students take responsibility for their own learning and understand how they learn. Approaches to learning include organizational skills and attitudes toward work and communication skills" (LSG, 2013).

Thematic analysis of R3. The third research question asked how the IB MYP contributes to global literacy. Seven codes led to the development of three themes for R3. The themes were global cross-cultural communications, explore/understand global issues, and accessing global information.

The first theme, global cross-cultural communications, illustrated in Table 12, focuses upon engagement in cross-cultural communications globally. This theme also includes learning new languages, valuing different cultures, and interacting with people around the world. I. Hill (2006) stipulated that "conflicts around the globe represent physical clashes between cultures. The root of the problem is the lack of understanding of each other's culture. This is why education for intercultural understanding is so important" (p. 6). Therefore, the ability to communicate in a variety of modes in more than one language is essential to the concept of intercultural understanding. In education, global literacy for all learners is crucial to the success of a rich development of language. In the literature, Tochon (2009) stated, "the world's literary and artistic works have been written in various languages. Some elements do not have equivalents in other languages" (p. 657). Thus, a monolingual view of the world unavoidably limits perspective.

Some aspects of people's lives and culture seem to be universal truths, until they encounter another way of thinking. Viewing one's value system through the eyes of others is, put simply, valuable (Tochon, 2009). Knowledge and skill proficiencies in other languages as well as understanding other cultures characterizes global citizenship, which builds intercultural sensitivity and produces understanding that leads to trust between people and to promotion of partnerships, as well as lasting peace between nations (Tochon, 2009). Therefore, global cross-cultural communications are integral to

exploring and sustaining personal development, cultural identity, and intercultural understanding of how to communicate effectively with other nationalities in more than one language. Furthermore, van Oord (2007) postulated that "students should also 'develop an awareness that human attitudes and opinions are widely diverse and that a study of society requires an appreciation of such diversity'" (p. 379). Further quotations, in Table 12, support the global cross-cultural communications theme.

The second theme that emerged was explore/understand global issues, as illustrated in Table 13. The theme identified how students engage in dialogue and activities to provide in-depth understanding and appreciation of significant global issues facing society. The literature referenced how the IB learner profile has attributes intended to develop globally literate young people who recognize their common humanity and their shared guardianship of the planet to help create a better and more peaceful world (Wells, 2011). The IB learner profile attributes are "inquirers, knowledgeable, thinkers, communicators, principled, open-minded, caring, risk-takers, balanced, and reflective" (Wells, 2011, pp. 176–177). Therefore, in order for the United States to keep pace with global peers, the educational system needs competitive and innovative curricula to equip learners with high levels of competence in knowledge and skills to compete globally.

Table 12

Global Cross-Cultural Communications Theme

R3.T1: Global cross-cultural communications: Engagement in cross-cultural communications on a global basis, including learning new languages, valuing different cultures, and interacting with people around the world. Learners who are learning in a language other than their mother tongue comprehend that language is integral to exploring and sustaining personal development, cultural identity, and intercultural understanding of how to communicate effectively in more than one language.	
Media	"Do you want to hear from the horse's mouth? An excellent source for evaluating IB is *A Continuum of International Education*, published by the Organization in 2002. From this document, we learned the goal of IB is not merely to impart knowledge or teach thinking, but rather develop 'citizens of the world' with universal human values" (McGroarty, 2011).
IB Documents	"Language is integral to exploring and sustaining personal development, cultural identity and intercultural understanding. As well as being the major medium of social communication, it is tightly linked to cognitive growth because it is the process by which meaning and knowledge is negotiated and constructed" (IBO, 2008, p. 1).
	"Crucial for the success of the programmes is a rich development of language and literacy for all learners. The ability to communicate in a variety of modes in more than one language is essential to the concept of an international education that promotes intercultural understanding" (IBO, 2008, p. 3).
Empirical Journal Articles	"The learning of another language (mandated for some time during schooling in most countries) makes national students more sensitive to the problems of immigrant children who do not yet speak the national tongue; it also leads to the realization that people think and express themselves differently" (I. Hill, 2006, p. 16).
	"The underlying principle of requiring the study of a second language is, according to the IBO, 'to promote cultural understanding through language and an understanding of other cultures through the study of other languages'" (van Oord, 2007, p. 378).
	"Conflicts around the globe represent physical clashes between cultures. The root of the problem is the lack of understanding of each other's culture. This is why education for intercultural understanding is so important. Programmes such as those of the International Baccalaureate Organization (IBO) 'ask that [students] identify with the corresponding traditions of others'" (I. Hill, 2006, p. 6).
	"Where citizenship does surface, IBO consistently emphasized the importance of first promoting one's national identity and then learning to adopt openness to peoples from other nations and cultures" (Tarc, 2009, p. 241).
	"Students should also 'develop an awareness . . . that human attitudes and opinions are widely diverse and that a study of society requires an appreciation of such diversity'" (van Oord, 2007, p. 379).
Interviews	"IB MYP contributes to global literacy by opening the students' minds to other cultures through the subjects through media, readings, journals, field trips, research, and projects" (LSG, 2013).
	"It exposes students to others' beliefs and point of view which in turn helps to develop tolerance and international mindedness" (LSG, 2013).

CAS is one of the many requirements of the IB. CAS demonstrates how learners develop immediate awareness, knowledge, skills, talent, and the ability to work cooperatively with others. Participation in CAS encourages students to become more caring and socially responsible citizens of the world as they apply skills immediately to reach far beyond themselves. I. Hill (2012) stipulated that

> as people work together, their skills and knowledge interact and support each other to shape attitudes of respect for cultural diversity, commitment to peace and justice, compassion, responsible citizenship (family, local, national, international), commitment to lifelong learning, respect for others, and respect for the sustainable development of natural and human resources. (p. 352)

In Table 13, there are quotations that further support the theme explore/understand global issues.

The third theme that emerged was access global information, as shown in Table 14. As globalization expands, it is vital that learners comprehend how to access global information, in order to know what changes in global society may affect their daily lives. In the literature, Lindahl (2006) contended that the United Nations' *Millennium Declaration of 2000* commits all 189 UN member states to achieve millennium development goals by 2015, which include improving early childhood care and education. In addition, these goals will ensure all children have access to a free, compulsory, quality education and achieve a 50% reduction in levels of illiteracy. The goals will further achieve equality in primary and secondary education. Literacy is no longer local or national; it is global. Historically, literacy has been a universal and ideological set of skills in which transferability to different contexts was easy, such as

decoding symbols from a text; literacy skills were autonomous from the context in which

they derived (Corus & Ozanne, 2011). In today's globalized society, in contrast, global

literacy access through technology is more prevalent and thus vital to survival.

Table 13

Explore/Understand Global Issues Theme

R3.T2: Explore/understand global issues: Engage in dialogue and activities to provide in-depth understanding and appreciation of significant global issues facing oneself and society.	
Media	"The need to prepare students to compete for [the] 21st century" (Cech, 2007, pp. 22–24).
	"'To think that students in other countries are learning the same things that you are; is a wonderful opportunity,' Blackmon told students. 'Through IB, we want to create a better, more peaceful world'" (Healy, 2008, p. 1).
Empirical Journal Articles	"IB aims to: Develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect" (Culross & Tarver, 2011, p. 232).
	"These programs encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right" (Culross & Tarver, 2011, p. 232).
	"Furthermore, there also appears to be growing evidence for identification of IB programmes with the preparation of learners for entry into the global knowledge economy. . . . The *IB Learner Profile* [acts] as a template for the production of the ideal global citizen, and its relation to the attributes of the ideal global worker" (Cambridge, 2010, p. 208).
	"The MYP brings to our highly diverse community an international program that raises awareness of the connections among people . . . as well as an understanding and tolerance of others and their beliefs" (Sperandio, 2010, p. 145).
	"As people work together, their skills and knowledge interact and support each other to shape attitudes of respect for cultural diversity, commitment to peace and justice, compassion, responsible citizenship (family, local, national, international), commitment to Lifelong learning, respect for others, and respect for the sustainable development of natural and human resources" (I. Hill, 2012, p. 352).
	"These programs encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right" (Culross & Tarver, 2011, p. 232).
Interviews	"Humanities contributes the most along with Language A and B" (LSG, 2013).
	"The teachers and students have more of a global perspective" (LSG, 2013).

Table 14

Access Global Information Theme

R3.T3: Access global information: Use the Internet to find and access information on global issues, culture, and language.	
Empirical Journal Articles	"The IB stated that it strived to become a 'learning organization' (Rigney, 1999), and the Online Curriculum Centre, a network for IB teachers, was established" (Bunnell, 2010, p. 355).
	"In April 2008, the IB launched its 'Community Theme' website. In October 2008, the IB launched the first 'global lesson'. The outline lessons, on 'Global Poverty', were made available for teaching that month for Theory of Knowledge and for humanities within the MYP" (Bunnell, 2010, p. 356).
	"The 2004 Strategic Plan made reference to the widening of access through the 'use of innovative technology including e-learning', and the IB Director General stated 'we will use technology to help us leverage programmes globally'" (Bunnell, 2008, p. 329).

The access global information theme provides educators with tools to engage learners with issues facing global society, which is in line with the IB's goals and objectives. "IB stated that it strived to become a learning organization and the Online Curriculum Centre, a network for IB teachers, was established" (Bunnell, 2010, p. 355). "In October 2008 the IB launched the first global lesson. The outline lessons, on Global Poverty, were made available for teaching that month for Theory of Knowledge and for humanities within the MYP" (Bunnell, 2010, p. 356). This online experience provided learners with an in-depth understanding of complex global issues facing society. In addition, it developed 21st-century technology knowledge and skills. Therefore, the theme is a vehicle, which educators use to assist learners to comprehend how it is feasible to know the importance of participating in the decision-making process about changes in global society. In Table 14, quotations support the access global information theme.

Thematic analysis of R4. R4 asked how leadership of an IB MYP contributed to a school's success. The 31 codes that emerged resulted in the development of nine

themes. The eight themes that initially emerged were improved national test scores, school and leadership recognition, career and college readiness, student retention, globally recognized curriculum, positive school climate, government recognition and funding, and ethical globally contributing members of society. The analysis of the data from R4 also identified a ninth theme, the negative perspectives towards the IB MYP entitled negative perceptions from some constituents.

The first theme, described in Table 15, was improved national test scores. The improvement of analytical skills and cognitive development resulting in students performing at high academic standards, which lead to superior standardized test scores, was the focus of this theme. In the United States, there has been a succession of laws intended to raise academic standards, offer parental choice, and minimize the learning gaps. The IB curriculum centers on a learner profile, to create consistency and standardization. The learner profile is a vital fundamental for pedagogical discourse for learning as well as assessment (Bunnell, 2010).

In the literature, D. R. Jackson (2006) compared the Virginia SOL test results of students participating in an IB MYP to those of non-IB MYP students. The purpose of the study was to determine whether students who participated in a holistic program of study were comparable to their counterparts.

Table 15

Improved National Test Scores Theme

R4.T1: Improved national test scores: Improvement of analytical skills and cognitive development results in students performing at high academic standards, which lead to far superior standardized test scores (AYP, etc.).	
Media	"The IB is committed to providing rigorous, international education to students from around the world. In the United States, the IB has received much support from governments and policymakers, including the U.S. Department of Education and local school districts, to increase student achievement and to turn around low-performing schools (Morse, 2008, p. 1). "Discovery has launched a school wide Middle Years Programme, a more rigorous academic system that models the International Baccalaureate program at Columbia River High School. It also has a small challenge (gift student) program" (Buck, 2010, p. 1).
Local School Curriculum Document	"[Educators can use] Benchmark, Strategic or Intensive [approaches] to develop individual instructional plans based on 2011, 2012, and 2013 CRCT Results and Pre-Assessments" (LSG, 2013). "[Educators can] implement and monitor implementation of the school improvement plan for 2011-2012, 2012-2013, and 2013-2014 making adjustments as necessary to positively impact student learning and achievement" (LSG, 2013). "Curriculum Assessment, Instruction, Planning and Organization Leadership, Culture, Professional Learning, Student, Family and Community [can help to improve results]" (LSG, 2013).
Empirical Journal Articles	"The election of George W. Bush marked a distinct turn toward authoritarianism, one strand of which is educational conformism. The initial legislative stimulus came from the 1983 report *A Nation at Risk* (National Commission on Excellence in Education, 1983) which called for greater federal support of education" (Bunnell, 2009, pp. 63–64). "The 'Learner Profile' seeks to create consistency and standardization ('quality assurance' in IB parlance), but it also provides an important pedagogical discourse for learning, and assessment" (Bunnell, 2010, p. 355).
Empirical Journal Articles	"The different forms of assessment are selected with the intention of testing those areas of the candidate's performance for which they are best suited. . . . The elements in this battery are: Multiple-choice questions, 'Short-answer' questions, Essay questions, 'Face-to-face' oral examinations, Oral examinations by tape-recorded cassettes, Practical examinations, Assessment of projects, Assessment of 'extended essays', Teachers' assessment of course work" (Tarc, 2009, p. 248). "The examinations worked to ensure that a common curriculum was covered by schools. With a common framework and curriculum the potential for collaboration between international (and like-minded) schools greatly increased" (Tarc, 2009, p. 248).
Interviews	"I do not have that data at this time, but I do know the special education subgroup has made slight increases on the CRCT, especially in Science and Humanities" (LSG, 2013).

One group of eighth-grade students was from the IB MYP and the other group of students was from a traditional-path middle school. D. R. Jackson (2006) matched the groups' eighth-grade Virginia SOL scores and ethnicity. The Virginia SOL scores of the IB MYP group were higher than the means of the total non-IB MYP group in all areas. The content showing the greatest difference was English (reading, literature, and research; 15 scaled points). Due to study skills embedded in the approaches to learning design of the IB MYP, reading scores showed the greatest difference. However, the different forms of assessment that the IB offers provide holistic views of the learners (Tarc, 2009). Therefore, the varied forms of assessments test those areas in which learners are best suited. However, the skills acquired through approaches to learning transfer to other forms of assessment. Therefore, a balance of assessments provides a more valid and reliable indication of how the learner achieves objectives outlined in his or her studies. In Table 15, quotations further support the improved national test scores theme.

The second theme that emerged, as illustrated in Table 16, was school and leadership recognition. Schools are exceptional due to leadership approaches that build school strengths and capacity, thus improving community relationships. Keung and Rockinson-Szapkiw (2012) stipulated,

> although instructional leadership has been shown to influence student achievement, transformational leadership is the most commonly used definition of effective leadership in recent empirical literature and has been shown to be the most effective form of leadership when studying overall organizational and leader effectiveness. (p. 837)

An example of this would be principals of IB schools who receive honorary distinctions in their state for achievements beyond those expected in their school programs. Leaders, with a unique ability to transform schools, maintain high expectations of students and staff. Additionally, Keung and Rockinson-Szapkiw (2012) stated,

> Leaders who have a higher level of cultural intelligence exhibit a higher level of transformational leadership style, which suggests that individuals with high-cultural intelligence are able to lead and to manage more effectively in multicultural environments. Behavioral cultural intelligence and cognitive cultural intelligence were found to be the best predictors of transformational leadership. (p. 836)

In Table 16, quotations further support the school and leadership recognition theme.

Table 16

School and Leadership Recognition Theme

R4.T2: School and leadership: Schools are exceptional due to the use of leadership approaches that build school strengths and capacity as well as improving community relationships.	
Media	"The AP is 'easier to scale up,' said Brad W. Richardson, the director of the IB's North American office, in New York. 'It allows a school to build strength and capacity at a rate it's comfortable with. Schools offering the IB curriculum, by contrast, can't reserve the program for their strongest departments,' he said. 'Building a coherent curriculum is a lot harder than putting your best foot forward,' he said" (Cavanagh, 2006, p. 1).
	"Collier was named the top elementary school principal in the state last year by the Indiana Association of School Principals" (Wall, 2011, p. 1).
Empirical Journal Articles	"Although instructional leadership has been shown to influence student achievement, transformational leadership is the most commonly used definition of effective leadership in recent empirical literature and has been shown to be the most effective form of leadership when studying overall organizational and leader effectiveness" (Keung and Rockinson-Szapkiw, 2012, p. 837).
Interviews	"The school became authorized in Nov. 2010. The candidacy phase was very intense. First, the teachers and I had to attend training, and then develop units and a curriculum that was approved by the IB organization (LSG, 2013).
	"[I] Attended trainings, workshops and conferences with staff, completely supported IB MYP program and IB Coordinator" (LSG, 2013).
	"The leadership contributes with guidance and on-going training and meetings" (LSG, 2013).

The third theme was career and college readiness, as described in Table 17. Students prepare for college and careers. A revamping of the curriculum and schedules, training teachers, improving all interdisciplinary subjects, and new approaches to recruiting students are parts of the process. This revamping yields positive evaluations of the program. Suldo, Shaunessy, Michalowski, and Shaffer (2008) stipulated that the design of the IB DP is a rigorous college-preparatory curriculum for advanced high school students, aged 16 to 19. The goals of the curriculum, which are the same for the IB MYP, include developing globally conscious, content-knowledgeable, socially aware, service-oriented youth who are effective communicators. The curriculum philosophy emphasizes a balance of academic and interpersonal, which include social-emotional skills. The curriculum, also taught throughout the world, has course exams that may lead to college credit at universities.

In the literature, Culross and Tarver (2011) investigated the impact of the high-school version of the IB MYP, called the IB DP, on the rigor of preparing learners for college and university. The study revealed that top colleges and universities perceived that students from an IB DP had a value-added education as an indication of success in post-secondary school. Students also received college-level credit. As the United States seeks to reform public schools' curricula to eliminate the learning gaps, the balance of the IB academic programs may be a solution. Culross and Tarver's study showed that the IB offers programs with rigorous curricula that produce successful results.

Table 17

Career and College Readiness Theme

R4.T3: Career and college readiness: Students are prepared for college and career readiness based on a rigorous, standardized, globally recognized curriculum.	
Media	"Then, there's the college-tuition factor. Ms. Shenouda has already been accepted by the University of Minnesota, which she's weighing attending, in part because, if she earns a score of at least 30 out of 45 possible points on her IB final exams, she'll be eligible to skip up to a year of classes there" (Cech, 2007, pp. 22–24).
	"'It may be the best-kept secret in high school reform,' said Barmak Nassirian, the associate executive director of the American Association of Collegiate Registrars and Admissions Officers, in Washington. The IB program, he said, is generally regarded as 'the gold standard of high school curriculum in admissions circles'" (Cavanagh, 2006, p. 1).
	"Outside the United States, 27,000 students were high school diploma candidates in IB. The program is popular among families of college-bound students both domestically and abroad" (Cavanagh, 2006, p. 1).
Empirical Journal Articles	"The IB diploma program is a rigorous college-preparatory curriculum specifically designed for academically advanced high school students ages 16 to 19. . . . The IB program's philosophy emphasizes a balance of academic, interpersonal, and social-emotional skills, and the curriculum is uniformly taught throughout the world, with end-of-course exams that may be accepted for college credit" (Suldo et al., 2008, p. 962).
	"The program was described as challenging students and requiring high academic standards (32.0%)" (Sperandio, 2010, p. 144).
	"The MYP identified all of the factors that had emerged from previous studies as influential in program choice and subsequent program implementation, namely an appreciation of aligning philosophy and mission with program (3), an appreciation of school needs such as offering students challenge through innovative program elements and requiring high academic performance (1, 5)" (Sperandio, 2010, p. 144).
	"First, both top national universities and top liberal arts colleges perceive the participation of high school students in an IB DP to be beneficial to the students' admission and awarding of advanced credit. The institutions, through their admissions directors, report that the IB DP is perceived as a rigorous and excellent preparation for college-level work" (Culross & Tarver, 2011, p. 241).
	"It is the IB organization itself which provides the guarantee that its diploma results are reliable, wherever in the world the student is located. Most universities understand this process and therefore treat IB grades with respect. The IB diploma is an international benchmark" (I. Hill, 2012, p. 357).

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"Indeed, many of the institutions indicated that they actively recruited students who had

participated in an IB DP" (Culross & Tarver, 2011, p. 241). In Table 17, quotations

further support the College and Career Readiness theme.

 The fourth theme was Student Retention, as illustrated in Table 18. This theme

focuses upon keeping students in public schools. I. Hill (2012) revealed that Binghamton

High School, a public Title I school, in New York State, has offered the IB DP since

1996.

> The IB programme gives students from the poorest neighborhoods in our city the
>
> opportunity to have the same academic experiences as those students who attend
>
> the most elite schools in the world. It "levels the playing field" for students who
>
> may live in poverty, yet at the same time it also challenges the most gifted
>
> students in our schools. It offers hope to many; but more importantly, it shows
>
> that our students can compete academically on a global stage. (I. Hill, 2012, p.
>
> 345)

Kilpatrick (2010) conducted a case study on two high schools that implemented and

attempted to institutionalize global education by exploring what was perceived to work or

not to work in meeting the goals of their understanding and interpretation of global

education. The findings suggested that if policy makers and educators continue to

advocate a global dimension in education, then a clearer sense of its practical

implementation, successes, and challenges is needed in order to make that advocacy a

sustainable and equitable reality in schools, especially since few studies have examined

how U.S. schools are implementing education for global competence. One of the main

goals of an IB program is to retain students in an ongoing program in order to see stellar

results. In Table 18, quotations further support the student retention theme.

Table 18

Student Retention Theme

R4.T4: Student retention: Keep students in public schools.	
Media	"One of the goals is to retain kids in our district" (Wall, 2011, p. 1).
	"While IPS boasted many K-8 schools with stellar academic results, the district has had no high schools that matched them" (Wall, 2011, p. 1).
	"But their academic results are far superior. For all students in IPS, 57 percent passed the language arts portion of the state standardized ISTEP test this spring, and 59 percent passed the math portion" (Wall, 2011, p. 1).
Local School Curriculum Documents	"Students are successfully retained in the 3 year programme and meeting program guidelines established by IB. Successful completion of documents based on IBNA document submission deadlines" (LSGCD, 2013, p. 61).
Empirical Journal Articles	"The IB programme gives students from the poorest neighbourhoods in our city the opportunity to have the same academic experiences as those students who attend the most elite schools in the world. It 'levels the playing field' for students who may live in poverty, yet at the same time it also challenges the most gifted students in our schools. It offers hope to many; but more importantly, it shows that our students can compete academically on a global stage" (I. Hill, 2012, p. 345).

The fifth theme that emerged was globally recognized curriculum, as illustrated in

Table 19. A curriculum that is on a global level, providing learning in a broad base of

disciplines, ensures that students acquire the knowledge and skills necessary to prepare

for the global future. Acquiring this knowledge and these skills transcends domestic

borders, thereby allowing the attainment of international standards. Yemini (2012)

postulated that "International literacy has become critical to cultural, technological,

economic and political health" (p. 156). Myers (2010) further contended that

"educational programs associated with international organizations and national non-

governmental organizations (NGOs) provide probably the most comprehensive and in

depth coverage of globalization" (p. 155). Therefore, students who have a global

perspective are able to apply a canon of knowledge and skills learned in an IB program, in any context anywhere in the world.

In the literature, van Oord (2007) postulated that courses such as theory of knowledge, world cultures, world religions, peace and conflict studies, and environmental systems create a fusion of opportunities for students to acquire skills in environmentalism, conflict management, global ethics, interfaith awareness, and global citizenship. The core of the IB curriculum provides learners with critical thinking skills, second language skills, and ways to understand other cultures, in order to solve complex issues in global society. Suldo et al. (2008) further mentioned that "The IB program's philosophy emphasizes a balance of academic, interpersonal, and social-emotional skills, and the curriculum is uniformly taught throughout the world" (p. 962). Therefore, in analyzing the IB's philosophy, the kind of knowledge diffused and propagated cannot omit "the true nature of a truly international education that is determined as much by its epistemology as by the content being taught" (van Oord, 2007, p. 382). Such comprehensive discussions highlight this theme regarding the nature and structure of the IB MYP. In Table 19, quotations further support the globally recognized theme.

Table 19

Globally Recognized Curriculum Theme

R4.T5: Globally recognized curriculum: A curriculum that is on a global level, which provides learning in a broad base of disciplines to ensure that students acquire the knowledge and skills necessary to prepare for the global future.	
Media	"The core of our curriculum provides students with critical thinking skills, second language skills and an understanding of other cultures in order to prepare them for success in a global economy" (Morse, 2008, p. 1).
	"The International Baccalaureate requires students to follow a specific curriculum in six subject areas, with a special emphasis *on interdisciplinary study and understanding of foreign cultures*" (Cavanagh, 2006, p. 1).
	"The IB program is offered in 623 schools in the United States, a small fraction of those served by the AP. But backers say the federal support underscores the *IB's strong reputation, especially among college-admissions officials, who admire its academic standards and its commitment to teach students about cultures besides their own*" (Cavanagh, 2006, p. 1).
	"In developing our curriculum and assessments, we consult with international educators around the world in order to provide all of our students, in all of our countries, with an equal assessment of their work" (Morse, 2008, p. 1).
	"Siva Kumari, chief operating officer of IB, says the purpose of the program is to give students a knowledge base that they can apply to many types of jobs in many different nations. 'We're creating learners,' she says. 'We teach a canon of knowledge we think students should know, so that it doesn't matter what job they have or where they go, students are able to adapt to any context'" (Koebler, 2011, p. 7).
IB Documents	"Through completing the project students will develop their ATL skills further and students might: make connections between previous learning and current learning. Conduct experiments, make predictions and take action. Collect data and report findings. Clarify existing ideas and revise perceptions of events. Deepen understanding by applying a concept, defend a position. Solve problems through innovation, extend their understanding of academic honesty, develop skills that may benefit them for the future" (IBO, 2011, p. 7).
Empirical Journal Articles	"The IB Learner Profile not only offers a description of the ideal IB learner in 10 domains but is also presented as a tool for school development, informing classroom practices, assessment and reporting practices, daily life, management and leadership (International Baccalaureate, 2006)" (Cambridge, 2010, p. 200).
	"The IB DP grew out of experiments in curriculum development conducted in a handful of international schools, coupled with academic studies involving comparative education and the English sixth-form curriculum at the Department of Educational Studies at Oxford University" (Cambridge, 2010, p. 205).
	"Educational programs associated with international organizations and national non-governmental organizations (NGOs) provide probably the most comprehensive and in depth coverage of globalization" (Myers, 2010, p. 155).
	"International literacy has become critical to cultural, technological, economic and political health" (Yemini, 2012, p. 156).
	"The IB program's philosophy emphasizes a balance of academic, interpersonal, and social-emotional skills, and the curriculum is uniformly taught throughout the world" (Suldo et al., 2008, p. 962).
Interviews	"Students have a better understanding of connections between subjects and the real world. It answers the question, why do we have to learn this?" (LSG, 2013).

The sixth theme that emerged was positive school climate, as described in Table 20. This theme provides a school setting that is conducive to a successful learning environment. A positive school climate depends upon the leaders of the school, the teachers, the parents, and the community coming together to ensure that students attain necessary skills and knowledge. The IB MYP focuses not only on the experience approach to learning, cognitive development, and developing the global citizen; it focuses on the nature of the classroom experience. Cambridge (2010) stipulated that "The IB Learner Profile not only offers a description of the ideal IB learner in 10 domains but is also presented as a tool for school development, informing classroom practices, assessment and reporting practices, daily life, management and leadership" (Cambridge, 2010, p. 200). As a tool, the IB Learner Profile promotes a positive school climate, which engages students, teachers, parents, and leadership in the learning process. As a result, learners become self-directed, self-managed, self-regulated, and thus autonomous for lifelong learning, service, and leadership.

Hallinger, Lee, and Walker (2012b) identified how the learners profile, an educational tool within the IB MYP, fosters a positive school climate conducive to a successful learning environment in two programs. One is through cross-program teaching where teachers teach more than one program, such as the IB MYP and the IB DP (Hallinger et al., 2012b). The other program is cross-program cooperation where teachers act as mentors or project supervisors (Hallinger et al., 2012b). These programs, encouraged by senior leaders, are at the discretion of individual teachers. These forms of cross-program involvement provide more teachers in schools to exercise instructional leadership through interactions with colleagues working in different school units, grade

levels, departments, and programs (Hallinger et al., 2012b). However, professional development of teachers and supportive parents' reinforcement at home, along with leadership inside and outside of school, must be consistent. This distributed leadership activity enhances understanding of the school-wide mission and fosters a sense of collective responsibility for its achievement (Hallinger et al., 2012b). Providing value to all of the stakeholders allows everyone to participate in decision-making and academic celebrations, which become the norm for professional and personal successes. In Table 20, quotations further support the positive school climate theme.

The seventh theme that emerged was government recognition and funding, as illustrated in Table 21. The U.S. Federal Government provides funding to support the success of IB programs in U.S. public schools as well as other organizations (non-profit/for-profit), groups, and individuals. According to the literature, in 1983, the Department of Education released a report on the status of the public education system since 1965. The report declared, "The educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people" (Gardner, 1983, p. 5). This alarming reality signaled a nationwide commitment to standards-based reform, and in the late 1980s and early 1990s, President George H. W. Bush endorsed the governors, who emphasized the need for national standards by supporting America 2000 (Kessinger, 2007). The America 2000 agenda began with six goals and became eight goals in 1994.

Table 20

Positive School Climate Theme

R4.T6: Positive school climate: The school setting is conducive to a successful learning environment due to a positive and supportive climate that is created to engage students, teachers, parents, and leaders in the learning process, which also provides value to all of the stakeholders. Everyone is involved in decision-making and celebrations of academic, professional, and personal success are the norm, whereby learners are self-directed, self-managed, self-regulated, and thus autonomous.	
IB Documents	"Since proficiency in cognitive academic language is inseparable from successful learning in school, it makes sense to think of all teachers as having some role in developing this. In other words, all teachers are language teachers. In order that all teachers are able to be effective in this, professional development, especially as it concerns those learners who are learning in a language other than their mother tongue, needs to be in place" (IBO, 2008, p. 9).
Local School Curriculum Documents	"[There are] subject area and grade level meeting notes/agendas, lesson plans, collaborative unit development, [and] vertical alignment" (LSGCD, 2013, p. 61). "The implementation plan for IB MYP is developed, discussed, and communicated to parents, students, and staff through formal channels (Parent Advisory Council, Student Council, Staff Committee, Staff Meetings, assemblies) and in general through the school newsletter, the school website and district staff through correspondence" (LSGCD, 2013, p. 58).
Empirical Journal Articles	"Schools stated that the MYP provides clear teacher guidelines and required professional development for teachers linked directly to the program (16.9%)" (Sperandio, 2010, p. 144). "Another important type of cross-program activity was labeled cross program involvement. This includes (a) cross-program teaching (i.e., where teachers teach more than one program such as both MYP and DP) and (b) cross-program cooperation (i.e., where teachers act as a mentor or project supervisor in another program). These two types of cross program involvement represented strategically deployed cross-program interactions" (Hallinger, Lee, and Walker, 2012b, pp. 680–681).
Interviews	"The faculty and staff, parents, students, and community members are more motivated in adopting the language" (LSG, 2013).

America 2000 passed in the U.S. Congress as the Goals 2000: Educate America

Act under President Bill Clinton. At that time, Congress adopted AYP as a standard. This

bill became the lynchpin of the *No Child Left Behind Act* of 2001. During the 1993–1997

period, Robert Reich, U.S. secretary of labor, drew attention to the emerging global

economy. March 1994 saw the signing into law of the *Goals 2000: Educate America Act.*

Table 21

Government Recognition and Funding Theme

R4.T7: Government recognition and funding: A variety of funding sources support the IB programs in U.S. schools. These sources include local taxes, state funding, federal funding, grants, and the IB Fund.	
Media	"Some facts about the IB: The IB is almost entirely supported by school fees. A small amount (currently about 1 percent of our annual budget) is received through donations for development projects" (Morse, 2008, p. 1).
Empirical Journal Articles	"To this end the IBO works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment" (van Oord, 2007, p. 377).
	"The IB has attracted a varied clientele and made enormous inroads in state funded schooling especially in parts of the USA, where 92% of the IB schools are state-funded, and many serve poor inner-city areas" (Bunnell, 2010, p. 352).
	"The IB has set up a fundraising arm, the 'IB Fund', and one of its projects is to create an 'IB Association', a worldwide alumni forum, and basis for future fundraising" (Bunnell, 2010, p. 355).
	"We assess the availability of IBDP in schools attended by Black and Hispanic students by considering the percentages of Black and Hispanic students enrolled at a school. Because of limitations in the available measures, to assess the availability of IBDP at schools attended by low-income students we consider both the percentage of students at a school who are eligible for the federal free and reduced lunch program and a school's Title I eligibility" (Perna et al., 2013, p. 6).
	"Robert Reich (US Secretary of Labor 1993-1997) drew attention to the emerging global economy and March 1994 saw the signing into law of The Goals 2000: Educate America Act. The original six educational goals included the aim that by year 2000 'every adult American will possess the knowledge and skills necessary to compete in a global economy'" (Bunnell, 2009, p. 64).
	"Significantly, this period saw the granting of the first federal funds towards the IB. In October 2003 the US Department of Education granted $1.17 million to six middle years schools in Arizona, Massachusetts, and New York to become 'feeder schools' for the IBDP in low-income schools" (Bunnell, 2009, p. 64).
	"A 'culture of fear' emerged in society over the state of education at this time, and the appeal of the IB as an academic high standard-bearer explains much of the growth in the USA" (Bunnell, 2009, pp. 63–64).
	"Recent increases in funding have specifically focused on offering IBDP to more demographically diverse students. In 2006, the U.S. Department of Education awarded IB North America (IBNA) a grant to implement the IBDP curriculum in Title I high schools" (Perna et al., 2013, p. 20).
	"In fall 2009, the Gates Foundation built on these efforts to expand access to the IBDP to students from low-income families and racial/ethnic minorities with The International Baccalaureate (IB) Access Project. This US$2.4 million grant is designed to prepare underserved students for future participation and success in the IBDP by increasing participation in the Middle Years Programme (MYP) and developing 'tools and resources for student assessment in Grades 9 and 10 that align with expectations for the Diploma Program in Grades 11 and 12'" (Perna et al., 2013, pp. 20–21).

The original six educational goals included the aim that by year 2000 "every adult American will possess the knowledge and skills necessary to compete in a global economy" (Bunnell, 2009, p. 64). In October 2003, the U.S. Department of Education granted $1.17 million to six middle schools in Arizona, Massachusetts, and New York to become feeder schools for the IB DP in low-income schools. This was supplemented in September 2006 by a grant of $1.08 million targeted at 50 IB DP schools. The U.S. government in 2006 was one of only five worldwide that supported IB expansion in state schools, alongside the UK, Ecuador, Australia, and Canada. The granting of federal monies to fund IB programs, plus the rejoining of UNESCO, were undeniably key catalysts for the conservative offensive, to be studied in detail next (Bunnell, 2009, p. 64). In Table 21, further quotations support the government recognition and funding theme.

The eighth theme that emerged was ethical globally contributing members of society, as illustrated in Table 22. This theme focuses on learners developing higher levels of ethical behaviors as well as capabilities to become contributing members of global society. Cambridge (2010) postulated that "ethical predispositions include capacities for philanthropy for community development, safety and health, and care for the environment" (p. 207). Learners of the IB program develop an understanding of academic honesty through research projects. The knowledge and skills acquired from others' contributions of reliable information gathered in the field are vital in the process of completing their personal projects. In Table 22, further quotations support the ethical globally contributing members of society theme.

Table 22

Ethical Globally Contributing Members of Society Theme

R4.T8: Ethical globally contributing members of society: Cultivate learners who develop higher levels of ethical behaviors and who have the capabilities to be contributing members of our global society.	
IB Documents	"Developing an academic honesty policy is a requirement for MYP schools. During the MYP, students will develop their understanding of the requirements for and practices of academic honesty, which is important in the process of completing the personal project" (IBO, 2011, p. 9).
Empirical Journal Articles	"[The] IB Learner Profile . . . expresses the 'values that should infuse all elements of the Primary Years Programme (PYP), Middle Years Programme (MYP) and Diploma Programme and, therefore, the culture and ethos of all IB World Schools'" (Cambridge, 2010, p. 207). "Ethical predispositions include capacities for philanthropy for community development, safety and health, and care for the environment. Resnik (2008: 163) argues that the picture that arises from the juxtaposition of global workers' predispositions to global citizens' predispositions is strikingly similar. It seems that the IB curriculum is entirely committed to the construction of the global worker, and with exception of some ethical distinctions, no difference exists between the characteristics of the worker and the characteristics of the citizen in the global era" (Cambridge, 2010, p. 207).

The ninth theme that emerged was negative perceptions from some stakeholders, as illustrated in Table 23. This theme highlights various external stakeholders and critics who do not support the IB program. Albeit that there are high praises of the IB programs, there is strong criticism from some stakeholders. Bunnell (2009) postulated,

At first glance, certainly as viewed from outside America, the attack on the IB seems obvious enough in its political direction. Republicans in Minnesota passed an anti-IB resolution at their State Convention in summer 2005, and the Pittsburgh high school issue began after four Republicans were elected to the board in autumn 2005 on a tax-cutting ticket. (p. 65)

Although there are negative perceptions about IB, most of it emanates from the United States post-Cold War (Bunnell, 2009).

The term *neoconservative* does not accurately reflect the nature of the attack, since neoconservatives are apparently relaxed about the size of the state and are forward-

looking in their outlook (Kristol, 2003). The protagonists of the attack are not disillusioned liberals, as are many neoconservatives (Nuechterlein, 1996). Instead, a "paleoconservative" mindset is evident in literature attacking the IB. This form of "classical conservatism" stresses tradition, civil society, and the American constitution, along with a value structure centred upon familial, religious, regional, and national identity (Gottfried, 2007). This brand of American conservatism is most notably reflected on the world stage by former presidential candidate Patrick Buchanan, founder of the paleoconservative foundation The American Cause.

The attack on the IB seems partly as much an attack on federal government interference as it is on the curriculum itself. Paleoconservatives abhor what they sense to be a long-term erosion of the independence and localism that characterized the "Old Republic" (Francis, 2004). There is also a fear of a new version of multiculturalism emerging "post-9/11," referred to by Fonte (2002) as "transnational progressivism." It is within this context that the IB has been accused of promoting universal values above American values and thus [being] fundamentally un-American (Quist, 2006). (Bunnell, 2009, p. 65)

In Table 23, further quotations support the negative perceptions from some constituents theme.

Reflection upon the data that emerged from the study resulted in identifying more than the set of 21 themes that emerged from the four research questions. Initially, the four research questions were examined separately. However, reflecting upon the conceptual model, shown in Figures 1 and 2, resulted in this case study providing a richer

Table 23

Negative Perceptions From Some Stakeholders Theme

R4.T9: Negative perceptions from some stakeholders: Various external constituents and critics in the United States do not support the IB program, for a variety of different reasons.	
Media	"Such high praises has not insulated the program from occasional criticism on ideological grounds. That may have been the case last month, when a school board in a suburb of Pittsburgh voted to eliminate the program, a decision that has since drawn a lawsuit from a group of parents who supported the IB. The lawsuit alleges that a board member who favored doing away with the program cited its inconsistency with 'strong Judeo-Christian' values and American traditions" (Cavanagh, 2006, p. 1).
	"Similar objections, however, emerged in force last month in Pennsylvania's 4,300-student Upper St. Clair district, near Pittsburgh. On Feb. 20, the school board voted 5-4 to eliminate the IB from its elementary, middle, and high schools" (Cavanagh, 2006, p. 1).
	"According to local press accounts, some board members questioned whether the program has an anti-Christian agenda. They also objected the IB's endorsement of the Earth Charter, a document originally called for by a United Nations commission and completed in 2000. The charter promotes human rights, sustainable development, and environmental protection, but some circles have interpreted its positions as promoting leftist ideology" (Cavanagh, 2006, p. 1).
Empirical Journal Articles	"Much of the literature shows the historical context of a conservative conspiracy theory, which sees the IB as part of a long-term move towards global governance" (Bunnell, 2009, p. 65).
	"The initial attack on the IB came largely from agitated parents. Initially they questioned the cost and necessity of the programmes, but further research then galvanized a political theme of attack. This is an important point to make since parental ignorance of the IB, especially of its philosophy and historical background, seems to be a central cause of the attack" (Bunnell, 2009, p. 66).
	"IBDP is being offered in more diverse schools, [but] it is experiencing less success enrolling Black, Hispanic, and low-income students into the program. These findings raise questions about the extent to which the expansion of IBDP has the potential to improve academic preparation for college among groups of students that average lower levels of preparation" (Perna et al., 2013, p. 18).
	"However, the attack on the IB is not a clear-cut political party issue. Much of the attack emanates from the rather muddled rainbow of right-wing thought that has emerged in the US post-Cold War" (Bunnell, 2009, p. 65).
Interviews	"There is not a significant growth that I have observed. We have not collected that data" (LSG, 2013).
	"Creating the vertical/horizontal planners for each subject was a challenge. Now implementing the new Georgia common Core, we must revise our planners. Funding is a major issue as well" (LSG, 2013).

perspective. The four research questions were separated into two distinct phases. The first

phase of the empirical single case study identified innovative approaches to learning

through R1, which reflected the IB MYP's holistic approach and Vygotsky's theoretical framework, which led to R2, cognitive development, and R3, global literacy. As a result, the first three research questions identified three different aspects of the program that worked together to contribute not only to the students' academic performance but also to the school's success from a variety of different perspectives as identified through R4.

Although the primary focus for R4 was on *how* the leadership of an IB MYP contributes to a school's success, there were unexpected results. The answers to R4 identified the various types of success that resulted from the IB MYP and the role of leadership. This second phase of the study, through R4, revealed many areas of success other than just AYP scores. The results appeared to show that the IB MYP contributed to the school's success in a variety of different ways. These areas of success are reflected in the themes that emerged from this fourth research question. The areas of success included: improved national test scores, school and leadership recognition, career and college readiness, student retention, globally recognized curriculum, positive school climate, government recognition and funding, ethical global contributing members of society, and negative perceptions from some constituents. In addition to the thematic analysis of the interviews and documents, the analysis of actual school AYP data determined if the IB MYP might influence the school's success in terms of student achievement. Looking at how programs influence AYP scores is often an area of focus when examining various programs. AYP scores are a primary measurement of students' academic success, which reflects a school's performance, thereby making AYP scores relevant for this type of research. Additionally, prior research had shown that the IB MYP leads to improvement on state test scores. The researcher collected four years of data to

determine if the IB MYP appeared to influence the success of this one school in terms of students' academic performance, as measured by AYP test scores. AYP data were collected for the three academic years (2007–2009) prior to the implementation of the IB MYP. The program was implemented in 2010 for the 2010–2011 academic year. AYP data were then collected for the end of the 2010–2011 academic year. No AYP data were available for 2011–2012, because the requirements for No Child Left Behind Act of 2001 were waived for Georgia in 2011.

The AYP graphs for this school (Figures 5 and 6) depict increases in math test scores but show mixed results on the literacy scores, which is relevant to R4. Figure 5 demonstrates an increase in math test scores within this school for the year prior to the IB MYP from the initiatives put into place by the school's leadership as well as initiatives by individual teachers. At the end of the first year of implementation of the IB MYP, there was once again improvement in students' math performance, as measured by AYP test scores. However, this improvement could be due to a number of different factors. Prior programs and initiatives may have continued to influence student performance. Other initiatives provided by individual teachers may have influenced performance. Alternatively, the IB MYP may have influenced improvement in performance, which would be consistent with prior studies. Based on the theoretical foundation used for this study, the use of an MKO through social interaction improves cognition, according to Vygotsky (1978). Therefore, it would be reasonable to expect the IB MYP to influence students' AYP scores in math as well as in literacy.
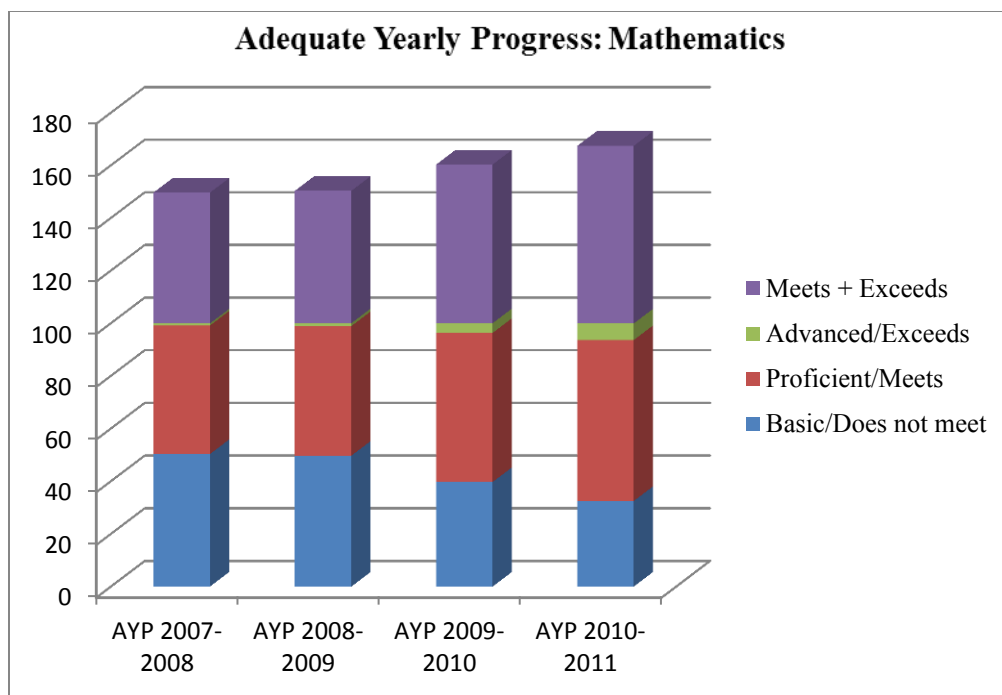
Figure 5. AYP 2007–2011: mathematics for sixth, seventh, and eighth grades
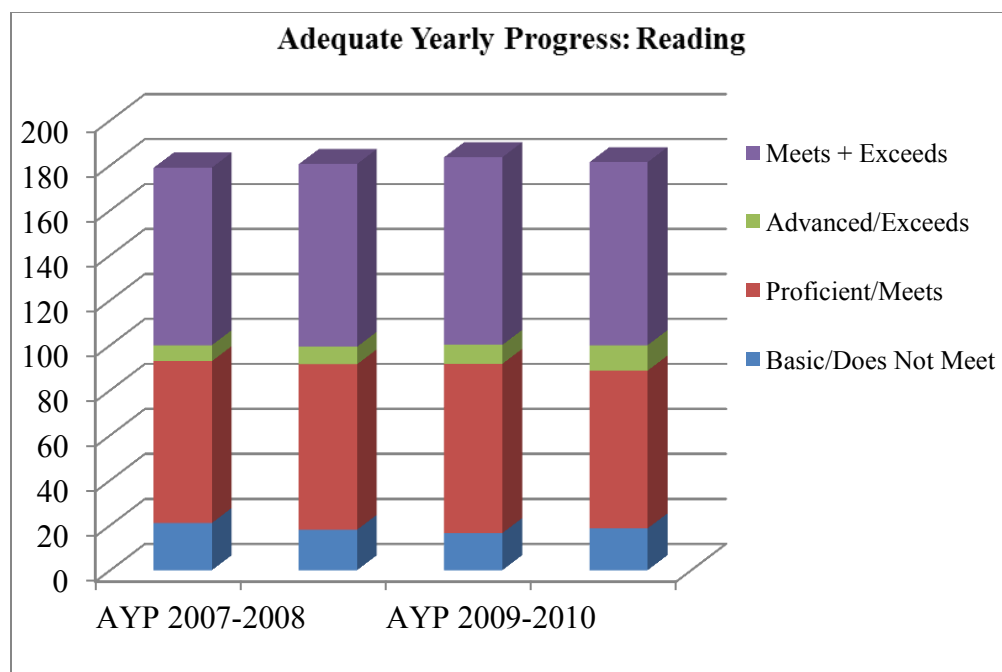
Figure 6. AYP 2007–2011: reading for sixth, seventh, and eighth grades

However, the data on the literacy scores show mixed results. Although the scores improved from 2007 through 2009 school years, they decreased in the 2010–2011 academic school year. The number of students not meeting AYP increased. The increases prior to 2010 were most likely due to programs and initiatives implemented at the school level as well as by individual teachers. There are several reasons that may have led to the decrease in literacy scores in the 2010–2011 academic year. The causes for this decrease may be because the actual level of performance on the tests rises each year. Alternatively, it may be that the IB MYP had no influence on the literacy area, which is not consistent with the researcher's expectations.

Thus data were not as expected. Nor were they consistent with prior studies that found that IB programs led to improvement in state test scores. This researcher expected improvement on state test scores, based on prior authors' studies, which showed improvement on state test scores. Math showed slight possible influence by the IB MYP. Literacy scores actually declined. However, there were no data available for the years after the program was implemented to determine if there was a long-term influence because of the discontinuance of AYP testing.

Considering the conceptual model, the following 21 themes emerged from the four research questions for this study. These themes are summarized in Tables 24–27 by research question.

Table 24

Summary of Themes: R1

R1	**Multidisciplinary curriculum:** This provides a multidisciplinary approach to learning in every content class, which links across the content classes.
	Inquiry-based experiential approach to learning: This is a construction of courses based on the use of an inquiry-based experiential approach, which involves asking questions, giving opinions, and experimental teaching and learning.
	Real-world experiential activities: These activities provide a variety of experiential activities in the classroom as well as through community service projects, environmental activities, and global social activities.
	Technology-enabled learning: This uses a variety of contemporary technologies such as virtual learning, etc. (Internet = e-mail, Skype, GoToMeeting) to enable learning.
	Coaching and mentoring for learning: Teachers, guidance counselors, and peers serve as coaches and mentors for all aspects of learning. Teaching methodology includes a variety of specific ways in which teachers can scaffold new learning in the ZPD to help learners understand text.
	Individual responsibility and accountability: Various approaches are used to focus on building individual accountability in areas such as individual performance, ethics, sustainability, and global responsibility.

Table 25

Summary of Themes: R2

R2	**Develops social intelligence:** Develops social reasoning by working with others and addressing controversial issues through team activities, engagement in community activities, environmental activities, and dialogue on global social issues.
	Develops emotional intelligence: Develops emotional reasoning by becoming aware of one's own emotions and managing those emotions individually as well as through teams, groups, and community service.
	Develops analytical intelligence: Develops the ability to think critically across all content areas and in real-life situations.

Table 26

Summary of Themes: R3

R3	**Global cross-cultural communications:** Learners engage in cross-cultural communications on a global basis including learning new languages, valuing different cultures, and interacting with people around the world.
	Explore/understand global issues: Engage in dialogue and activities to provide in-depth understanding and appreciation of significant global issues facing them and society.
	Access global issues: Use the Internet to find and access information on global issues, culture, and language.

Table 27

Summary of Themes: R4

R4	**Improved national test scores:** Improvement of analytical skills and cognitive development result in students performing at high academic standards, which lead to far superior standardized test scores (AYP, etc.).
	School and leadership recognition: Schools are exceptional due to the use of leadership approaches that build school strengths and capacity as well as improving community relationships.
	Career and college readiness: Students are prepared for college and career readiness.
	Student retention: Keep students in public schools.
	Globally recognized curriculum: A curriculum that on a global level provides learning in a broad base of disciplines to ensure that students acquire the knowledge and skills necessary to prepare for the global future.
	Positive school climate: The school setting is conducive to a successful learning environment due to a positive and supportive climate created to engage students, teachers, parents, and leadership in the learning process, which also provides value to all of the stakeholders.
	Government recognition and funding: The U.S. Federal Government provides funding to support the success of IB programs in U.S. public schools as well as other organizations (non-profit/for-profit), groups, and individuals.
	Ethical global contributing members of society: Develop learners who develop higher levels of ethical behaviors and who have the capabilities to be contributing members to our global society.
	Negative perceptions from some constituents: Various external constituents and critics do not support the IB program.

Summary

The purpose of this study was to determine how the IB MYP influenced the success of one middle school in the state of Georgia. The design of the investigation was an empirical single case study including descriptive statistics and thematic analysis. The research methodology was qualitative in nature. The method consisted of developing research questions, collecting data, coding data, thematically analyzing data, interpreting data, and reporting data results by research question. The research location was in the state of Georgia. The sample was one middle school that uses the IB MYP. The population size was approximately 400 students. The chosen qualitative method was suitable to explore and comprehend individuals or groups ascribed to a human or social problem.

The education system across the United States constitutes a grave national security threat due to educational failures (Klein et al., 2012). International competition, globalization of labor markets, and international trade all require higher educational skills. Young people across the country have not kept pace, as measured by the 2009 PISA (Klein et al., 2012). The findings identified how the IB MYP appears to influence the success of a school. The results identified (a) innovative learning practices that appeared to influence cognitive development resulting in learners with global literacy and (b) the various foci of success experienced by this one middle school implementing the IB MYP. As such, this program may have the capability to contribute to the national agenda of improving the performance of schools and students, further discussed in Chapter 5. Additionally, Chapter 5 presents a summary of the study as well as conclusions and recommendations.

Chapter 5: Summary, Conclusions, and Recommendations

Introduction

The U.S. educational system has continued to seek to reduce achievement gaps between U.S. schools and their foreign counterparts. Although the federal government has enacted laws and initiatives to galvanize the improvement of cognitive development and global literacy, only one third of learners in elementary and middle schools are competent in basic skills on national test scores (Klein et al., 2012). Measured against international standards in the twenty-first century, the United States needs to respond innovatively in order to compete and succeed globally. The IB DP, originally developed for globally mobile learners in the 1960s, provides further assistance with these needed approaches. The IB has grown in popularity in schools around the country and may offer techniques.

This study is important because the United States needs innovative ways to improve student achievement nationwide as well as to remain globally competitive. The study's design was an empirical single case study. "A case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Yin, 2009, p. 18). Therefore, this approach contributes to understanding the topic as it focused on a single middle school in the state of Georgia. The study's design provided information to describe the phenomenon of the nature and influence of a global curriculum, the IB MYP, on the success of the students and the school. Four research questions guided the study.

The investigation added knowledge to two different national fields. First, the study added knowledge about how a comprehensive global program, namely the IB MYP, influenced the success of one middle school in the state of Georgia, which leads to improved cognitive development. Second, the research added knowledge to how young learners become globally literate through programs such as the IB MYP, which also include a foreign language. In valuing a foreign language, young people in the United States learn ways to facilitate communication and gain greater cultural understanding (Anya, 2011). Therefore, the study provides strategies that may reduce achievement gaps present in the nation's current educational system. As a result, students become globally literate, and they are able to participate actively in our global environment. Chapter 5 provides further insight on how the results from and structure of this study advanced the theoretical foundation behind this study.

Summary of the Study

The context of the study derived from the problem statement about how the IB MYP influenced the success of one middle school in the state of Georgia was unknown. Four research questions guided this study.

R1: How did the IB MYP influence students' academic performance?

R2: How did the IB MYP contribute to cognitive development?

R3: How did the IB MYP contribute to global literacy?

R4: How did the leadership of an IB MYP contribute to a school's success?

The conceptual model, shown in Figures 1 and 2, depicted how the four research questions related to each other and provided a basis for the researcher's empirical single case study design. The gears represented how a variety of approaches to learning,

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cognitive development, and global literacy interacted and ultimately led to the school's

success. Understanding the variety of approaches to learning used by IB MYP was the

focus of R1. Understanding how IB MYP enabled cognitive development was the focus

of R2. Understanding how IB MYP enabled global literacy was the focus of R3. The first

three research questions reflected Vygotsky's theoretical framework of social reasoning

and language. The researcher's expectation was that the curriculum would influence

cognitive development and global literacy. Moreover, the research questions investigated

how the combination of approaches to learning, approaches to cognitive development,

and approaches to global literacy, as well as the school's leadership, influenced the

learners' and school's success. Originally the basis for collecting the data, the model

illustrated in Figures 1 and 2, emerged as a model that described the phenomenon

explored in this research. This model, shown in Figure 7, illustrates how the IB MYP, the

processes of cognitive development, and the focus on global literacy acted together to

enable the success of the students and the school. Table 28 gives a breakdown of the

themes that addressed each research question.
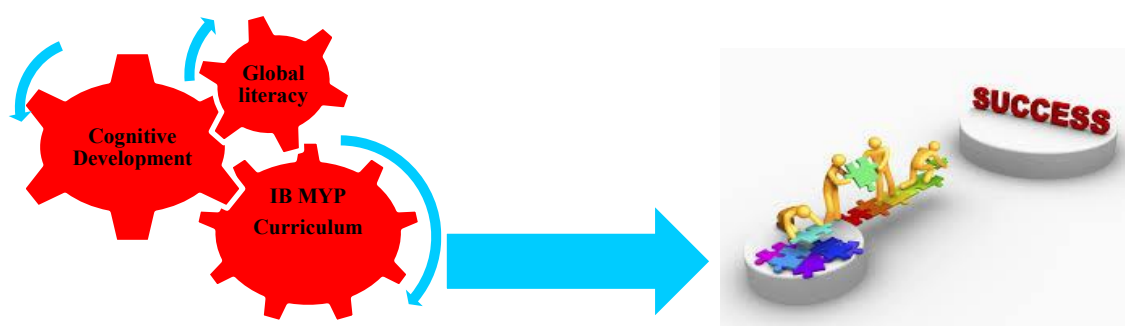
Figure 7. The phenomenon of how the IB MYP influenced the success of a school

Table 28

The Phenomenon of How the IB MYP Influenced the Success of a School

IB MYP Curriculum	Cognitive development	Global literacy	Students and School success
Multidisciplinary curriculum	Develops social intelligence	Global cross cultural communications	Improved national test scores
Inquiry-based/experiential approach	Develops emotional intelligence	Explore and understand global issues	School and leadership recognition
Real-world experiential activities	Develops analytical intelligence	Access global information	Career and college readiness
Technology enabled learning			Student retention
Coaching and mentoring for learning			Globally recognized curriculum
Individual responsibility & accountability			Positive school climate
			Government recognition and funding
			Ethical global contributing members of society
			Negative perceptions from constituents

The results of the study supported Lev Vygotsky's concepts. Vygotsky (1978) proposed that language, along with environmental social interaction, helps a child to reason. To prepare learners across the nation to become globally literate, the learners need to interact with the environment. Vygotsky's model also purports that cognitive development transfers in the ZPD (Vygotsky, 1978). "The Zone of Proximal Development is the distance between a learner's ability to solve a problem or a task independently and the learner's potential comprehension when given guidance by a More Knowledgeable Other" (Vygotsky, 1978, p. 78). The learning that occurs is in the ZPD.

A diverse set of data sources, provided by this case study, enabled rich data analyses relative to the research questions. Yin (2009) contended, "the case study inquiry . . . relies on multiple sources of evidence, with data needing to converge in a triangulated fashion and as another result benefits from the prior development of theoretical propositions to guide data collection analysis" (p. 18). The research questions guided the study. The data sources were documents from the IBO and the IB MYP local school site curriculum, which included lesson plans. There were also media reports and empirical journal articles on the nature and results of the IB MYP that contributed to the data sources. Interviews with participants in the study and a public database were also data sources. After reviewing the data to gain an initial sense of the flow and structure of the data collected, coding and thematic analysis followed.

The result of the study provides themes that also provide suggestions for federal and state governments, as well as local school districts and viable communities, to consider as they look for strategies to improve the deficiencies in schools around the country using the IB program or similar programs. In addition, the investigation contributes to the field of cognitive development and global literacy, thereby addressing the nation's current learning and security priorities. A summary of the analysis follows in the findings and conclusions.

Summary of Findings and Conclusion

The phenomenon studied was the nature and impact of an IB MYP in one middle school in the state of Georgia. The investigation method was qualitative in nature, and the design was an empirical single case study. This approach promoted an in-depth holistic understanding of the phenomenon. The research focus originated from a concern that

U.S. schools are inadequate in comparison to schools around the world (Kessinger, 2011) due in part to globalization, which affects the core of every profession, including academic institutions. Therefore, as innovations expand in the twenty-first century, the United States must develop educational curricula in order to be able to compete in a globalized society. Four research questions guided the study. The organization of the data analysis and findings were by research questions. Thematic analysis across the various data sources addressed each of the four research questions. A number of codes and resulting themes emerged for each of these research questions. The codes, along with the visual model illustrated above, were used to create a model to describe the overall phenomenon.

Research Question 1 focused on how the IB MYP influenced students' academic performance. After conducting a thematic analysis, six themes emerged to address R1. The first theme was a multidisciplinary curriculum. This theme identified the fact that the IB MYP curriculum provides integrative approaches to learning in every content class, which links across the content classes. The second theme was inquiry-based/experiential approaches to learning. This theme identified how the curriculum uses approaches such as asking questions, giving opinions, and experimenting with teaching and learning. The third theme, real-world experiential activities, described how the IB MYP provides an assortment of experiential activities that are relevant to the real world. These activities, which occur inside and outside the classroom, involve community service projects, environmental projects, and global social activities. The fourth theme was technology-enabled learning. This theme described how the curriculum uses an array of contemporary technologies such as virtual learning to enable learning. The fifth theme

was coaching and mentoring for learning, which includes a variety of specific teaching methodologies that teachers, guidance counselors, and peers use to scaffold new learning in the ZPD. The sixth theme was individual responsibility and accountability. This theme described the various approaches used to focus on building individual accountability in areas such as individual performance, ethics, sustainability, and global responsibility.

The six themes provided the information to answer R1. The IB MYP influences student academic performance by using a variety of different approaches to learning throughout this multidisciplinary curriculum. This variety of an inquiry-based/ experiential approach to learning and real-world experiential activities enables learners to play a proactive role in the learning process. It is then, through the application of content and concepts, that learners not only learn new knowledge, but more importantly, they develop the capabilities to process and apply that knowledge to real-world situations. These findings are consistent with I. Hill (2012) who articulated that educators providing tools for seeking and processing knowledge, rather than just presenting knowledge, promote a child-centered approach to learning to stimulate dialogue, critical questioning, lateral thinking, interdisciplinary awareness, and interdependent and independent learning.

The research findings agreed with and added to prior studies. Spring (2008) contended that learners should be educated to adapt continually to a world of lifelong learning, in which the application of knowledge and skill innovations occurs daily. The data analysis findings of this research identified how the IB MYP approaches to learning meet this need. Learners go through real-world experiential learning activities that enable them to have the skills and knowledge needed for lifelong learning. In addition, Morentin

(2011) stipulated that learning must be experiential in nature to enable learners to explore

and demonstrate value through real-world applications. The IB MYP is experientially

based.

The findings of the data analysis for the six themes for R1 further support and

expand Vygotsky's theoretical model. In particular, they support the concept of imitation,

which is a core idea within the concept of the ZPD. However, Vygotsky stated that the

demonstration of the concept alone is not sufficient to raise performance. For example,

"If I am not able to play chess, I will not be able to play a match even if a chess master

shows me how" (Vygotsky, 1978, p. 209). Therefore, the learner needs to be able to

imitate the skill or capability by experiencing it in order to be successful. More

importantly, it is critical that the learner has a sense that success is possible. As Vygotsky

said, "to imitate, there must be some possibility of moving from what I can do to what I

cannot" (p. 209). Thus, the combination of approaches to learning that emerged, as

inquiry-based/experiential approaches to learning, real-world experiential activities, and

technology-enabled learning, provides learners the opportunity to imitate the MKO.

The IB MYP currently provides a medium through which inquiry-

based/experiential approaches to learning, real-world experiential activities, and

technology-enabled learning allow learners to engage in imitation as described by

Vygotsky. Research on the IB MYP extends Vygotsky's research by identifying different

ways that learning can enable imitation. The IB MYP provides curricula that use very

structured approaches to realize inquiry-based experiential approaches to learning, real-

world activities, and the use of mentoring and coaching for community-based projects.

Research Question 2 centered on how the IB MYP contributed to cognitive development. After conducting a thorough thematic analysis, three themes emerged to address R2. The themes were social intelligence, emotional intelligence, and analytical intelligence. The social intelligence theme provided approaches to develop social reasoning. By working with others to address controversial issues, including through team activities, environmental activities, engagement in the community, and global social issues, social skills develop. The emotional intelligence theme provided approaches to identify, assess, and manage one's emotions, as well as those of a team or group and a community. The analytical intelligence theme provided approaches on how to develop critical thinking skills across all content areas as well as in real-life situations. These three intelligence themes were identified as approaches supported by the curriculum that contribute to cognitive development.

The three themes provided information to answer R2. The IB MYP contributes to cognitive development by supporting the development of a variety of different intelligences throughout the curriculum. These various intelligences, social intelligence, emotional intelligence, and analytical intelligence, enable students to develop cognitive abilities as the learners engage in a variety of activities where they reflect upon self, reflect upon their interaction with peers, and apply critical thinking to solve problems and analyze issues. These capabilities develop through the process of learning and using language. Furthermore, prior research supports this notion. Kozulin (1986) and Vygotsky (1978) contended that interaction with the sociocultural environment occurs through language, which influences cognitive development. Therefore, by discussing ideas and issues through learning initiatives, including community services projects, environmental

projects, and global services, learners develop cognitive skills. These findings on the areas of learning from the IB MYP are also consistent with Resnick et al. (2008), who voiced that some of the most crucial skills needed in the global marketplace are critical thinking, self-reflection, multiculturalism, and flexibility.

The data analysis results for this research question supported and added to prior research. In the literature, I. Hill (2007) stipulated,

> Comparisons with one's own culture, an important reference point, facilitate an appreciation of others. While the existence of a number of layers of understanding is recognized, it is here assumed that the attainment of the affective dimension is the ultimate goal as students are exposed to intercultural understanding in different settings. (p. 12)

This supports the research findings in that the need to cultivate U.S. students to achieve global literacy lies in comprehensive global learning curricula, such as the IB MYP, that offer in-depth learning to handle global complexities. Furthermore, the results of the study support I. Hill's work, which stipulated that cognitive and affective education skills derived from Voltaire's *Micromégas*, for which Voltaire traveled the world to develop his mind and heart using languages.

Learners who use different modes of communication through foreign languages develop cognitive skills. Cooper et al., (2008) stated that learning a foreign language has been essential in developing the critical thinking skills described in Bloom's taxonomy of thinking processes. Bilinguals develop greater flexibility with respect to critical thinking that applies to problem solving, which may be due to their capacity to choose between two languages (Adesope et al., 2010). Such enhanced problem-solving skills are more

prevalent in tasks involving executive control (Adesope et al., 2010). The IB MYP curriculum includes the learning and use of a second language. This second language further contributes to the development of cognitive reasoning based upon these prior studies.

The data analysis results supported, extended, and differed from Vygotsky's theory. In the literature, Adesope et al. (2010) postulated that learners who have metacognitive awareness have the mental ability to strategize learning. Some advantages of metacognition include the aptitude to think abstractly and to reason symbolically, which leads to enhanced problem solving. The findings from this study on the IB MYP curriculum support Vygotsky's theory as the IB MYP's variety of approaches to learning allows learners to interact socially with the environment in order to develop cognitive skills. However, the results of this research also extend Vygotsky's theory in that learners who interact with foreign languages have the capacity of bilingual learners and therefore can appropriately contextualize the process of learning vocabulary, syntax, phonology, and morphology in more than one language, which provides extended learning and increased cognitive skill opportunities.

Research Question 3 focused on how the IB MYP contributed to global literacy. After conducting a thorough thematic analysis, three resulting themes emerged to answer R3. The themes were global cross-cultural communications, explore/understand global issues, and access global information. The global cross-cultural theme focused upon engagement in cross-cultural communications on a global basis including new languages, valuing different cultures, and interacting with people of the world. The explore/understand global issues theme used dialogue and activities to provide in-depth

understanding and appreciation of significant global issues facing society. The access

global information theme focused upon using the Internet to access information on global

issues, culture, and languages. These themes advanced scientific knowledge about how

young learners become globally literate through not only learning languages but also

learning about other cultures and global issues.

These three themes answered R3. The IB MYP contributes to global literacy by

supporting a variety of different modes of communications to engage cross-culturally and

thereby to value cultures and to appreciate global issues facing society. Global cross-

cultural communications, explore/understand global issues, and access global information

develop in learners as they interact with people from around the world learning in

languages other than English. This learning can happen face-to-face or through a variety

of contemporary technologies. These capabilities develop through a process of exploring,

comprehending, and sustaining personal development. Prior research supports these

themes. Dunne and Edwards (2010) stated that global competency and intercultural

communications are prerequisite skills to developing globally literate people. In addition,

Myers (2010) wrote, "International education programs and schools are ideally situated to

prepare youth to make sense of the complexities of current world realities by studying

globalization. This aim is particularly important because globalization receives little

attention within most national official curricula" (p. 153). The philosophy of the IB

encourages students to use theory of knowledge to develop cognitively, reflect on

significant cultural shifts worldwide, and interact with the sociocultural environment in

order to participate as global citizens. Historical events have identified the need for young

people to attain global literacy and cognitive development across the nation in order to remain competitive as a country.

The results from this research were consistent with the needs defined in the literature and addressed these stated needs. The literature identified the need to focus on global issues. Acedo (2012) postulated that UNESCO's philosophy to focus on education for peace and intercultural understanding allows learners to become cognizant of globalization and achieve an educational perspective extending across national frontiers. Young people across the United States have fallen behind their global peers, especially in foreign languages, suggesting that schools across the United States are not educating for the challenges of the twenty-first century (Klein et al., 2012). Davy (2011) stipulated that as the United States continues seeking innovative techniques to support and prepare all learners for achievement, the literature expounds upon the curriculum that strengthen elements of global citizenship as an approach to learning, rather than just as additions to the curriculum. Global literacy is limited and young learners must prepare for the realities of a global society. In valuing a foreign language, young people in the United States learn a variety of modes of communication and gain greater cultural understanding (Anya, 2011) in global society. The IB MYP curriculum not only reflects these ideas, but also enables learners to develop these needed global capabilities. Furthermore, the program addresses the nation's priority to reform education to meet the demands of globalization.

The literature extended Vygotsky's model by bringing in a global context as well as the importance of not only language, but also the use of a foreign language to improve cognitive capabilities. Literacy was addressed in a global context rather than a local or national context, and therefore it has become critical to cultural, technological, economic,

and political health. Corus and Ozanne (2011) contended that, historically, literacy has been a universal and ideological set of skills in which transferability to different contexts was easy, such as decoding symbols from a text. Literacy skills were also autonomous from the context in which they derived. However, in today's globalized society, global literacy access through technology is more prevalent.

Research Question 4 centered on how the leadership of an IB MYP contributed to a school's success. After conducting a thorough thematic analysis, nine themes emerged to address R4. The themes were improved national test scores, school and leadership recognition, career and college readiness, student retention, globally recognized curriculum, positive school climate, government recognition and funding, ethical globally contributing members of society, and negative perceptions from some constituents. The improved national test scores theme focused upon improving analytical skills and cognitive development, resulting in students performing at high academic standards, leading to far superior standardized test scores. The school and leadership recognition theme focused upon exceptional schools due to leadership approaches that build upon school strengths and capacity, thus improving community relationships.

The theme career and college readiness focused upon revamping curricula, revamping schedules, training teachers, and improving all interdisciplinary subjects to recruiting students as part of the process. The theme student retention focused upon keeping students in school. The globally recognized curriculum theme focused upon providing learning in a broad base of disciplines to ensure students acquire the knowledge and skills necessary to prepare for the global future. This same knowledge transcends domestic borders of communication, thereby allowing students to meet

international standards. The theme positive school climate focused upon providing a school setting that is conducive to a successful learning environment. This depends upon the leaders of the school, the teachers, the parents, and the community coming together to ensure that students attain necessary skills and knowledge.

The theme government recognition and funding focused upon providing finances from the U.S. government, non-profit/profit organizations, and individuals to support the success of the IBO programs. The theme ethical globally contributing members of society focused upon learners developing higher-order levels of ethical behaviors as well as capabilities to become contributing members of global society. The theme negative perceptions from some constituents highlighted varied external constituents and critics who do not support the IB programs.

Nine themes answered R4. The leadership of an IB MYP contributes to a school's success by fostering an environment that values teaching and learning, transcending domestic borders for all stakeholders, and success is the norm. However, leadership attributes cultivate school success. A positive school climate engages all stakeholders, and everyone is involved in decision-making as well as celebrating academic, professional, and personal successes. This provides a medium for which student retention is the norm and improved national test scores show continuous improvement in analytical skills and cognitive development. In addition, this prepares students for college and career readiness due to the use of a globally recognized curriculum that fosters ethical globally contributing members of society. As a result, school and leadership recognition and government recognition and funding become the norm, despite negative perceptions from some constituents. Prior research from the literature supported this notion.

Education is an outcome of a democratic process; people must become disposed toward it by experiencing values such as care, consideration, patience, and respect toward others (Morentin, 2011). In addition, a nation that builds social responsibility and democratic coexistence in accordance with UNESCO's philosophy plays a role in an open and multicultural society (Morentin, 2011). Thus, the nine themes answered R4.

The results of the study support and extend prior research. In the literature, Remington (2000) led an investigation to compare students in two different middle-school curriculum designs to determine whether the IB MYP had a significant effect on student achievement. The study revealed that students of the IB MYP achieved higher scores than the control group on each of the five subtests of the CAT. Remington suggested that the IB MYP was another successful middle-school curriculum to educate young adolescents. In addition, Jordan (2009) conducted a study on the IB PYP to determine the impact of the English language arts test scores on the PACT. The study findings revealed that the rigor of the IB PYP had a significant positive impact on third-, fourth-, and fifth-grade students' PACT scores. The results of these two studies suggest that the IB MYP improves national test scores. This study on one IB MYP school in the state of Georgia was not consistent with prior results. The results of the study support, extend, and differ from Vygotsky' s theory. In the literature, Lev Vygotsky, the Russian psychologist and social theorist, believed that interaction with the sociocultural environment occurred through language, which influenced cognitive development (Kozulin, 1986; Vygotsky, 1978). The results of the study support the prior literature because a positive school climate that creates engagement among all stakeholders produces a successful learning environment. In addition, school and leadership

recognition strengthens the capacity to improve community relationships. Moreover, the results of the study also extend the prior literature, in that a globally recognized curriculum transcends domestic borders in different modes of communication, using a variety of contemporary technologies. However, other results from this study differ from Vygotsky' s theory. The results of this study showed that ethical globally contributing members of society who develop ethical behaviors and capabilities contribute to global society, whereas Vygotsky focused on how interaction with the sociocultural environment influenced cognitive development.

Implications

There were a number of implications, which emerged from the results of the study. This study was designed to clarify the nature and impact of the IB MYP on one middle school in the state of Georgia. Even though this study was specific to one middle school, the research identified the contributions of a comprehensive global curriculum. First, the comprehensive global curriculum appears to influence a school's success through the variety of approaches to learning. Second, a comprehensive global curriculum appears to contribute to the development of cognitive abilities. Third, a comprehensive global curriculum appears to contribute through developing global literacy in learners. Fourth, the global curriculum appears to contribute to the schools' success.

Theoretical implications. The theoretical foundation used one theory and two principles to develop four research questions for the study. The theoretical framework used Vygotsky's theory from a holistic viewpoint. There were two models used from Vygotsky's theory. The first was the MKO. The second was the ZPD.

Vygotsky (1978) proposed that language, along with environmental social interaction, helps a child to reason. Vygotsky's model of the ZPD supports the assumption in the current investigation that a learner's interaction with the environment delineates cycles of maturation, allowing others to view the current developmental achievements of a learner as well as those still in the process of maturing (Vygotsky, 1978). Additionally, the research identified how the IB MYP demonstrates the use of Vygotsky's principles: the MKO and the ZPD (Vygotsky, 1978). To prepare learners across the nation to become globally literate and to enhance cognitive development, learners need to interact with the environment. The IB MYP provided a medium in which the two principles within Vygotsky's theory, the MKO and the ZPD, were demonstrated through the curriculum materials.

The results of the study demonstrated that learners master knowledge through a variety of approaches to learning, the development of intelligence, global literacy, and leadership contributions. I. Hill (2012), who articulated that educators provide tools for seeking and processing knowledge, rather than just presenting knowledge, promoted a child-centered approach to learning to stimulate dialogue, critical questioning, lateral thinking, interdisciplinary awareness, and interdependent and independent learning. The results of the study identified that the IB MYP uses a variety of approaches to learning, such as real-world experiential activities, inquiry-based/experiential approaches to learning, and technology-enabled learning that further support and extend Vygotsky's theory. Therefore, Vygotsky's model was appropriate for the proposed study.

There were strengths and weakness in the study. One of the strengths was the variety of data resources. There were six data sources. They were a public database;

interviews from three participants from the school site; curriculum documents, including

lesson plans, from the school; documents from the designers of the IBO; media reports;

and journal articles. These sources of information allowed the investigator to code

hundreds of pages to provide themes and thus answer the research questions. However,

one weakness was that the investigation was an empirical single case study at one school.

Therefore, the study needs to be repeated in many schools. Another weakness was that

interviews were limited to three people. It would be important to interview a large sample

of teachers and administrators. Additionally, students should be interviewed to gain their

perspectives. The research was limited to a single city within a single state. A study

should be conducted in a variety of locations.

Practical implications. The focus of the study was to understand the nature and

influence of the phenomenon associated with the implementation and success of the IB

MYP. Therefore, the investigation results demonstrated how the IB MYP appeared to

influence the success of one middle school in the state of Georgia in a number of

different ways. Based upon these findings, leaders need to consider some practical

implications, as the United States identifies innovative ways to improve student

achievement nationwide as well as to remain globally competitive. One of the ways in

which leaders can influence achievement results is by developing curricula that use a

broad set of approaches to learning. Another way to influence results in the area of global

literacy is to merge global topics throughout the curriculum content areas rather than treat

global literacy as a content area by itself.

The results of the research supported prior research that the IB MYP enables

students to increase cognitive development and schools to meet achievement on

standardized test scores, therefore meeting AYP. Remington (2000) led an investigation to compare students in two different middle-school curriculum designs to determine whether the IB MYP had a significant effect on student achievement. The study revealed that the IB MYP had a significant effect on student achievement. The study revealed that students of the IB MYP achieved higher scores than did the control group on each of the five subtests of the CAT. Remington (2000) suggested that IB MYP was another successful middle-school curriculum to educate young adolescents.

In another study, D. R. Jackson (2006) compared the SOL test results of students participating in an IB MYP to those of non-IB MYP students. The purpose of the study was to determine whether students who participated in a holistic program of study were comparable to their counterparts. One group of eighth-grade students was from the IB MYP and the other group of students was from a traditional-path middle school. Jackson matched the groups' fifth-grade Virginia SOL scores and ethnicity. The Virginia SOL mean scores of the IB MYP group were higher than the means of the non-IB MYP group in all areas. The content showing the greatest difference was English (reading, literature, and research). Due to study skills embedded in the approaches to learning design of the IB MYP, reading scores showed the greatest difference.

The results of this study provided approaches to learning that may help to reduce achievement gaps present in the nation's current educational system. There were a variety of approaches to learning including multidisciplinary curriculum, inquiry-based/ experiential approaches to learning, real-world experiential activities, technology-enabled learning, coaching and mentoring, and individual responsibility and accountability. The inquiry-based/experiential approaches to learning use inquiry, action, and reflection that

aim to develop a range of competencies and dispositions (IBO, 2012c). This approach to learning includes skills for thinking, working with others, communicating, managing self, and research to develop cognitive abilities (IBO, 2012c). This approach to learning combined with the other approaches to learning brings about successful learning achievements. Learners also become globally literate, and they are able to participate actively and competitively in the international world.

The investigation revealed that the IB MYP contributed to improvement of both cognitive development and global literacy. Zhao (2010) wrote that globalization has transformed people's daily lives, work, and entertainment, and made salient people who lived thousands of miles away. Literacy has constantly evolved with the advances of technology, and in the twenty-first century, Internet use, text messaging, and other multifaceted communication venues provide opportunities for greater social and political participation (UNESCO, 2012b). Lindahl (2006) posited that in recognition of the increasing rate of technological advancement, as well as scientific and social change, education must extend beyond basic literacy skills to lifelong learning. Widening access to and use of innovative technology promotes students' learning at all levels—locally, nationally, and internationally.

An example from the results of the data analysis would be a real-world activity called CAS used within the IB MYP. CAS aims at developing students' creative and social skills worldwide. Van Oord (2007) stipulated that experiential learning through cooperation is a key ingredient of the CAS requirement. This real-world activity leads to a sense of responsibility toward all members of the community and it develops attitudes and traits that respect others. This investigation is useful to national and state

governments, as well as to local school districts and viable community leaders who want to identify ways to improve academic performance. Therefore, stakeholders need to consider using the IB MYP as appropriate. Additionally, the set of approaches to learning, combined with a focus on cognitive development and global literacy, should be considered when developing curricula for the future. This combination appears to influence the success of a school from a broad set of perspectives.

Future implications. This empirical single case study reinforced Lev Vygotsky's theoretical perspective that two fundamental principles, the MKO and the ZPD, prepare learners to become globally literate and enhance cognitive development when learners interact with the environment. Future implications of this study could include the insight that there would be value of doing multiple case studies. Mixed methods would also provide a larger sample size, which would give more in-depth analysis from both qualitative and quantitative perspectives. Since the current investigation was only in the United States, the sample could also include schools from various countries, thereby providing a more global perspective. Continuing to conduct a variety of similar studies would make the study results more generalizable, as the current study was specific to one middle school. In addition, to gain the richness of the data available at a single research site, the interviews should include additional stakeholders including the board of education, the district superintendent, and other positions, such as core subject teachers, support staff, business partners, parents, and students. Other documents, such as surveys, video recordings, pictures, or observations could also benefit the study.

Recommendations

The literature review behind this study identified a need to discover approaches to learning that enable improved performance in students as well as enabling them to meet state standardized test achievement requirements, such as AYP. Carber (2009) contended that in order to confront the archaic U.S. education standards, there is a need to nurture an internationally minded leadership base for the future. Additionally, the research identified the need to develop a more globally literate population of students to realize the priorities of the United States. Dunne and Edwards (2010) suggested that global competency and intercultural communications were prerequisite skills to developing globally literate people. In a global era, public school students should have internationally oriented programs as the world continues to grow interconnected at an increased rate and thereby to partake in solving international complexities. Thus, the United States needs to discover innovative solutions to succeed and remain a global leader (Carber, 2009).

This investigation is useful to national and state governments, as well as to local school districts and community leaders who want to identify ways to improve academic performance. Therefore, stakeholders need to consider using the IB MYP as a set of strategies. The outcome of the study identified that this curriculum can be used to support the needs echoed by Klein et al. (2012), who indicated that in the twenty-first century, human capital will determine a country's power. The United States needs people who can fulfill the requisites of its military, diplomatic services, intelligence services, and cyber security, as well as citizens, to protect critical infrastructure. Accentuating the importance of developing a strategy for improving student performance, school performance, student

cognitive development and global literacy, including foreign language learning, is essential.

      Recommendations for future research. There are eight recommendations proposed for future research.

1. The first recommendation would be to conduct studies that collect data before, during, and after the implementation of an IB program to determine the specific effects on test scores, graduation rates, and other areas of performance. This would give more information about the program, which would expand and validate the study.

2. Second, the IB appears to provide approaches to learning, the use of foreign languages, and other factors that improve cognitive development as well as students' performance. However, it is not known in detail how and why or to what extent cognitive capabilities and student performance increase. Detailed studies of individual learners as they complete the program may help to describe this phenomenon better.

3. A third recommendation would be to conduct multiple case studies rather than a single case study, which was the approach for this research. These studies could be across different locations within the United States. Additionally, they could include case studies of schools in different countries. Conducting a number of different case studies will over time help to make the findings generalizable across different schools, locations, and even countries.

4. The fourth recommendation is that future research should compare and contrast schools with the IB MYP with those that do not have the IB MYP. Although

this program appears to influence student performance, cognitive development, and school success, it is not known how this compares with a variety of other curricula. The focus would be both in terms of the approaches to learning used in terms of the student and school performance in areas of state test scores, as well as the percentage of students graduating high school and going to college. A study looking at these perspectives would give clarity on programs' achievements.

5. A fifth recommendation would be to use a larger set of stakeholders for the interview process. This study had a limited set of interviews, including interviews with only the IB MYP local school-based principal, the IB MYP local school-based project coordinator, and the IB MYP local school-based foreign language teacher. The stakeholder interviews should include, at a minimum, additional teachers, students, and parents. This broader approach would provide a more comprehensive understanding of how the various stakeholders perceive the program. In addition, it would identify the different ways in which they perceive influences of students as well as the school's performance.

6. A sixth recommendation is to focus on global literacy in detail, particularly how the IB MYP enhances the development of global literacy within the school. There is a stated need in current research to improve the level of global literacy in students because it is a national priority. According to this study, the IB MYP appears to develop global literacy. However, what specifically

should comprise global literacy? Moreover, how does global literacy

capability develop through programs such as the IB MYP?

7. A seventh recommendation would be to research how the IB MYP enhances the

credibility of the school's leadership and the school's relationships in the

community. This research identified that the program appears to influence

credibility and relationships; it did not identify, however, how or why this

influence occurs. Nevertheless, the IB MYP does focus on having learners do

projects within the community. Moreover, the school studied in this case

appears to have developed a level of credibility within the community due to

its success. However, it is not known exactly how schools and their leaders

actually achieve these results. Understanding this process would enable other

schools and their leaders to realize these goals more systematically.

8. The eighth recommendation is to explore in greater depth how coaching and

mentoring in the IB MYP enhances the success of the learners. This would be

a more in-depth exploration of the program based on Vygotsky's principle of

the MKO. This information would not only further enhance the success of the

IB MYP, but also enable others developing curricula to integrate the

appropriate approaches to realize this goal.

Recommendations for practice. There are two recommendations for practice

that have emerged from this research.

1. The first practical implication of the study results would be for schools to adapt

curricula that use multidisciplinary approaches. Today, the world is more

interconnected. Therefore, multidisciplinary rather than single disciplinary

curricula are beneficial. Curriculum developers would benefit from understanding the nature and impact of the IB MYP. Curriculum developers also need to understand how this approach achieves learning. Schools that adapt curricula should consider global, comprehensive programs, such as the IB MYP, which have a variety of approaches to learning. In addition, the IB MYP has significant prior studies behind it that demonstrate its effectiveness in a number of areas.

2. Second, principals would benefit from reading the results of this study to understand how many different stakeholders play a vital role in realizing the success of curriculum programs. All of the stakeholders would benefit from seeing the importance of including real-world community-based projects in curricula. In addition, the community would benefit from understanding how students can influence the community through a set of worthwhile projects. Third, teachers and students would benefit from using the results of this study as a component of focusing on stakeholders playing the role of the MKO by serving as coaches and mentors. Teachers benefit from understanding how to facilitate learning. Students benefit from understanding the importance of experiencing learning. Fourth, for students who plan to attend college and students who are successfully completing advanced placement, it is a priority to select programs, such as the IB MYP, that consistently deliver good results.

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Appendix A

IRB Authorization

3300 West Camelback Road, Phoenix Arizona 85017   602.639.7500   Toll Free 800.800.9776   www.gcu.edu

DATE: January 17, 2013

TO: Shamita Johnson

FROM: Grand Canyon University Institutional Review Board

STUDY TITLE: [374255-1] A Case Study of How the International
Baccalaureate Middle Years Programme, Influences the Success of One Middle School
IRB REFERENCE #:

SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: January 17, 2013

REVIEW CATEGORY: Exemption category # *[7.1]*

Thank you for your submission of New Project materials for this research study. Grand
Canyon University Institutional Review Board has determined this project is EXEMPT
FROM IRB REVIEW according to federal regulations.

We will put a copy of this correspondence on file in our office.

If you have any questions, please contact Stephanie Henkel at 602-639-8010 or
stephanie.henkel@gcu.edu. Please include your study title and reference number in all
correspondence with this office.

cc:

Appendix B

IB MYP Regional Division Authorization Letter

Dear IRB,

A Case Study of how a comprehensive global program, the International Baccalaureate Middle Years Program, influences the success of a single middle school, presented by *Shamita Johnson* has been granted authorization by the International Baccalaureate organization (IB) to conduct interviews.

I understand the purpose of the case study is to determine how the International Baccalaureate Middle Years Program (IB MYP) influences the success of a single middle school in the state of Georgia. *Shamita Johnson* will conduct interviews at the International Baccalaureate organization (IB). It is understood that this project will end no later than January 2013.

To ensure confidentiality of the International Baccalaureate organization (IB), *Shamita Johnson* has agreed to provide me with a copy of the Grand Canyon University Internal Review Board (IRB) approval letter.

If the Internal Review Board (IRB) has any concerns about the permission being granted by this letter, please send any inquiries to the contact information listed below.

Sincerely,

Signature of Participant

Contact information

Appendix C

Site Authorization Letter

Dear IRB,

A Case Study of how a comprehensive global program, the International Baccalaureate Middle Years Program, influences the success of a single middle school, presented by *Shamita Johnson* has been granted authorization by ███████████████████████ .

I understand the purpose of the case study is to determine how the International Baccalaureate Middle Years Program (IB MYP) influences the success of a single middle school in the state of Georgia. *Shamita Johnson* will conduct interviews with the staff. It is understood that this project will end no later than February 2013.

I have indicated to *Shamita Johnson* that the research questions can be sent to me via e-mail. Then, responses will be sent back. Thereafter, a follow-up interview call can be made to provide clarity on any remaining questions.

To ensure confidentiality of ███████████████████████ , *Shamita Johnson* has agreed to provide me with a copy of Grand Canyon University Internal Review Board (IRB) approval letter.
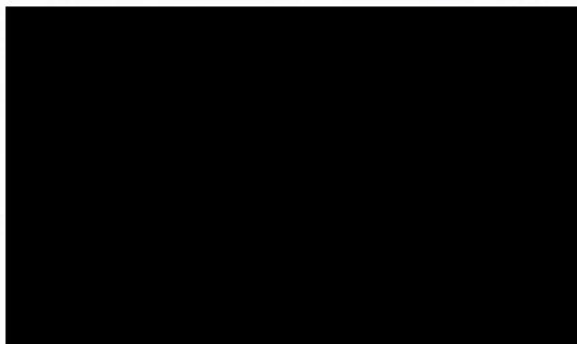
If the Internal Review Board (IRB) has any concerns about the permission being granted by this letter, please send any inquiries to the contact information listed below.

Sincerely,

████████████████

Signature of Principal

Appendix D

Interview Questions—Local School Based Principal

A Case Study of How an International Baccalaureate Middle Years Programme and Leadership Synergistically Promoted Student Learning and School Success

The purpose of the qualitative single case study is to determine how the International Baccalaureate Middle Years Program (IB MYP) influences the success of one middle school in the state of Georgia. The results of this study may be used in reports, presentations, or publications, but your name will not be known. Your responses will be confidential.

Preliminary Information

Date: _____

Interviewer: _____

Start time of interview: _____

End time of interview: _____

Participant's name: _____

Participant's role/position: _____

School/District: _____

Number of years' experience in the education field: _____

Number of years at this campus: _____

Number of years with IB MYP at this campus: _____

Number of years with IB MYP at other campuses: _____

Questions

1. How long have you been a principal? How long have you been the principal in your current position? What was your familiarity with the IB MYP before coming to this school?

2. Could you provide a background of your school's administration and faculty (turnover, average experience, etc.)?

3. Could you provide background information on your school (school size, ethnic background, student mobility, etc.)?

4. When was the IB MYP authorized at your school? What was the candidacy phase like?

5. What are some of the positive impacts of the IB MYP's implementation at your school?

6.   What are (were) some of the challenges of the IB MYP's implementation you have observed at your school?

7.   Based on your experience and observation, do you believe the introduction of the IB MYP at your school has influenced the climate of the school? If so, in what way? By school climate, I mean very broadly, the quality and character of school life. This includes the norms, goals, values, interpersonal relationships, teaching, learning, leadership practices, organizational structures, etc. that contribute to staff and student experiences within your school.

8.   What is the difference in the percentage of growth of the special education subgroup in an IB MYP middle school after two years of exposure to the IB MYP?

9.   Outside of the IB MYP, what are some other key characteristics or features of your school that influence the school climate?

RQ1: How does the IB MYP influence students' academic performance?

10.   To what extent is the IB MYP a focus of the school's improvement plan? Is it possible for me to get a copy for my records?

11.   Do you believe the introduction of the IB MYP at your school has influenced student engagement in learning? If so, in what ways?

12.   What is the difference in achievement growth patterns among eighth-graders after two years of exposure to the IB MYP?

13.   How has IB MYP impacted your school's success, including annual yearly progress (AYP)?

RQ2: does the IB MYP contribute to cognitive development?

14.   Do any factors of the IB MYP contribute to cognitive development? If so, what are the factors?

RQ3: How does the IB MYP contribute to global literacy?

15.   Do any factors of the IB MYP contribute to global literacy? If so, what are the factors?

RQ4: How does the leadership of an IB MYP contribute to a schools' success?

16.   Could you explain leadership's role/contribution to an IB MYP school's success?

17.   Is there anything else you would like to share about the IB MYP in your school?

Appendix E

Interview Questions—Local School Based Project Coordinator

A Case Study of How an International Baccalaureate Middle Years Programme and Leadership Synergistically Promoted Student Learning and School Success

The purpose of the qualitative single case study is to determine how the International Baccalaureate Middle Years Program (IB MYP) influences the success of one middle school in the state of Georgia. The results of this study may be used in reports, presentations, or publications, but your name will not be known. Your responses will be confidential.

Preliminary Information

Date: _____

Interviewer: _____

Start time of interview: _____

End time of interview: _____

Participant's name: _____

Participant's role/position: _____

School/District: _____

Number of years' experience in the education field: _____

Number of years at this campus: _____

Number of years with IB MYP at this campus: _____

Number of years with IB MYP at other campuses: _____

Questions

1.   How long have you been a project coordinator? How long have you been the project coordinator in your current position? What was your familiarity with the IB MYP before coming to this school?

2.   When was the IB MYP authorized at your school? What was the candidacy phase like?

3.   What are some of the positive impacts of the IB MYP's implementation at your school?

4.   What are (were) some of the challenges of the IB MYP's implementation you have observed at your school?

5.   Based on your experience and observation, do you believe the introduction of the IB MYP at your school has influenced the climate of the school? If so, in what way? By school climate, I mean

very broadly, the quality and character of school life. This includes the norms, goals, values, interpersonal relationships, teaching, learning, leadership practices, organizational structures, etc. that contribute to staff and student experiences within your school.

6.   Outside of the IB MYP, what are some other key characteristics or features of your school that influence the school climate?

RQ1: How does the IB MYP influence students' academic performance?

7.   How would you explain the curriculum of IB MYP? May I have copies of the curriculum program?

8.   How does the IB MYP curriculum theory and practice work?

9.   Do you believe the introduction of the IB MYP at your school has influenced student engagement in learning? If so, in what ways?

10.   What is the difference in achievement growth patterns among eighth-graders after two years of exposure to the IB MYP?

11.   How has IB MYP impacted your school's success, including annual yearly progress (AYP)?

RQ2: How does the IB MYP contribute to cognitive development?

12.   Do any factors of the IB MYP contribute to cognitive development? If so, what are the factors?

RQ3: How does the IB MYP contribute to global literacy?

13.   Do any factors of the IB MYP contribute to global literacy? If so, what are the factors?

RQ4: How does the leadership of an IB MYP contribute to a schools' success?

14.   Could you explain leadership's role/contribution to an IB MYP school's success?

15.   Is there anything else you would like to share about the IB MYP in your school?

Appendix F

Interview Questions—Local School Based Foreign Language Teacher

A Case Study of How an International Baccalaureate Middle Years Programme and Leadership Synergistically Promoted Student Learning and School Success

The purpose of the qualitative single case study is to determine how the International Baccalaureate Middle Years Program (IB MYP) influences the success of one middle school in the state of Georgia. The results of this study may be used in reports, presentations, or publications, but your name will not be known. Your responses will be confidential.

Preliminary Information

Date: _____

Interviewer: _____

Start time of interview: _____

End time of interview: _____

Participant's name: _____

Participant's role/position: _____

School/District: _____

Number of years' experience in the education field: _____

Number of years at this campus: _____

Number of years with IB MYP at this campus: _____

Number of years with IB MYP at other campuses: _____

Questions

1. How long have you been a foreign language teacher? How long have you been a foreign language teacher in your current position? What was your familiarity with the IB MYP before coming to this school?

2. Could you provide a background of your role as a foreign language teacher and what language you teach?

3. What are some of the positive impacts of the IB MYP's implementation at your school?

4. What are (were) some of the challenges of the IB MYP's implementation you have observed at your school?

5.   Based on your experience and observation, do you believe the introduction of the IB MYP at your

        school has influenced the climate of the school? If so, in what way? By school climate, I mean

        very broadly, the quality and character of school life. This includes the norms, goals, values,

        interpersonal relationships, teaching, learning, leadership practices, organizational structures, etc.

        that contribute to staff and student experiences within your school.

6.   Outside of the IB MYP, what are some other key characteristics or features of your school that

        influence the school climate?

RQ1: How does the IB MYP influence students' academic performance?

7.   Do you believe the introduction of the IB MYP at your school has influenced student engagement

        in learning? If so, in what ways?

8.   What is the difference in achievement growth patterns in students learning a foreign language with

        an IB MYP?

9.   How has IB MYP impacted your school's success by learning a foreign language?

RQ2: How does the IB MYP contribute to cognitive development?

10.   Do any factors of the IB MYP contribute to cognitive development? If so, what are the factors?

RQ3: How does the IB MYP contribute to global literacy?

11.   Do any factors of the IB MYP contribute to global literacy? If so, what are the factors?

12.   How would you explain the curriculum of IB MYP for foreign languages? May I have copies of

        the curriculum program and lesson plans?

13.   How does the theory and practice of IB MYP foreign language program work?

RQ4: How does the leadership of an IB MYP contribute to a schools' success?

14.   How does the leadership's role contribute to an IB MYP school's success for the foreign language

        program?

15.   Is there anything else you would like to share about the IB MYP in your school?

Appendix G

Codes Pertaining to RQ1

RQ1: How did the International Baccalaureate Middle Years Programme influence
students' academic performance?
Codes emerged from the documents across the document types.

Codes Emerged During Coding Process	Presence of Code in the Document					
	Magazine & Newspaper Media Documents	International Baccalaureate Documents	School Documents	Empirical Journals	Interviews	Database
R1.1.0 Integration of core skills			X	X		
R1.2.0 Analytical Capabilities						
R1.3.0 Classroom Activities						
R1.4.0 Multidisciplinary curriculum	X	X		X	X	
R1.5.0 Multidisciplinary projects	X					
R1.6.0 Community service projects		X		X		
R1.7.0 Rigorous written and oral testing (all subjects)	X					
R1.8.0 Sports used to challenge students	X					
R1.9.0 Environmental projects outside	X					
R1.10.0 Technology				X		
R1.11.0 Creative writing						
R1.12.0 Inquiry, Action & Reflection approaches	X	X	X	X	X	
R1.13.0 Team-						

Codes Emerged During Coding Process	Presence of Code in the Document					
	Magazine & Newspaper Media Documents	International Baccalaureate Documents	School Documents	Empirical Journals	Interviews	Database
based approaches to learning						
R1.14.0 Multi approaches to teaching and learning	X	X	X	X	X	
R1.15.0 Personal based/challengi ng projects (research)		X			X	
R1.16.0 Scaffolding/Zon e of Proximal Development		X				
R1.17.0 Media resources, information & technology		X				
R1.18.0 Variety of technology communication		X				
R1.19.0 Responsibility for own learning				X	X	
R1. 20.0 Career focused curriculum						
R1.21.0 Responsibility of teachers				X		
R1.22.0 Innovative school guidance counselors						

Appendix H

Codes Pertaining to RQ2

RQ2: How did the International Baccalaureate Middle Years Programme contribute
to cognitive development?
Codes Were Based on Literature Review Research that Identified Emotions, Social and Analytic
Reasoning as Areas of Cognitive Development.

Codes Emerged During Coding Process	Presence of Code in the Document					
	Magazine & Newspaper Media Documents	International Baccalaureate Documents	School Documents	Empirical Journals	Interview	Database
R2.1.0 Social Intelligence	X	X		X	X	
R2.2.0 Emotional Intelligence		X		X	X	
R2.3.0 Analytical Intelligence	X	X		X	X	

Appendix I

Codes Pertaining to RQ3

RQ3: How did the International Baccalaureate contribute to global literacy?						
Codes Emerged During Coding Process	Presence of Code in the Document					
	Magazine & Newspaper Media Documents	International Baccalaureate Documents	School Documents	Empirical Journals	Interview	Data base
R3.1.0 Learning languages		X		X	X	
R3.2.0 Appreciating other cultures	X	X		X	X	
R3.30 Addressing global issues	X	X		X	X	
R3.4.0 Interacting with Cultures		X		X	X	
R3.5.0 Valuing peace	X	X		X		
R3. 6.0 Technology access on countries				X		
R3.7.0 Global engagement		X		X	X	

Appendix J

Codes Pertaining to RQ4

RQ4: How did the leadership of an International Baccalaureate Middle Years Programme

contribute to a school's success?

Codes Emerged During Coding Process	Presence of Code in the Document					
	Newspaper & Magazine Media Documents	International Baccalaureate Documents	School Documents	Empirical Journals	Interview	Data base
R4.1.0 Develop multidisciplinary skills	X					
R4.2.0 Improves achievement AYP			X	X	X	X
R4.3.0 School recognized in community					X	
R4.4.0 Becoming an excelling school	X			X	X	X
R4.5.0 College readiness/Preparing schools for success	X			X	X	
R4.6.0 Recognitions of leadership	X					
R4.7.0 Student retention	X		X			
R4.8.0 Stellar academic results	X					
R4.9.0 Global Reality Curriculum	X			X	X	
R4.10.0 Reputation of Colleges/Universities				X		
R4.11.0 Negative Reputation/Recognition	X			X		
R4.12.0 Recognized (Coherent) Curriculum	X					
R4.13.0 Balanced Curriculum	X	X		X	X	
R4.14.0 Rituals/Routines/Order/Discipline					X	
R4.15.0 Faculty/Staff involved in decision making				X	X	
R4.16.0 Celebrations of successes					X	
R4.17.0 Funding	X		X	X	X	
R4.18.0 Supportive leadership				X	X	

Codes Emerged During Coding Process	Presence of Code in the Document					
	Newspaper & Magazine Media Documents	International Baccalaureate Documents	School Documents	Empirical Journals	Interview	Data base
R.19.0 Improves achievement CRCT, Progress Reports & Other			X	X		X
R4.20.0 Good teaching strategies		X				
R4.21.0 Challenges					X	
R4.22.0 Lack data collection approach					X	
R4.23.0 Learning a language increases literacy capabilities						

Appendix K

Codes Synthesized to Themes

Research Question	Codes Synthesized to Themes	Themes	Themes Definitions
R1	R1.19.0 Responsibility for own learning. R1.14.0 Multi approaches (innovative approaches) to teaching and learning. R1.9.0 Environmental projects outside. R1.8.0 Sports used to challenge students. R1.6.0 Community service projects. R1.5.0 Multidisciplinary projects R1.4.0 Multidisciplinary curriculum R1.1.0 Integration of core skills	T1: Multidisciplinary curriculum	Multidisciplinary curriculum involves using a variety of disciplines, rather than a single-discipline approach to learning that links across every content class.
R1	R1.15.0 Personal based/challenging projects (research). R1.12.0 Inquiry & Action (Experimenting/doing) & Reflection approaches to learning. R1.11.0 Creative writing R1.7.0 Rigorous written and oral testing (all subjects. R1.2.0 Analytical Capabilities	T2: Inquiry-based Experiential Approach	Inquiry-based experiential approaches to learning: Construction of courses is based on the use of an inquiry-based experiential approach, which involves asking questions, giving opinions, and experimenting during learning.
R1	R1. 20.0 Career focused curriculum. R1.19.0 Responsibility for own learning. R1.15.0 Personal based/challenging projects (research). R1.9.0 Environmental projects outside. R1.6.0 Community service projects. R1.3.0 Classroom Activities	T3: Real-world Experiential Activities	Real-world experiential activities: Provides a variety of experiential activities in the classroom as well as through community service projects, environmental activities, and global social activities.

Research Question	Codes Synthesized to Themes	Themes	Themes Definitions
R1	R1.10.0 Technology – virtual learning/e-learning/distance learning and connections with other countries/students- Video-conferencing	T4: Technology-enabled learning	Technology-enabled learning: Uses a variety of contemporary technologies such as virtual learning (Internet = e-mail, Skype, GoToMeeting) to enable learning.
	R1.17.0 Media resources, information, and technology based projects		
	R1.18.0 Variety of communication approaches through technology		
R1	R1. 20.0 Career focused curriculum.	T5: Coaching & Mentoring for Learning	Coaching and mentoring for learning: Teachers, guidance counselors, and peers serve as coaches and mentors for all aspects of learning. Teaching methodology includes a variety of specific ways in which teachers can scaffold new learning in the ZPD to help learners understand text
	R1.18.0 Variety of communication approaches through technology.		
	R1.16.0 Scaffolding/Zone of Proximal Development Teaching.		
	R1.13.0 Team based approaches to learning		
	R1.21.0 Responsibility of teachers'.		
	R1.22.0 Innovative school guidance counselors.		
R1	R1. 20.0 Career focused curriculum.	T6: Individual Responsibility & Accountability	Individual responsibility and accountability: Various approaches are used to focus on building individual accountability in areas such as individual performance, ethics, sustainability, and global responsibility.
	R1.19.0 Responsibility for own learning.		
	R1.15.0 Personal based/challenging projects (research).		
	R1.14.0 Multi approaches (innovative approaches) to teaching and learning.		
	R1.9.0 Environmental projects outside.		
	R1.8.0 Sports used to challenge students.		
	R1.6.0 Community service projects.		
R2	R2.1.0 Social Intelligence (Reasoning).	T1: Develops Social Intelligence	Develops social intelligence – Developing social reasoning by working with others and addressing controversial issues, including working through team activities, engagement in community, environmental activities, and dialogue on global social issues.

Research Question	Codes Synthesized to Themes	Themes	Themes Definitions
R2	R2.2.0 Emotional Intelligence (Reasoning)	T2: Develops emotional intelligence	Develops emotional intelligence: Developing emotional reasoning through becoming aware of one's own emotions and managing one's own emotions in individual, team, group, and community activities.
R2	R2.3.0 Analytical Intelligence (Reasoning).	T3: Develops Analytical Intelligence	Develops analytical intelligence: Develops the ability to think critically across content areas as well as in real-life situations.
R3	R3.1.0 Learning languages. R3.2.0 Appreciating others cultures. R3.4.0 Interacting with other cultures. R3.5.0 Valuing peace	T1: Global Cross Cultural Communications	T1: Global cross-cultural communications: Engagement in cross-cultural communications on a global basis, including learning new languages, valuing different cultures, and interacting with people around the world. Learners who are learning in a language other than their mother tongue comprehend that language is integral to exploring and sustaining personal development, cultural identity, and intercultural understanding of how to communicate effectively in more than one language.
R3	R3.3.0 Addressing global issues. R3.5.0 Valuing peace. R3.7.0 Global engagement R3. 6.0 Technology access on countries..	T2: Explore/Understand Global Issues	T2: Explore/understand global issues: Engage in dialogue and activities to provide in-depth understanding and appreciation of significant global issues facing oneself and society.
R3		T3: Access Global Information	Access global information: Use the Internet to find and access information on global issues, culture, and language.
R4	R4.2.0 Improves achievement R4.4.0 Becoming an excelling school R4.8.0 Stellar academic results R.19.0 Improves achievement CRCT, Progress Reports & Other.	T1: Improved national test scores	T1: Improved national test scores: Improvement of analytical skills and cognitive development results in students performing at high academic standards, which lead to far superior standardized test, scores (AYP, etc.).
R4	R4.3.0 School recognized in the community. R4.4.0 Becoming an excelling school. R4.6.0 Recognitions of leadership. R4.12.0 Recognized (Coherent) Curriculum	T2: School and leadership recognition	School and leadership recognition: Schools are exceptional due to the use of leadership approaches that build school strengths and capacity as well as improving community relationships.

Research Question	Codes Synthesized to Themes	Themes	Themes Definitions
R4	R4.5.0 College readiness/Preparing schools for success. R4.10.0 Reputation of Colleges/Universities	T3: Career and college readiness	Career and college readiness: Students are prepared for college and career readiness based on a rigorous, standardized, globally recognized curriculum.
R4	R4.7.0 Student retention	T4: Student retention	Student retention: Keep students in public schools.
R4	R4.9.0 Global Reality Curriculum. R4.12.0 Recognized (Coherent) Curriculum. R4.13.0 Balanced Curriculum (flexibility). R4.23.0 Learning a language increases literacy capabilities	T5: Globally recognized curriculum	Globally recognized curriculum: A curriculum that is on a global level, which provides learning in a broad base of disciplines to ensure that students acquire the knowledge and skills necessary to prepare for the global future.
R4	R4.1.0 Develop multidisciplinary skills. R4.14.0 Rituals/Routines/Order/Discipline R4.15.0 Faculty/Staff involved in decision making. R4.20.0 Teachers learn good teaching strategies.	T6: Positive school climate	Positive school climate: The school setting is conducive to a successful learning environment due to a positive and supportive climate that is created to engage students, teachers, parents, and leaders in the learning process, which also provides value to all of the stakeholders. Everyone is involved in decision-making and celebrations of academic, professional, and personal success are the norm, whereby learners are self-directed, self-managed, self-regulated, and thus autonomous
R4	R4.17.0 Funding R4.18.0 Supportive leadership	T7: Government recognition and funding	Government recognition and funding: A variety of funding sources support the IB programs in U.S. schools. These sources include local taxes, state funding, federal funding, grants, and the IB Fund
R4		T8: Ethical globally contributing members of society	Cultivate learners who develop higher levels of ethical behaviors and who have the capabilities to be contributing members of our global society.
R4	R4.11.0 Negative Reputation/Recognition R4.21.0 Challenges R4.22.0 Lack of data collection approach.	T9: Negative perceptions from some constituents:	Various external constituents and critics in the United States do not support the IB program, for a variety of different reasons.

Appendix L

Data Sources Artifacts

Magazine & Newspaper Media Documents	International Baccalaureate Documents	School Documents	Empirical Journal	Interviews	Database
Vancouver schools brace for shake-up	Learning in a language other than mother tongue in IB programmes	Local School Georgia Curriculum Document	Peace education: an International Baccalaureate perspective	Local School in Georgia (Interview Question Principal)	Math AYP scores
International Baccalaureate Undermines U.S. Founding Principles	Global engagement: Teaching and learning about the environment	Local School Georgia lesson plans	The International Baccalaureate and its Diploma Programme online: The challenges and opportunities	Local School in Georgia (Interview Question Project Coordinator)	Reading AYP scores
International Baccalaureate May Get Lift from Booster Bush	Global engagement: Teaching and learning about rights		A Distributed Perspective on Instructional Leadership in International Baccalaureate (IB) Schools	Local School in Georgia (Interview Question Foreign Language Teacher)	
International Baccalaureate Creates 4,000th Program Worldwide	Personal project guide		School Program Selection: Why Schools Worldwide Choose the International Baccalaureate Middle Years Program		
In Defense of International Baccalaureate	What is an IB education?		Unequal Access to Rigorous High School Curricula: An Exploration of the Opportunity to Benefit From the International Baccalaureate Diploma Programme (IBDP)		

Magazine & Newspaper Media Documents	International Baccalaureate Documents	School Documents	Empirical Journal	Interviews	Database
A new reason to stick around?			An empirical method for deriving grade equivalence for university entrance qualifications: an application to A levels and the International Baccalaureate		
With World Growing Smaller, IB Gets Big.			An international model of world-class education: The International Baccalaureate		
International Baccalaureate program offered at middle school			A summary of research on the International Baccalaureate Diploma Programme: Perspectives of students, teachers, and university admissions offices in the USA		
Discovery Middle School aims to leave problem zone			Intellectually Gifted Females and Their Perspectives of Lived Experience in the AP and IB Programs		
Colorado Voices Education paths Should Colorado's focus be on preparing students for colleges?			The relationship between transformational leadership and cultural intelligence A study of international school leaders		

Magazine & Newspaper Media Documents	International Baccalaureate Documents	School Documents	Empirical Journal	Interviews	Database
			Leadership challenges in international schools in the Asia Pacific region: evidence from programme implementation of the International Baccalaureate		
			The International Successful School Principalship Project: success sustained?		
			Evolution of education for international mindedness		
			The International Baccalaureate and a framework for class consciousness: the potential outcomes of a 'class-for-itself'		
			To westernize the nations? An analysis of the International Baccalaureate's philosophy of education		
			Transnational spaces of education: the growth of the international school sector		
			Coping Strategies of High School Students in an International Baccalaureate Program		

Magazine & Newspaper Media Documents	International Baccalaureate Documents	School Documents	Empirical Journal	Interviews	Database
			Exploring adolescents' thinking about globalization in an international education		
			The International Baccalaureate in the USA and the emerging 'culture war'		
			The International Baccalaureate Diploma Programme and the construction of pedagogic identity: A preliminary study		
			Whispers from within : Students' perceptions of the first year of the International Baccalaureate Middle Years Programme in an international school		