

INTERNATIONAL BACCALAUREATE: A STUDY IN COLLEGE READINESS

A Dissertation

by

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This dissertation meets the standards for scope and quality of Texas A&M University-Corpus Christi and is hereby approved.

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ABSTRACT

Lack of college readiness in high school graduates entering college is a problem. The International Baccalaureate Diploma Program (IBDP) is a challenging pre-university curriculum, created by a group of teachers from Geneva in 1968 for students who wanted to study in European universities. The primary purpose of the study was to examine the high school correlates of first semester college freshman Grade Point Average (GPA) and credit hours completed in a non-probability sample of the IBDP graduates. The second purpose was to document the perspectives of a group of the IBDP graduates regarding the effectiveness of the program in preparing them for college.

The study employed an explanatory sequential mixed methods design. Descriptive statistics, correlation coefficients, coefficients of determination, and mean difference effect sizes were used to analyze the quantitative data. Inductive analysis was used to analyze the qualitative data. A total of 31 college freshman students, IBDP graduates of the study site, voluntarily participated in the quantitative component of the study and 12, from this group, participated in the qualitative study. The majority of the participants were female (61%), White (84%), and not economically disadvantaged (87%).

The quantitative results showed that the study's IBDP graduates had achieved high GPA and completed a large number of credit hours during the first semester of college. High school GPA, junior year English and physics scores predicted college GPA. High school GPA and junior year physics scores predicted the credit hours taken. The qualitative results indicated the challenging nature of the IBDP curriculum had prepared IBDP graduates for the first semester of college with writing skills, problem-solving skills, management of time and stress in college.

The results of the study may be used to predict college readiness in IBDP students. The findings could provide the community with positive feedback on the IBDP and encourage more students to enroll in this challenging program. The study could be used to ensure that the best academic programs are available for students' postsecondary success and IBDP programs can use the results to improve gray areas of implementation. The study can be replicated using a diverse population.

DEDICATION

This dissertation is dedicated to my parents, Meetna Jathavedan and Aryadevi Vedan, my two sons Karthik and Srikanth, and to my husband Ajeet Varma. My parents gave me the freedom to explore and seek my own path. My mother, who dreamt some 30 years ago that I would go much further than anyone in my family, has inspired in me the love to learn and find myself. My sons have given me unconditional love during the most trying times in life. My husband, who has stood like a rock, has provided me patient support and unending love to follow my chosen path which has taken me far from him in distance of place.

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CHAPTER I

INTRODUCTION

Background and Setting

The International Baccalaureate (IB) program is a non-profit educational foundation founded in 1968 in Geneva, Switzerland. Although its beginnings date back to just after World War I, when the International School of Geneva, popularly known as Ecolint, was formed to serve the needs of the League of Nations (Peterson, 2011). A call to create an international school, similar to the IB was made as early as 1925, but failed due to an indifferent response. As a result, as late as 1945, differences between national college entrance requirements necessitated segregating expatriate students studying in Geneva into distinct national groups in order to deliver curricular content that satisfied these differing requirements. This situation led to a second effort to create an international curriculum to ensure expatriate students would satisfy entrance requirements for the universities of their choice, regardless of whether the university was in their own country, or elsewhere. In 1948, Ecolint was asked to take a lead role in creating an international curriculum (Peterson, 2011).

Finally, teachers from the International School of Geneva, in collaboration with other international schools, created the International Baccalaureate Diploma Program (IBDP) to cater to internationally mobile students, mostly children of diplomats, between the ages of 16-19, who were preparing for college (International Baccalaureate Organization, 2013). In its early years, the program provided a pre-university curriculum, with common external examinations across the world, aiming to prepare students for an international education. The early IB schools were predominantly private. However, over the years, the inclusion of state schools has expanded so

that now more than half of participating schools are state schools. The IB has further grown to include primary and middle year programs (IBO, 2013). Although the IB program has been criticized for its *Eurocentric* curriculum (Peterson, 2011), most developing nations followed the European model for university education, and the majority of the IBDP graduates pursued higher education at European universities. Over the years, curricular changes have been incorporated to make IB truly international.

The IB mission statement clearly asserts its purpose is to create a better and more peaceful world where young people foster intercultural understanding and respect (IBO, 2013). Further, the IB learner profile provides ten attributes the program is designed to foster. These attributes are intended to produce students who are: (a) inquirers, (b) knowledgeable, (c) thinkers, (d) communicators, (e) principled, (f) open-minded, (g) caring, (h) risk-takers, (i) balanced, and (j) reflective (IBO, 2013). The combination of these attributes prepares students to become responsible members of their communities, nations, and the world (IBO, 2013).

The IBDP requires specialized training for teachers to prepare them to teach the two-level (standard and higher level) curriculum. The rigorous curriculum is made of the Diploma (DP) Core and six subject groups. The DP core has three required components: (a) Extended Essay, an original, independent research essay of 4,000 words completed under the supervision of faculty; (b) Theory of Knowledge, in which IBDP students reflect upon the nature of knowledge; and, (c) Creativity, Action, and Service, which requires 150 hours of community service (IBO, 2014). The six subject groups are: (a) Studies in Language and Literature, (b) Language Acquisition, (c) Individuals and Societies, (d) Sciences, (e) Mathematics, and (f) Arts (IBO, 2014). Students have to take three subjects in higher level and three subjects in standard level. The IB assessments are criterion based, and award students points based on performance. The point

range is from one (on the low end) through seven (on the high end). Students must accumulate 24 points in all to earn a Diploma, with 12 points awarded in Higher Level (HL) subjects. While the maximum number of points a student may achieve is 45, (6 subjects x 7 points each + 3 points for the Extended Essay and Theory of Knowledge), the average score is 30 points, and approximately 5 % earn 40 points (IBO. 2014).

The first IB school in the United States was authorized in 1971 in New York. Since that time, the program has enjoyed a healthy expansion. At the time of this study, there were 1,575 IB schools in the United States, with 142 are situated in Texas, offering one or more of the three IB programs – Primary Years Program (PYP), Middle Years Program (MYP) and Diploma Program (DP). Of the total number of school in the US, 444 offer the PYP introduced in 1997; 544 offer the MYP, introduced in 1994; and 830 schools offer the DP (IBO, 2014). Recently, in 2012, a fourth program was introduced. It is the Career Related Program (CP), aimed at offering career-ready courses for students aged 16-19 (IBO, 2014).

As IB schools have expanded in the United States from 1999 to 2009 (Bunnell, 2011), there has been a corresponding increase in IBDP graduates over the past decade. Between 2001 and 2011, while participation doubled in Texas from 3 % to 6 %, performance levels remained stable, ranging from 85.1 % to 87.9 % (TEA, 2013). The IB program was introduced to the study site's district in 2007 in the elementary and middle school gifted and talented schools. According to Saenz (2007), when the IB program was first initiated in the site's district, there was resistance, and numerous questions regarding its Eurocentric curriculum and costs were raised. But eventually, the school district prevailed and the program was implemented, and has since flourished

The IBMYP was introduced to the study site in 2009 and the IBDP in August 2011.

Although the study site is a Title I school, initially, the IB program was a magnet program for the gifted and talented students who streamed into the high school through the vertically aligned gifted and talented school that followed the IBMYP. The district received criticism for making the IB program exclusively for the gifted and talented. However, the selection of the study site as the IB school was made because of its proximity to the feeder schools. Later, in 2014, the school became a world IB school and became eligible to follow the IBMYP curriculum through the 10th grade. In other words, admission was not just through the gifted and talented program alone but it was open to all students in the school district and outside the district. All students now had the option of entering the IB program and following the IBDP in grades 11 and 12.

Since, 2014, the demographics for the IBMYP became more diverse and subsequent cohorts in the IBDP have also become diverse. The present study has focused only on the first two cohorts of the school, namely the 2013 and 2014 cohorts where diversity was limited and the students came from the gifted and talented population. Although, the main feeder school is still the gifted and talented middle school, there are more students enrolling into the program from across the district, outside the district and from private schools. Students from outside the gifted and talented have to apply for the program through an application that requires a 400 word personal essay on why they wish to join the program, provide a copy of their latest school transcript and of their latest standardized test results.

Many parents and students still do not know the difference between taking Advanced Placement (AP) courses and the IB curriculum, because IB is more rigorous and new to the district. However, having now successfully graduated three cohorts (2013, 2014, and 2015), the school's IBDP graduates have had the opportunity to impact their peers and families, and more students are enrolling in the program. The high school has strengthened the program rapidly, and

graduated 139 IB students. The IB DP graduates from the study school have been admitted to colleges and universities both within and outside of the country, and many have received full scholarships and several college credits.

Statement of the Problem

Although most students aspire to earn a college degree, only 68 % enroll in institutes of higher education immediately after high school (National Center for Education Statistics, 2013; ACT, 2013). Additionally, among students who do enroll in college, only about 60 % graduate from four-year institutions within six years of enrollment, and the completion rates at two-year institutions are even less (NCES, 2013; ACT, 2013). Given these poor graduation rates, it is imperative to identify the gaps that exist between knowledge and academic skills that students have acquired in high school and those needed to be successful in college (ACT, 2013).

College Readiness

For several years, the term *college readiness* has been discussed frequently in the field of education. It refers to the level of preparation a student needs in order to enroll and succeed, without remediation, in a credit bearing general education course at a postsecondary institution (Conley, 2007). In other words, high school courses must prepare students with the requisite skills “to be able to cope with the full range of college courses they are likely to encounter” (Conley, 2007, p. 5). A college-ready student, therefore, “is expected to understand the content knowledge that is presented, be able to absorb the key intellectual lessons, and have the disposition and attitude to imbibe the college culture of academic and social environment” (Conley, 2007, p. 5). Studies describing the postsecondary impact of AP/IB DP courses have also been examined by Wilkerson (2005), Byrd, Ellington, Gross, Jago, and Stern (2007), Roderick et al. (2009) Saavedra (2011), Blake (2012), and Lou (2013). These studies concluded that that

AP/IBDP courses have a definite impact on college enrollment and success of students. These researchers further found that the IBDP students outperformed the AP students in critical thinking skills.

In order to fully grasp the problem of high school students who are not prepared for college, one has to investigate the changes in school education over the past decade and explore the impact of IB in creating college-ready students.

Since the No Child Left Behind (NCLB) initiative was implemented in 2001, accountability for state tests has increased (Darling-Hammond, 2014). NCLB (2001) has forced schools and policy makers to implement challenging curricula for all students (Mayer, 2010). However, according to reports from the National Assessment of Educational Progress (NAEP), the eighth and 12th grade scores have not shown any improvement. Further the report from the Program for International Student Assessment (PISA) which tests students' ability to apply knowledge and demonstrate reasoning, showed the United States' performance in mathematics, reading, and science declined between 2000 and 2012 (Darling-Hammond, 2014). The need for a new and meaningful system of learning that is inquiry-based, and which leads to continuous improvement in schools has become important (Darling-Hammond, 2014).

The drive for improved academic standards has further strengthened with the more recent Race to the Top (RTT) program of 2009 that awards grants to participating schools for demonstrating improved academic performance (Frost, 2011; U.S. Department of Education, 2009). Further, the 2010 reauthorization of the Elementary and Secondary School Act (ESEA) of 1965 that provided states with more flexibility in developing plans to improve testing and enforce quality education has brought the focus back to accountability and college and career readiness. Also, a new wave of competitive spirit has been introduced with the new flexibility

provision of the reauthorized ESEA and the incorporation of the RTT. These new policies have provided waivers from the accountability system within NCLB and reward schools and teachers for improved academic performance to make students college ready (Frost, 2011; U.S. Department of Education, 2009).

According to Mayer (2010), these federal government expectations have sent policy makers in search of school reforms that would help schools “to raise the academic achievement of their students” (p.172). The AP and IB programs have been used as indicators of school quality (Frost, 2011; Kyburg, Hertberg-Davis & Callahan, 2006; Mayer, 2010; Roderick et al., 2006; Saavedra, 2011; Smith, 2009). Kyburg et al. (2006) suggested that over a length of time, the IB Program could assist minorities in achieving greater academic success because teachers have higher expectations.

Texas, although not part of the RTT, has also implemented more stringent measures of testing since spring 2012. Prior to 2012, Texas passed legislation, which focused on increasing the numbers of college, and/or career ready high school graduates (Texas State Legislature, House Bill 1). This legislation required the Texas Education Agency (TEA) and the Texas Higher Education Coordinating Board (THECB) to create vertical teams in the areas of English and language arts, mathematics, science, and social studies to develop strong college and career readiness standards in order for students to succeed in entry-level courses at postsecondary institutions (EPIC, 2008). While developing the college and career readiness standards (CCRS), it was inferred that high school courses were designed to provide core knowledge and skills as a foundation in literacy and basic mathematics, whereas college courses required students to use their content knowledge to analyze issues and questions in their field of study. Even college preparatory courses do not prepare students for specific majors in college, although they do

provide a stronger foundation of skills so that students may pursue different majors in college (EPIC, 2008). To bridge this gap, an entire set of CCRS guidelines were prepared to address the shortcomings that students demonstrated in entry-level college courses. This study explored the IBDP curriculum as one of the curricula that fits the CCRS mostly by structure and results as demonstrated by the graduates.

Theoretical Framework

The theoretical framework for the study is Jean Piaget's theory of Constructivism, derived from his research on cognitive learning. According to Piaget (1950), intelligence, which is comprised of "a mobile and at the same time a permanent equilibrium between the universe and thought, is an extension of and perfection of all of all adaptive processes" (p.10). In other words, Piaget's theory on knowledge and learning describes both what knowing is and how one comes to know (Fosnot, 2005). The constructivist theory is not a theory for teaching but provides a different approach to instruction. Since it was derived from psychology, philosophy, science, and more importantly biology, the theory views knowledge as emergent and developmental, and believes humans engage in continual meaning making through cultural and social communications (Fosnot, 2005).

This theory is incorporated into the IB curriculum by compelling students to construct knowledge based on their existing mental models, deepening their experience of understanding evolving through inquiry (IBO, 2008). Students in these programs are taught to become independent learners as a result of curricular demands. The IB's focus on reflective practice along with encouragement in curiosity learning, coupled with a holistic grading process, allows students to develop a learning style that is internalized from their primary years through their final years in high school. Additionally, IB follows the theory of multiple intelligences as

established by Howard Gardner (IBO, 2008). Gardner (1983) proposed a model with eight abilities to describe intelligence rather than as on single ability : visual-spatial, musical-rhythmic, verbal-linguistic, logical-mathematical, bodily-kinesthetic, interpersonal, intrapersonal and naturalistic. Instead of restricting students to one form of intelligence, these abilities can allow students to excel in education. The IBDP provides the breadth of learning through its curriculum; IBDP students can choose fine arts, music or art, as one of the subjects to pursue instead of just the core subjects.

Jerome Bruner's (1971) emphasis on culture as an integral aspect of education is absorbed in IB education as evident in the IB's mission and curriculum structure. Bruner investigated the relationship between culture and cognitive development by studying whether intellectual development depends upon external influences. The IB curriculum emphasizes creating culturally sound students by including curricula that expose them to different cultures of the world (IBO, 2013). This aspect is accomplished through the criteria that are used to evaluate student progress and through the theory of knowledge, the DP core that connects all subject areas by teaching ethics and explaining how knowledge works in society. In literature, students have to read works from other world cultures, which exposes them to the workings of other societies in comparison to their own. The IBDP students are taught to be culturally sensitive which builds their cognitive development. Bruner also analyzed language as a cultural barrier in cognitive development and found that children who went to school and learned the written language developed better cognitively than children who were unschooled. Bruner supported his theories on language with Vygotsky's theories (Takaya, 2008). The IBDP students have to learn a language other than their own and take a final examination. The language learning begins in the MYP and develops further in the DP of the 11th and 12th grades (IBO, 2013). Students are also

given an opportunity to use their first language for extended essays. This function of choice within the curriculum allows students to pick the subjects that they most desire to learn, not only providing more freedom in learning, but fostering an innate desire to learn.

In *Experience and Education (1938)*, Dewey states that the primary objective of education is “to prepare the young for future responsibilities and for success in life” (p.18) through subject matter learning and real life experiences. Dewey believed in the “connection between education and personal experience” (p.25), a new philosophy in education that was both empirical and experimental. It becomes the educator’s duty to incite interest in the students to learn; a teacher cannot evoke interest in students’ learning experience just by examples of experience or drill methods. Dewey advocated a progressive education based upon the philosophy of experience; experience that “arouses curiosity, strengthens initiative, and sets up desires and purposes that are sufficiently intense to carry a person over dead places in the future” (p. 38). In other words, experiences of educators guide them in understanding their students’ experiences and in creating lessons that provide rich learning experiences for their students. If educators do not continue to apply their experiences to improve their teaching strategies, their experiences are useless. Dewey reiterated that educators have to understand “what surroundings are conducive to having experiences that lead to growth” (p. 40). The IB curriculum creates opportunities for students to apply their experiences in a learning environment that allows them to grow as independent learners. The IBDP’s curriculum emphasizes an expanded portfolio that consists of oral assessments in languages, and written assessments in the form of essays, laboratory reports across the curriculum, performances, as well as volunteer community involvement. This provides multiple opportunities for intellectual and academic growth where students are given choices to expand their creativity and produce works of originality (IBO,

2013). The teacher becomes a facilitator and an advisor while students discover learning on their own and become competent in self-expression through oral presentations and written assessments. Piaget's theory on meaning-making through inquiry becomes the core element in the IB curriculum, which makes students independent learners and further aids in their postsecondary education.

Another philosophical influence for the PYP has been Maria Montessori (IBO, 2013). According to Orem (1966) her methodology of teaching by touch and feel placed great emphasis on early childhood learning as students learn by discovery and experimentation of touching and feeling. Her technique for early childhood learning followed a natural physiological and psychological development that she called "sensitive periods" (Orem, p. 13) of the child and was divided into three parts, namely, motor, sensory, and language or intellectual education. Motor education relates to learning through movement; students have to move around in groups to connect to their growth as caring of their environment. The "caring" aspect is a component of the IB Learner profile, a non-academic skill required for life. The sensory education relates to the manner in which students approach the materials provided to them and utilize them to extend their learning through observance, comparisons between the selected object that would lead to reasoning and decision making. The sensory education is instilled in IBDP students through critical thinking skills. The period from birth to six are the most crucial when the child constructs his personality through his "experiences and environment" (Orem, 13) and language learning occurs (Orem, 122). This part of the Montessori method provide intellectual development to students through discovery learning and connects to the IBDP philosophy of independent learning that comes with curiosity about subjects. Montessori also placed great importance on the freedom of the child: freedom to choose materials, freedom to choose the

objects for learning, freedom to work alone, or in groups. Providing freedom did not lead to lack of discipline, for order would fall into place if the child were engaged with the materials or activities he/she had chosen. She preferred the teacher to be a guide without letting the child know of his/her presence as she has espoused in her theory on providing freedom to students. This philosophy of the teacher as a guide is present in the IB viewpoint, which views the teacher as a facilitator. This allows students freedom to maintain enthusiasm for the subjects under study. The IB curriculum, therefore, provides the opportunity for originality of thought and creativity as facilitated by the teacher, and encourages independent learning, which is a very important element for cognitive development.

The common element in these theories is the construction of thought by learners through cognitive development, which creates independent learners who are supported by a facilitator. The freedom to discover knowledge develops students cognitively as they become aware of their learning and are ready to take accountability for it. Students pride themselves in creating products using their reasoning. The process begins in the early childhood years of the PYP, progresses in the MYP, and comes to full realization in the DP years. The IB curriculum provides a beautiful and seamless process that is rigorous but challenging. It endows students with lifelong learning skills that ensure the growth of successful, well-rounded individuals in the future.

Purpose of the Study

The primary purpose of the study was to investigate the impact of the IBDP on the postsecondary academic success of IB program graduates. The primary reason for analyzing the college readiness of the IBDP graduates was to investigate whether the IB curriculum prepares high school students for college. The study took place in South Texas.

IB research has increased over the past decade. However, research on student achievement and college readiness is scant. A few studies have been conducted to understand the impact of the IBDP on college admission and stress management. Foust, Hertberg-Davis, and Callahan (2009a, 2009b) and Shaunessy, Suldo, Hardesty and Shaffer (2006) studied the stress associated with the IBDP. Smith (2009), Frost (2011), and Lou (2009) explored completion of college courses in the first semester and year. Mayer (2006) studied the positive impact of the IB program among minorities. A recent study by Conley, McGaughy, Davis-Molin, Farkas and Fukuda (2014) examined the role of the IBDP in preparing students for college by examining the students' accounts of classroom teaching and curriculum.

With the growing number of students in both inner city and urban schools, this study's topic is an important area for research because student achievement in college reflects upon the high school education students received. Given the nature of the IBDP program, the challenges faced by these students are daunting, but literature suggests they lead to better preparation for college and postsecondary academic success. The study was guided by the following research questions:

1. To what extent does academic achievement in high school explain GPA and course completion among International Baccalaureate Diploma Program graduates?
2. What are the perspectives of International Baccalaureate Diploma Program graduates regarding the usefulness of the program in preparing them for college education?

Definition of Terms

ACT - Originally called American College Test (ACT, 2012)

Advanced Placement Program (AP) - A program founded by the College Board in the 1950s to fill the gap for high achieving students so that they could be exempt from introductory level courses in college (College Board, 2014).

CAS - Creativity, Action, and Service, a 200-hour voluntary work requirement for the IBDP students to receive their diploma (IBO, 2013).

Diploma Years (DP) - the final two years of the IB program in the 11th and 12th grade levels that lead to attaining the Diploma (IBO, 2013).

Gifted and talented – Those individuals who demonstrate outstanding levels of aptitude (defined as an exceptional ability to reason and learn) or competence (documented performance or achievement at or above the top 10%) in one or more domains (e.g., mathematics, music, language) and/or sensorimotor skills (e.g., painting, dance, sports; National Association for Gifted Children, 2010).

International Baccalaureate (IB) - founded in Geneva, Switzerland, by teachers in 1968 to generate a common curriculum across the world that would create students who are inquiring, knowledgeable and caring to create peace and intercultural understanding (IBO, 2014).

International Baccalaureate Diploma Program (IBDP) - a challenging two-year program open to any student, between the ages of 16-19 (IBO, 2014).

Middle Years Program (MYP) - the IB program from Grade 6 to Grade 10 (IBO, 2013).

No Child Left Behind (NCLB) - a 2001 federal policy to raise the bar in educational excellence in schools (U.S. Department of Education, 2014).

Primary Years Program (PYP) – This is IB’s elementary school program from Kindergarten to fifth grade (IBO, 2013).

Race to the Top (RTT) - a federal policy begun in 2009 aimed at providing incentives to schools and teachers for improved performance (U.S. Department of Education, 2009).

TIBS - Texas International Baccalaureate Schools, created as a non-profit organization to support parents, teachers, and students who are involved in IB schools (Texas International Baccalaureate Schools, 2014)

Delimitations, Limitations, and Assumptions

The study was delimited to the IBDP graduates of one high school in South Texas in 2013 and 2014. The majority of these graduates came from the gifted and talented group of students in the feeder middle school. The two cohorts were part of the initial program that formed a magnet school. Due to non-probability nature of sampling, external validity was limited to the study's participants. No causal inferences were drawn, as the study was non-experimental in nature. The researcher assumed the study participants provided accurate qualitative data. It was assumed that the researcher remained rigorous with objectivity and subjectivity in both the quantitative and qualitative portions of the study, respectively.

Significance of the Study

The study was significant because it has provided empirical and theoretical support that the IBDP prepares students academically for college (Aulls & Lemay, 2013; Aulls & Peláez, 2013; Coca, Johnson & Kelley-Kemple, 2012; Conley et al., 2014; Halic, 2013; Roderick, Nagoaka, Coca, Moeller, 2009). The study's results provided concerned individuals with information that may be used to evaluate the benefits of the program. The IBDP graduates' postsecondary academic success could be instrumental in encouraging other students to enroll in a challenging curriculum.

The study examined the high school correlates of first semester college freshman GPA and credit hours completed. The perspectives of the IBDP graduates on the impact of the IB curriculum on college readiness were also documented.

CHAPTER II

LITERATURE REVIEW

Several studies have been conducted on the impact of the IBDP on student success because of its rigor (Blake, 2012; Burris, Welner & Wiley, 2007; Byrd et al., 2007; Conley et al., 2014; Foust et al., 2008, 2009; Frost, 2011; Hill, 2011; Kyburg, 2006; Kyburg, Hertberg-Davis & Callahan, 2007; Mayer, 2006, 2010; Roderick, Nagoaka, Coca & Moeller, 2009; Saavedra, 2011). However, few studies exist regarding the level of college readiness that the IBDP offers (Bland & Woodward, 2009; Coca, Johnson, & Kelley-Kemple, 2012; Conley et al., 2014; Culross & Tarver, 2007; Duevel, 1999; Frost, 2011; Lou, 2013; Panich, 2001; Roderick et al., 2009; Thomas, 1988a, 1988b). Studies specific to the South Texas region are even more scarce (Bland & Woodward, 2009), and this study aims to fill this gap. Almost all research regarding the effect of the IBDP has been conducted on gifted programs or ethnic minorities, but specific studies related to the rigor in the IBDP curriculum and its effect on college education are few. At the time of this study, newer studies were being published in different parts of the country, though few for the South Texas region.

College Readiness

High school students' lack of college readiness is a nationwide issue. Recognition of the need for college readiness in Texas gained momentum after the 79th Legislature of Texas passed House Bill 1, the "Advancement of College Readiness Curriculum." Section 28.008 of the Texas Education Code "seeks to increase the number of students who are college and career ready when they graduate high school" (Texas Higher Education Coordinating Board, 2009, p. iii). The Legislation required the Texas Education Agency (TEA) and Texas Higher Education

Coordinating Board (THECB) work together to develop the CCRS for English/language arts, mathematics, science, and social studies. This legislation led to an increase in early college courses for high school students (Chapa, Galvan-De Leon, Solis, & Mundy, 2014). Further, nationally, the implementation of No Child Left Behind (NCLB, U.S. Department of Education, 2001) had already put immense pressure on teachers and schools to increase rigor in instruction (Chapa et al., 2014; Frost, 2011), and RTT (U.S. Department of Education, 2009) has only increased the requirement for college readiness for incoming freshman in college.

Completing high school is not commensurate with college readiness (Conley, 2007). Conley's (2007) operational definition for college readiness states that it is "... the level of preparation a student needs in order to enroll and succeed—without remediation—in a credit-bearing general education course at a postsecondary institution that offers a baccalaureate degree or transfer to a baccalaureate program" (p. 6). Further, if students succeed in "best practices" (p. 6) of instruction, they will be able to manage college curriculum. This is corroborated by ACT, which surveyed high performing high schools for practices that supported common core standards and college and career readiness. They found 74 % of teachers reported that a strong relationship between teachers and students, coupled with a safe school environment, and increased instructional time, led to higher student achievement, paving the way for creating college-ready students (ACT Report, 2012). Non- cognitive skills such as time-conflict management, determination, social attitude, and grade point average (GPA) combined demonstrated college readiness in students (Conley et al., 2014; Roderick et al., 2009). Further studies on developmental education also prove that high school GPA is correlated to college completion (Belfield & Crosta, 2012; Scott-Clayton, 2012). Stewart, Lim and Kim (2015) examined the relationship of remedial work and college persistence in first year college students.

They found that high school GPA and first semester college cumulative GPA explained 26% of persistence in college. In other words, high school GPA did not suggest persistence beyond the first year in the same institution for students placed in “mandatory remedial coursework” compared to “traditional aged college students who were academically prepared to take college-level work” (p.18).

Studies have been undertaken to assess different programs in high schools that claim to have college readiness standards in place so that students seamlessly stream into college course work and perform effectively in a postsecondary environment. The foremost programs that provide college level course work are Advanced Placement (AP), IBDP and Dual Credit. Some of these studies are discussed here.

Non-Credit and Non-IBDP Curriculum and College Readiness

Adelman’s study (1999), analyzed bachelor’s degree attainment based on academic transcripts. He focused on students who took rigorous high school curricula and found these students typically succeeded in college. However, his study only included honors and AP programs, the potential impact of the IBDPs was not investigated. Adelman (1999) conducted a longitudinal study that followed a national cohort of 10th grade students from 1980 to 1993. The study combined high school and college transcripts, records, test scores, and surveys to arrive at its quantitative findings. Adelman concluded there was a stronger correlation between high school curricula and attaining a bachelor’s degree than test scores or class rank. According to his findings, the impact of high “academic intensity and quality on degree completion” (p. vii) was most positive in African American and Latino students.

Adelman also found a correlation between AP courses taken and bachelor’s degree completion. Furthermore, the study revealed that the highest level of mathematics taken at high

school had a strong and continuing effect on the completion of a bachelor's degree. In other words, the study determined that high school curricula, test scores, and class rank combined have an effect on students' postsecondary success. This included students with lower socio-economic statuses (SES). This indicates courses with high degrees of rigor have the potential to offset negative social factors, including low SES. The major reason for their success depended on their responsibility to their education, which was the theme of the study.

Adelman followed up his findings in a second study, *The Toolbox Revisited* (2006), where he analyzed the cohort of 1992 high school graduates. In this study he looked at the "histories" (p. xvi) of the students derived from college transcripts. The major theme of this study was also student responsibility. Students who were accountable for their own education were the ones who succeeded, despite adverse circumstances. The major findings corroborated his earlier study (1999), which found that high school curriculum had a significant effect on the completion of a bachelor's degree. A major difference between the two studies was that class rank/GPA moved ahead of end-of-course senior year tests (2006). According to Adelman, "earning grades that place one at the top 40 percent of the first year GPA for the whole cohort is strong—and positive—contribution to academic momentum" (p. xxii) and also for degree completion for both the 1982 and 1992 cohorts. The study reiterated three points to reckon with: (a) high schools have to provide challenging content for better postsecondary preparedness, (b) postsecondary institutions have to become active players, and (c) the first year of postsecondary must begin in high school through AP courses and other dual enrollment structured courses.

Empirical studies (Flores, 2012; An 2015; An & Taylor, 2015; Connolly, Olson, Durham & Plank, 2014; Geiser & Santelices, 2004, 2007; Giani, Alexander & Reyes, 2014; Roderick, et al., 2009; Srinivas, 2012) have been conducted on AP and dual enrollment programs to explore

associated aspects of college readiness. Saul Geiser and Veronica Santelices (2004) analyzed the performance of college students from one campus of the University of California between 1996 and 1999. They found that “a GPA that does not grant additional points for honors – is consistently the best predictor of both first- and second-year college grades for each of the three cohorts in the sample” (p. 13). In another study (2007), they reaffirmed that “high-school grades are in fact better predictors of freshman grades in college” (p.4). Roderick, Nagaoka, Coca (2009) examined college readiness in some of Chicago’s urban schools and found that high school grades were an indicator for college GPA, and college graduation was consistent with that of the study conducted by Saul Geiser and Veronica Santelices (2004). Srinivas (2012) conducted a correlational study to examine whether Syracuse University’s concurrent enrollment program, Project Advance (SUPA), and AP developed persistence and performance in students who were in their first and fourth years at the university. Since this was a correlational study, no cause and effect claims were made. She found that for both short-term persistence and long-term persistence, AP had a significant effect on students as compared to SUPA. The study found that “high school academic variables such as SAT verbal, SAT math, and especially, high school GPA consistently show a significant and positive relationship to performance outcomes in both Year 1 and Year 4” (p. 192) thus confirming findings from Geiser and Santelices (2004), Roderick et al. (2009), and Adelman (1999).

In a study underwritten by the Baltimore Education Consortium, authors Connolly, Olson, Durham, and Plank (2014) concluded findings similar to Geiser and Santelices (2004), as well as Roderick, Nagaoka and Coca (2009). In their study of Baltimore public high school graduates, Connolly et al. (2011) found that GPA was a better predictor of degree completion than college admission tests like the Scholastic Aptitude Test (SAT) or the former American

College Test (ACT). They also concluded that the AP and the IBDP students were “most ready to complete college level work” (p. 7). The study further revealed that general education students entering higher education demonstrated low proficiency in mathematics and English skills. As a result, their mean GPA fell to 1.8. The purpose of the study was to provide “readiness alignment” (p.6) to Baltimore city’s schools and colleges in order to assist them in supporting struggling students.

Flores (2012) compared students who took dual credit classes at a community college and at a high school. The study found that when courses are taught by teachers who embraced rigor, maintaining academic quality by adhering to the dual credit standards, “college level learning is achieved” (abstract). Another study on dual credit courses by Taylor (2015) reaffirms the fact that rigor in courses translates into college success.

Giani, Alexander, and Reyes (2014) conducted a quasi-experimental study to explore the impact of college credit courses on postsecondary outcomes and found that “there may be a benefit conferred to students from participating in dual-credit courses” (p. 215), mostly in the form of socio-cultural effects, and the ability to navigate through college. Similarly, An (2015), found in his study that dual enrollment in college courses “provides a transitional period in which students learn normative rules and behaviors of what it means to be a college student” (p.102). In other words, high school students who enroll in college courses learn “to navigate a new social system” (p. 102) that helps them in college persistence. Wright and Lee (2014) found that AP students who took the AP exam graduated later than students who had taken dual credit courses in school, but the GPAs of the AP students were higher. She further stated that although neither of these programs can solve the challenges posed by education, students who take AP and dual credit courses have received “tangible” (p.188) benefits from the programs.

AP and IBDP

A number of studies have compared the AP and IB Diploma programs. Most of these studies found the IBDP has a significant effect on students' academic readiness. Kyburg's (2006) research on minorities enrolled in AP and the IBDP showed that students in both programs experienced challenging, heavily loaded academic work, but they understood the significance of the rigor and the challenge in the coursework. It demonstrated that hard work could also be enjoyable. The students in her study felt that teachers who "taught them about multiple viewpoints or who made connections across multiple disciplines reinforced their depth of understanding of their topics of study" (p.120). Kyburg cited Ladson-Billings (1994a) who found that minority students enjoyed learning about other cultures and different points of view. The IBDP fulfills this component clearly through its literature course. Further, Kyburg (2006) pointed out that the Theory of Knowledge core in the IBDP provides students with the opportunity to think about abstract ideas that build critical thinking skills. The students in her study were not only highly motivated to go to college, but they also wished to be well prepared for college.

Byrd et al. (2007) reviewed the AP and IB Diploma programs for content, rigor, and clarity and found that both programs offer curricula and assessments that are "rigorous, fair and intellectually richer" (p. 20) than the majority of the state standards and exams for high school. Further, Byrd et al. (2007) maintained in their study that students who took the AP and IBDP exams had a greater advantage "when they apply or matriculate from a postsecondary institution" (p.17). A difference they found between the two programs was that the IBO keeps "a tight rein on its programs and teachers" (p.17) by ensuring that IBO trains the schools before they are permitted to offer the DP. IBO also maintains consistency of course and quality through formative and summative assessments, which are administered internally by classroom teachers

and externally by IB examiners. Essentially, more accountability for teachers exists in IB as opposed to AP.

Hertberg-Davis, Callahan, and Kyburg (2006) have performed longitudinal qualitative studies on gifted students taking the AP and IB DP programs to explore non-academic advantages and disadvantages of grouping, examining the stress involved in the AP and IB DP curricula, and relating it to college success of students. They investigated the fit of AP and IB DP courses for gifted high school students. The findings revealed that AP and IB students experienced both positive and negative consequences as a result of their participation in AP and IB DP courses. The most important advantages were a better classroom atmosphere, special bonding among participants, pride, and self-confidence derived from doing challenging work. The three disadvantages noted were the perception of “unflattering stereotypes” (p.16) assigned to AP and IB students by non-AP and IB students, the heavy workload in these courses, and the resulting stress and fatigue. These findings are consistent with Shaunessy et al (2006).

Samia Merza Lou (2013) conducted a study to compare student achievement of AP and IB to college readiness programs. She attempted “to determine whether the two programs are predictors of student performance on SAT II and identify other variables that may contribute to student performance on SAT II” (p.20). Her study sought the opinions of AP and IB students regarding the program impact. In her quantitative study, she found there were no statistically significant differences in mathematics and SAT II scores between AP seniors and IB seniors. Similar results were found for English. However, there was a statistically significant difference in cumulative GPA between AP and IB seniors with AP students scoring higher than IB students. They showed that college preparation programs were not predictors of performance in the SAT II. AP and IB students shared common opinions about the rigor of the programs, and participants

of both programs “believed that AP and IB classes helped them develop study habits necessary to tackle rigorous course work” (p. 67). This study supports the results of Geiser and Santelices (2004) in which cumulative GPA and SAT scores were strong predictors of college success.

The AP and the IBDP are both examination-based programs, similar to credit courses in community colleges. However, as findings in the studies discussed here indicate, the IBDP differs strategically because it involves different types of assessments that are taken throughout the two-year course of grades 11 and 12, culminating with final exams for core subjects and completing the required core components of Extended Essay, Theory of Knowledge and Community, and Action and Service hours for holistic grading (IBO, 2013). On the other hand, AP has only one exam at the end of the course (College Board, 2014), and unlike the IB, there is no set of assessments throughout the course. The rigor in IB is maintained because of both the internal and external assessments.

IB

Studies that investigate a correlation between high school and college rigor through an examination of the IBDP graduates’ GPAs and subject scores are scant. The IBO has conducted and supported research worldwide on the impact of the IBDP on better practices at school and academic performance in college (IBO, 2014). Thomas (1988a, 1988b) began a study in 1986 for the IBO tracked IBDP graduates of the Geneva International School. The study analyzed data from 26 universities in United Kingdom universities, totaling approximately 1,036 IB students, who took university examinations from 1971–1987. Thomas found that 98% of these students completed university coursework with honors. Panich (2001), Smith (2009), Roderick et al. (2009), Lou (2013), and recently Conley et al. (2014) have conducted studies on first year IBDP graduates and found positive results.

Coca et al. (2012), Conley et al. (2014), Foust et al. (2008, 2009a, 2009b), Mayer (2006, 2008, 2010), and Roderick et al. (2009) are some of the major scholars who have conducted extensive research on the impact of the IBDP on students with regard to stress, rigor of the program, and college readiness for gifted and minority students. In-depth studies that focus on the effect of the IBDP on postsecondary academic performance of IBDP graduates by correlating their high school and college GPAs are limited, but interest in the area has increased since the implementation of NCLB (U.S. Department of Education, 2001).

In her quantitative study, Amy Tsukada (1998) examined the rigor in the IBDP. She investigated the percentage of IB students attaining a high school diploma at the end of Grade 12. She examined two groups: students who attained the diploma and those who received the certificate. She studied the results of students testing into the program using the Iowa Test of Basic Skills (ITBS) taken in the seventh grade, and followed their academic progress in language arts, mathematics, science, and social studies through twelfth grade. She concluded no gender difference existed between recipients and non-recipients of the diploma. With regard to the ITBS scores, the recipient group averaged higher than the non-recipient group in all subject scores.

Duevel (1999) did a descriptive study to examine whether an IB education is a predictor of college success. She collected data from 12 universities and found that 92% of the IBDP diploma holders earned a bachelors' degree, and 87% of those earned it in within five or fewer years. She also conducted a survey of IBDP graduates to gather reflections on the IB experience, postsecondary performance, and career choices. The respondents indicated that the challenging curriculum had a positive effect on their college experience. Negative points were related to the elitist atmosphere generated by the IB program and workload stress. Of the adults surveyed, 82% were in professions related to their undergraduate majors. Although 78% of them were in

scientific, technical, or business careers, they said their most valuable classes in high school were English (31%) and History (18%). Further, 94% said they would encourage their children to enroll in the IB program. Her study also considered the international outlook of the IB program and found that most IBDP graduates were involved in community activity and wished to work internationally. The IBDP education contributed to their success in college through the integration of subjects, study skills, and maintaining balance.

Panich (2001) examined the postsecondary performance of IBDP graduates using their university GPAs and correlating them to their SAT scores. Her study, conducted in Florida, focused on the university performance of students with the IBDP high school experience. The students chosen for the study matched exactly both on SAT verbal and non-verbal scores. She found that students with IB experience who did not receive the IBDP diploma had the lowest means for the SAT verbal, SAT non-verbal, and first year university GPA. Those with IB experience who earned the IB diploma had the highest means across all variables.

Wilkerson (2005) conducted a study to identify factors that contribute to successful student participation in the IBDP. She further investigated the instructional efficacy of the IBDP with regard to SAT, ACT, AP and IB examinations. There was no significant difference in the instructional efficacy of the IBDP with regard to SAT, ACT, AP, and IB scores. However, the study found significant gains in student achievement for those participating in the IBDP, revealing their scores in English, mathematics, and the National Norm test improved. Student achievement was validated through the National Norm test as the standard of evidence that success can occur in students not receiving the diploma.

Bland and Woodworth (2009) conducted case studies at Lamar Academy in McAllen, Texas, and Hillsborough High School (HHS) in Tampa, Florida. They found that students at

Lamar Academy reported they were “highly prepared for postsecondary education” (p.6). Further, the study cited alumni from Lamar Academy as having reiterated the fact that the program prepared them well for college, and writing 1,500 words was “a piece of cake” for them, even as their roommates were “freaking out” (p.6). Students and alumni of HHS also reported the same feeling of being well prepared for college. Further, the school’s enrollment data for postsecondary school was impressive. Between 2006 and 2008, 38 of its students enrolled in four-year colleges and one student enrolled in a two-year college. Some of the students from HHS began college as sophomores.

Shannon Smith’s (2009) quantitative study explored the value of participating in the IBDP through the perceptions of first year graduates. Her study focused on the benefits of both the AP and IBDP programs from the graduates’ perspectives of their performance in college courses. She compared postsecondary academic achievements of AP and IB students in their first year of college in Alabama. Smith found that among participating students, the percentage of IBDP graduates’ academic performance was greater (76%) than the AP students’ performance (47%). Suldo, Shaunessy, Michalowski, and Shaffer (2008) found that IB students out-performed their peers in school with higher GPAs, which is similar to Tsukada’s (2009) work.

In a study of Chicago Public Schools (CPS), Frost (2011) found that students who participated in the IBDP had a higher college enrollment rate and higher ACT scores. Frost’s main investigation was whether or not gifted students benefitted more than non-gifted students based on their participation in the IBDP. Her quantitative study analyzed course choices of gifted and non-gifted students. Her conclusion was that the course choices did show a difference in achievement between gifted and non-gifted students in the program. However, it did not give any new information on gifted and non- gifted according to the examination results.

In another quantitative study of the CPS offering the IBDP, Anna Rosefsky Saavedra (2011) found that the rigor maintained by the IBDP curriculum brought about increased academic success among students in state mandated and college admissions tests, thereby increasing college enrollment. Further, she discovered that in comparison to girls enrolled in the program, the percentage of boys enrolling in colleges was 5.9 % to 9.5% greater. She accredited this phenomenon to the fact that only boys who were strongly motivated entered the program, while a wider and greater motivation existed in girls in the CPS to enter the program. However, according to the ITBS data, boys' scores in mathematics were only three percentage points higher than those of the girls and were not statically significant on the ITBS reading test. Therefore, IB enrollment did not show any gender difference. She concluded that increasing boys' enrollment in the IBDP would "help attenuate the gender gap in educational attainment" (p. 36).

Blake (2012) investigated "the effect the IBDP and six of its component features had on the quantifiable academic achievement of students who had been identified as high-achieving prior to entering high school" (p. 38) in the state of Tennessee. He compared the academic achievement of 12th grade IB students and with non-IB students who had been previously been identified as high achieving eighth graders. He found a "statistical and correlational significance in participation in IB and student achievement in the areas of English, Reading and Science" (p.75). However, there was no significant difference between the non-participants and the IBDP participant groups in mathematics, probably due to sample size. In his recommendations, he suggested similar research be conducted in a more ethnically diverse school or district. Further, he also proposed that a greater number of full IB diploma candidates be studied. In his study, only two of the participants had taken full IBDP courses.

Culross and Tarver (2007) conducted a series of extensive research studies on the IBDP in the United States to investigate how the first class of IBDP graduates perceived the benefits of the program. The study included teacher perceptions of the program and included a follow-up study of first graduates upon their completion of college, concluding with an examination of the perception of the IBDP by colleges and universities. They found that students who participated in the IBDP did so to gain an advantage in college admission, particularly to selective institutions, and to better prepare themselves for college. Students saw that IB classes provided “a more conducive learning environment that broadened their horizons, increased their breadth and depth of knowledge, and improved their writing skills and study habits” (p. 234).

Since these were student perceptions, it became important to look at the perceptions of other stakeholders in the program, beginning with teachers. The teaching faculty had a positive view of the program that focused on these aspects: global issues, higher level thinking skills, application of content learning, developing links between concepts, and covering broader spectra of topics. Faculty felt students needed more preparation for IB classes, especially the extended essay requirement. Both students and teachers agreed the IBDP is a challenging program. Teachers added that IB required significant preparation of lessons and increased their prestige as teachers. Both students and teachers agreed the IB curriculum was challenging.

Significant to the present study, in their survey of the IBDP graduates attending college, Culross and Tarver (2007) discovered that students’ average GPA was 3.85 in high school, and 3.3 in college. The IBDP graduates, comprised of a sample of 28 students studying in different years of college, and held positive perceptions of the program. The graduates informed the researchers that the IBDP had provided them with a broader international and cultural awareness, a greater depth of knowledge, and improved their critical and creative thinking skills, in addition

to their oral and written communication skills. The graduates' perceptions also paralleled those of students enrolled in the IBDP. The graduates also gave high ratings to CAS (Community, Action, and Service) and Extended Essay (EE), which contradicted the IBDP candidates in high school who felt these two components of the IBDP were stressful. Overall, the IBDP candidates and graduates found the curriculum to be valuable.

Minorities and IBDP

Studies have been conducted to observe the IBDP's effect on the post secondary achievement of minorities (Burriss et al., 2007; Kyburg, et al., 2007; Mayer, 2006, 2010). In the case of South Side High School in the suburban district of Rockville, New York, researchers found that the school began the IBDP as a small program in 1981 but expanded it to all students who could take one or two IB courses. The school also used a system of detracking by putting students in heterogeneous groups and implementing Diploma level strategies in ninth and tenth grade courses. With detracking, students were introduced to writing at a higher level and research through historical investigation, which involved creating an annotated bibliography based on student research. Individual conferences became important practice, and English language arts classes provided content support to struggling students, which led to an improvement in learning for all students. South Side's 1988 graduating class had nine diploma candidates with five earning the IB Diploma. By 1998, the school had 49 diploma candidates with 43 achieving the goal. As the ninth and tenth grade classes were detracked, the enrollment in 11th and 12th grades increased, which led to greater success, improving the completion rates for diploma candidates from 35% in 2004 to 45% in 2006. The increasing diversity in South Side's IB classes, through open enrollment and detracking, was not enough to encourage all minority students to take IB classes, but it was a positive move. Teachers, IB coordinators, and

administrators had to work hand-in-hand to provide the support necessary for the successful implementation of instruction. They engaged in meetings on shared strategies in order to keep standards high for all students. Teachers were provided more time to focus on instruction and students due to the reduction of other duties, such as following up on student absences. The researchers found that the district's initiative of open enrollment, detracking IB candidates, and implementing best practices had a significant effect on student achievement.

In their longitudinal study, Burris et al. (2007) went further in tracking the South Side High School's IBDP graduates of 2002 to find out whether or not the rigorous courses, in the IB Program had an impact on the students in college. They took a telephone survey of a group of students from the class of 2002 who were graduating in 2006. Class demographics indicated 40% of this class had taken an IB class. Of the 86% who were contacted, 90% of those who took IB English and IB mathematics graduated from college in four years, compared to 34% for those who did not take either of the IB courses. The researchers then created two groups of 25 graduates from the class of 2002. One group was comprised of IBDP graduates and the second was made up of non-IBDP graduates. Importantly, both groups had matching Pre-Scholastic Aptitude Test (PSAT) scores. The researchers found that "taking IB English and IB math was strongly associated with completing college in four years" (p. 56). Of the students who took IB English and mathematics, 88% graduated college in four years, while only 32% of those students who took either IB English or IB mathematics finished college in four years. The researchers attributed this gap to other factors, such as student motivation. It can be concluded from this study that the rigor in IB courses has a strong impact on high school students' postsecondary achievement.

Kyburg et al. (2007) examined the effect of the AP and IB Diploma programs on schools,

teachers and students in high poverty, urban environments, “and the extent to which optimal learning environments were created for highly able learners from multi-cultural backgrounds” (p. 172). For the study, they used data from their 2006 study that investigated the needs of gifted learners in the AP and IBDP programs. This investigation (2007) narrowed the focus to talented minority students in three urban high schools with low income and high ethnic and cultural diversity. Kyburg addressed the critical issue of access to college for minorities and quoted Secretary of Education Riley: “I want everyone to know that college is possible” (p. 180).

In her qualitative case study, Mayer (2006) investigated the implementation of the IBDP in two different high schools in California to understand the effect of the IBDP curriculum on students: Jefferson High, an urban, low-performing school and Vista High, a high-performing, suburban school. In her investigation, she found that the IB program in the low-performing school raised the academic performance of its Latino and African American students by providing them with the same opportunities as Vista High, the high-performing school. Students who completed the IB program were also more motivated to apply to a four-year college, and they had acquired the necessary experience to handle college level academic work. Further, in her study she noted that 55% of the Jefferson teachers claimed that as a result of joining the IB program, they had increased expectations for their students, and roughly half of the IB teachers said that the curriculum was challenging. Empirical research in the area of minority students has found that low teacher expectations are a significant cause for students’ low academic performance (Gandára & Bial, 2001). Mayer’s study affirms this by noting the increased teacher expectations of Jefferson High IB teachers, which motivated minority students to improve significantly. At the same time, since Jefferson had an open enrollment for IBDP, their administrators understood that teacher expectations alone were not enough to challenge students

to succeed academically. In addition to high teacher expectations, they employed additional scaffolds such as counseling, study skills courses, retreats, and clubs to encourage students from the ninth grade onward. The school's pre-IB program in the ninth and tenth grades prepared the students for the two year IBDP.

On the other hand, Vista High, with high teacher expectations in the IB program resulted in neglect of the non-IB students. To counter this problem of neglect, the school introduced two programs: Integrated Studies for regular college-prep students and Passport for English Language Learners and other at-risk students. This initiated a tracking system that, although not viewed positively by teachers, resulted in students who were happier and felt they had better support. The teachers, however, felt overloaded with work (Mayer, 2006).

In a later article based on her initial study (2006), Mayer (2008) concluded that it was possible for "high quality academic program[s]" (p.202) to operate in low-performing schools and for a wide range of students to benefit from such programs. Therefore, the IBDP, if implemented correctly, can provide better results for minority students, which can lead them to become college-ready.

In 1997, the CPS decided to implement the IB program in 13 neighborhood schools (Coca et al., 2012). Between 1999 and 2006, the district opened five selective enrollment schools offering AP and IBDP. In their report for the Consortium On Chicago School Research (CCSR) sponsored by the University of Chicago Education Institute, Roderick et al. (2009) examined college readiness in the IBDP through a study conducted in the Chicago school system. Roderick et al (2009) refer to an earlier study conducted by the CCSR in 2006 that "...emerged as an important contributor because students with low grades in high school were very unlikely to graduate from a four-year institution once enrolled" (p. 6), as they had no support in finding

college application information. They examined graduates from the selected schools—both IBDP graduates and graduates who took honors and AP courses in their neighborhood schools. According to their findings, graduates of the selective enrollment school programs had higher achievement scores than the neighborhood schools offering AP and IB, but they did not come from advantaged families. Academically advanced students graduated with high GPAs and ACT scores, which demonstrated to colleges that they took rigorous courses in high school. However, their academic scores did not translate to college selection, and one-third of them applied to non-selective or two-year colleges because they lacked knowledge of the college application process. The gap between access and enrollment reflects a lack of understanding of the college process. Therefore, despite high scores, lack of support services in schools or families (most of these graduates were first generation graduates) became a deterrent to selective college enrollment. It thus becomes the school's duty to provide their students with the required support services.

Coca et al. (2012) conducted more path breaking research on IBDP graduates in the CPS. They studied the impact of IBDP on neighborhood schools that began the IBDP in 1999. The significant findings of the study were:

- 40% of IBDP graduates attended four year colleges, and 50% attended selective colleges
- IBDP graduates were “more likely to persist in four-year college for two years” (p. 4)
- IBDP graduates reported they felt more prepared for college coursework due to the rigor in the IB curriculum.

The Roderick et al. (2009) and Coca et al. (2012) studies are reinforced by Conley et al. (2014) in their three phase, mixed methods study. This study explored the direct relationship between IBDP courses taught in high school and their significance in the college readiness of IBDP students. Conley et al. (2014) researched first year college students who went through the

IBDP and arrived at the conclusion that IBDP curricula prepared students for college. The study explored the impact of IBDP on college readiness in first year college graduates by examining the academic and non-academic preparation of students who participated in the IBDP (Conley et al., 2014). Conley and his team of researchers compared honors and IBDP students and concluded that both groups “were more likely to persist to complete college” (p. 21). This mixed methods study found evidence that “students who participate in the IB Diploma Program ...are academically adjusted to the rigor and expectations of college courses” (p.13). Therefore, the study clearly found evidence that the IBDP prepares students for college, reinforced through student success in college.

On a different note, studies by Sheehy (2009) and Hill (2011) focused on the accountability and rigor of the curriculum within the program. Sheehy (1999) investigated teacher strategies in the curriculum planning and outcomes of honors courses, AP, and IBDP. She found that AP and IBDP courses were more challenging, and students “felt that they were more responsible for their own learning than honors students” (p.131). Hill (2011) conducted a study on the attrition rate of IB students within the program in high school and found that most students who could not withstand the rigor in the pre-IB classes exited the program in the ninth or tenth grades. Attrition slowed in the 11th grade and stabilized by the 12th grade. Ultimately, she concluded, “despite the increased risk of exit in the earlier grades, a fairly substantial majority of the students is expected to complete the courses required in the IBDP” (p.100).

International IBDP Studies and College Readiness

Poelzer and Feldhusen (1997) studied IBDP for gifted secondary students and compared the syllabi of the IBDP to the Alberta Science programs in Canada. They found that many universities recognized the higher level IBDP courses, and 60 of the 65 universities in the United

States accept only higher level IBDP courses. Poelzer (1994) found a similar situation in Canada when interviewing IB science teachers to learn the characteristics of IB students in Alberta. All teachers' descriptions were similar to the list of characteristics of gifted children who have high levels of motivation, discipline, desire to inquire and understand, intelligence, excellent management skills, and are independent thinkers. Therefore, IBDP provides greater opportunity for the intellectually abled students to experience abstract, complex, and fast-paced curricula. The curricular needs of students were met through Gardner's (1983) model depicting the seven intelligences. Piaget's constructivism theory can be applied to the student's experience of dealing with abstract ideas using intelligence and making meaning out of those abstract ideas.

Taylor and Porath (2006) studied graduates of the IBDP from two public schools in a large city in British Columbia, Canada. Graduates from the years 1996 and 2000 were selected for the 2005 survey. The results of the survey were positive. Graduates felt that the "rich" (p. 149) curriculum of IB, the critical thinking, and time management skills they developed were worth the extra effort required to earn an IB diploma and prepared them well for postsecondary studies. Of the respondents, 87.5% felt they were better prepared for introductory level postsecondary courses than those who did not take IBDP. The students' positive thoughts on the building of critical thinking can be associated to constructivist philosophy. Montessori's theory of teacher as the facilitator and that students should be left to discover learning can be applied here.

In her 2013 dissertation on international students from East Asia studying in the United States after completing the IBDP or IB Certificate program, Jennifer Hill found that the college completion rates for the student cohort studies (2007-2012) was high, whether they took the IBDP or the IB certificate courses. The students "showed a high level of preparedness for college

in their matriculation, retention, and graduation rates” (p. 92).

Tarc and Beatty (2012), in their qualitative pilot study of a Catholic school IB program in urban Ontario, surveyed 26 students in the 12th grade regarding their experiences in the IBDP in 2010, and followed it up with a survey of 12 IBDP graduates from the original 26 concerning their first year college experiences in 2011. The survey responses indicated that most IBDP candidates felt their IB experience was positive, and in the follow-up focus group interview, they reported that IB had prepared them well for the university. The majority of the IBDP graduates spoke positively of the program’s academic challenge, its role in building of critical reading skills, time management, and study skills. Some of the students who had immigrated to Canada from Asia stated that the IBDP curriculum was aligned to the curriculum of their home country. Almost all students felt IBDP was worth taking despite the negatives of heavy coursework, limited subject choices, and high stress levels. These findings are corroborated by studies conducted by Taylor and Porath (2006), Callahan (2008), and Foust et al. (2008, 2009a, 2009b).

In a mixed-methods study by Wright and Lee (2013) on IBDP schools in China, the researchers found that both the cognitive and non-cognitive skills are enhanced in the university preparation of students in the IBDP. The students under research were of Asian descent; the percentage of Chinese citizens was low, as most of China’s citizens are not allowed to attend international schools. However, the results were positive. The quantitative results indicated that the IBDP exams provided easy access to high profile universities and good GPAs were maintained in the university. Teachers and administrators who were interviewed reported that students who did well on the IBDP exams went on to “coast” (p. 31) through their first year of university. The IBDP graduates schooled in China also corroborated these findings by reporting that their self-confidence toward their academic abilities at the university level improved. The

learner profile and core components did not have any significant role in university preparation. This is different from other studies. For instance, Tarc and Beatty (2012), Aulls and Lemay (2013), and Aulls and Peláez (2013) all reported on the important role of the EE in college preparation, which is also supported by the qualitative findings of the present study.

Studies conducted in the United Kingdom, for instance Jenkins (2003), and UK Higher Education Statistics Agency (2011), as well as studies conducted in Australia and New Zealand, by Coates, Rosicka, and MacMahon-Ball (2007), have demonstrated the strength of the IBDP compared to state curricula in preparing students for university.

Intervention Programs and College Readiness

One of the problems of rigorous courses in high schools is attrition. Both AP and IB courses have high rates of attrition (Bland & Woodworth, 2009; Hill, 2011). As a result, intervention programs have been set up to support to at-risk and first generation students to encourage them to stay in advanced classes so they can acquire college skills. The IBDP students are not placed in Advancement Via Individual Determination (AVID), but they have scaffolds in the form of teacher support, counselors, and IB coordinators.

In their report for the U.S. Department of Education, Gándara and Bial (2001) evaluated intervention programs that were offered by private non-profit organizations such as A Better Chance, university based programs such as , and government funded programs (both state and federal) such as AVID. Gándara and Bial also looked at K-12 community-based programs such as College for Kids, and Project Grad, in Houston, Texas, and state initiated programs in Florida, Indiana and Minnesota. They found that “effective intervention programs appear capable of at least doubling the college-going rate of participants” (p. 80). Their report also concluded that students and families of the underrepresented felt that “these programs opened eyes and doors to

postsecondary options” (p. 80). A Better Chance is one of the oldest programs for college access available for high school students. It was introduced in 1963 for talented “minority” students, who were given a chance to experience excellent quality high school outside their own environments (Gándara and Bial, 2001). These students are provided education through boarding schools and many enter the school early, thereby they are separated from their families, local schools and communities. The major idea behind this program’s initiative to place bright students of low-income families in boarding schools is that these students would fare better when they are not in their environments (Gándara and Bial, 2001). According to Griffin (1999), students who graduated from ABC schools went to the best schools in the country and succeeded. The program College Now began in 1984 in New York in a partnership between CUNY, Kingsborough Community College, and 17 NYC public high schools (Gándara and Bial, 2001). The program assesses college readiness skills among the moderate high school students and provides remedial and college level courses to prepare these students for college. The aim is also to ease college transition in these students (Gándara and Bial, 2001).

The report by Gándara and Bial (2001) is well supported (Contreras, 2011; Huerta & Watt, 2015). Intervention programs that identify high-achieving minority students can then provide support services to them for academic success (Contreras, 2011). Contreras evaluated the role of intervention programs in the successful transition of underrepresented students.

According to Contreras, it is important for schools to provide minority students with rigorous curricula, and “access to supportive individuals” (p. 207) who build strong school-student-peer relationships and community resources for “individual resilience and positive choice” (p.207) in order to support academic success in school and to acquire college readiness. However, she states that for minority students, access to a rigorous curriculum is a significant factor in making

them college-ready because it removes the need for remedial classes and thus reduces tuition costs. Intervention programs provide this support and raise college awareness and readiness. Contreras analyzed a list of intervention programs but the school district partnership program, AVID, has made a notable difference in student lives as well as the Communities in School (CIS) program that evolved out of the Civil Rights Movement to prevent dropouts from the underrepresented student population. Contreras included dual enrollment courses in her list of intervention programs because she saw them as an opportunity for the high-achieving minority students to access college. Overall, both Gandára and Bial (2001) and Contreras (2011) found that if students from an underrepresented population are given access to college level courses with individual support, the chances of them succeeding in college are greater.

The success of the AVID program, as mentioned earlier, is gaining attention (Huerta & Watt, 2015; Huerta, Watt, & Butcher, 2013). AVID was created by Mary Swanson in order to support low-performing minority students and is “a college readiness system that includes curriculum, tutoring, and other forms college preparatory scaffolding” (Huerta & Watt, 2015, p.20) for middle school and high school students. Huerta, Watt and Butcher (2013) conducted a study in which they followed middle school students who were placed in the AVID program to evaluate the effectiveness of the program’s college readiness. The AVID program identifies students with “middle” academic abilities and those who are first generation college-going students, and provides them with interventions in academics and social skills to transition into postsecondary life (Huerta & Watt, 2015). AVID is an elective class where students receive the required support for the AP classes or other college credit academic classes in which they are enrolled. In their quantitative study, Huerta and Watt (2015) found that AVID graduates who went to four-year universities had taken a higher number of AP courses and acquired a higher

overall GPA. These AVID graduates were most likely to graduate within six years of entering college. The study found that taking college credit courses and having higher GPAs were significant predictors of their college readiness.

AVID, A Better Chance and College Now are more of an intervention system for first-generation high school students and for minority students, while AP, IB, and dual credit are college level courses offered to high school students to make them college-ready.

Refutations

Although most studies on IB provide a positive feedback on the aspect of college readiness in the curriculum, there are some studies that have pointed to some doubts about the program's effectiveness. Jenkins (2003) found that 96% of the respondents in the study were in favor of the program and said IB graduates were prepared for college. However, there were reservations on the core elements of Theory of Knowledge (TOK), Extended Essay (EE and Creativity, Action and Service (CAS), and some subject areas. For instance, Imperial College of Science respondents felt that IBDP graduates who took chemistry Higher Level (HL) required remedial classes in chemistry to bring them to an A-level student in UK. Some questions were raised at the University of Manchester with regard to languages and mathematics; and Universities of Kent, Brighton also doubted subject preparation in mathematics and physics; although Kent pointed that IB graduates did perform better than others did.

Another reservation about the program is that it might not be suitable for the less abled students because of the breadth involved in the curriculum (Jenkins 2003). Further, breadth in the curriculum would lead to "superficiality" (Jenkins, 2003 p.18) in the curriculum. The TOK and the EE are the two main core elements that contribute to the depth and breadth of the program. CAS does not add to the students' grade and is just an extra-curricular element that is

used to assess the student as a “whole person” (Jenkins, 2003 p. 20). According to the Jenkins study, 91 % were positive of the TOK, providing them with confidence for speaking at seminars (that is part of university studies). However, a 9 % felt did not see any value in the TOK probably stemming from a lack of understanding of TOK and its objectives. The Extended Essay received stronger supports at 96 %. The EE was seen as more valuable for it provides research skills that are a much-required skill in college. However, a 4 % of the respondents felt that the EE work was “superficial” and it was mostly “spoon-feeding” (p. 21). The CAS has only a 70 % approval rating and 30 % felt that it had no academic value. These finding of the core elements are well supported by the Wright and Lee (2013) study where students did not find any value in the core elements of the IB curriculum, including the EE.

Overall, the Jenkins study found that 97 % of the respondents found the IB curriculum valuable preparation for college but 40 % felt it had no value and 3 % felt DP students were disadvantaged compared to A-level students in the UK. Respondents felt that IB curriculum needs more depth and less breadth.

Coates, Rosicka, and MacMahon-Ball (2007), investigated the perceptions of university representatives on the IB curriculum in Australia and New Zealand in order to determine whether university representative knew about the IB program. The study was run from September 2006 to 2007, when 644 senior academic and university administrative staff were surveyed at 47 Australian and New Zealand universities. According to the study, 56 % of the university representatives indicated that they had some form of academic or administrative involvement with an IB Diploma student in the past 5 years. Most respondents did not know of the three core elements but most responses were in agreement of the range of assessment strategies, the breadth and depth of curriculum and the study of three subjects at a higher level. The comments also

elicited a lack of awareness of the IB Diploma program. A few comments were critical of the program for providing no advantage over the alternative preparations for university study, or some said it was elitist. Some individual responses pointed out that IB graduates can face adjustment problems at the university, or there are problems of delivery of the program at schools or the problem of scoring and conversion of IB scores.

Lauder (2007) in his essay has argued IB schools from their idealistic beginnings have become more of a “global capitalism” (p. 441). He states that IB schools have become a means to reach top ranked universities to the “indigenous elite” thereby creating a “transnational ruling class” (p. 441). Lauder argues that with globalization, the increasing need for global workers driven by the multinational corporations (MNCs) and non-Governmental Organizations (NGOs) has resulted in the “tightening bond” (p. 441) between IB and admission to top universities of the world. He further states the International School System (ISS) may steer national professional and management elites away from national school systems, thereby weakening the voice of the middle class. Targeting British and American school systems, he states that the International schools in these countries may set the benchmark for performance in admission to elite universities. This will create pressure in many to abandon the national school systems. When he states that the new international schools will create a class of global ruling class, he is referring to the changing global economy and its global elite that emanate from international schools. This in turn also brings in the question of global citizenship; how will students of the future conceptualize their rights -political, economic and social rights.

Hahn (2003), in her dissertation analyzed the official discourse in the IBDP by arguing it as a means of social change and relating it to language and power; her study shows a dominance of Western and American practices in the IBDP that promote language dominance,

internationalism and geographical mobility. According to her, although in the 1970s IB discourse contained “westernism and elitism, it does not discuss its Eurocentrism in relation to elitism.” (p.142). By the 1980s the terms Eurocentrism and elitism disappear from the IB discourse, and there is a failure to engage in these issues politically. The emphasis shifts to “humanitarian ideals” of cultures and languages and not on “cultural and linguistic dominance”, thereby IB deflects the “political implications”, according to Hahn (2003). As a result, it becomes important to understand the true nature of internationalism in IBDP.

Conclusion

It is clear from the available literature that IBDP increases college readiness through its challenging courses. Saavedra (2011) points out that, although her “estimate that the IB enrollment increases students’ probability of college enrollment by 38% is likely to be overstated, it is unlikely that the selection bias could completely negate the impact of IB enrollment” (p. 35). Several researchers such as, Blake (2012), Byrd et al. (2007), Lou (2013), Roderick et al. (2009), and Wilkerson (2005), have examined the impact of IBDP curricula on students’ academic success. These studies concluded that AP and IBDP courses have a definite impact on college enrollment and success of students. However, IBDP students outperformed AP students in critical thinking skills (Blake, 2012; Culross & Tarver, 2007; Taylor & Porath, 2006).

American research (Coca et al., 2011; Conley et al., 2014; Culross & Tarver, 2007; Duevel, 1999; Foust et al., 2009a, 2009b; Frost, 2011; Mayer, 2006; Saavedra, 2011; Smith, 2009; Suldo et al., 2008; Roderick et al., 2009; Tsukada, 1998) and international research (Lee et al., 2013; Poelzer & Feldhusen, 1997; Tarc & Beatty, 2012 Taylor & Porath 2006) have demonstrated that IBDP curricula and course work have led to better performance on tests and success in postsecondary education. The IBDP program has shown that even the academic

success of minority students has increased due to the rigor involved (Hertberg-Davis & Callahan, 2008; Kyburg, Hertberg-Davis & Callahan, 2007; Mayer, 2006, 2008). However, a gap still remains in empirical studies that investigate the academic success of students who complete the IBDP program and move on to postsecondary study. This current study hopes to set the stage for future research to explore the area of postsecondary academic success.

Intervention programs have been set up to support academically advanced minority students (Contreras, 2011; Gándara & Bial, 2001). These programs have provided scaffolds to students of lower social and economic status and students with low motivation to enroll in challenging courses such as AP and dual enrollment. However, IBDP has proven to be a complete, college-ready curriculum that provides the rigor required to enter college without any remediation (Bland & Woodward, 2009; Coca et al., 2012; Conley et al., 2014; Culross & Tarver, 2007; Duevel, 1999; Frost, 2011; Lou, 2013; Mayer, 2006; Panich, 2001; Roderick et al, 2009; Taylor & Porath, 2006; Thomas, 1988a, 1988b).

Although empirical research in the correlation of IBDP and GPA is limited, there is enough literature to suggest that IBDP increases the GPA of high school students, and IBDP graduates perform better than non-IBDP graduates at the college level. While comparing IBDP with AP and dual credit courses, it is clear that IBDP provides the most challenging curriculum, thus equipping students with the cognitive and non-cognitive skills necessary for college success. Further, despite a small percentage of reservations in some studies (Jenkins, 2003, Hahn, 2003; Coates et al., 2007, Lauder, 2007) about the IBDP curriculum's effect on college readiness, the majority of the studies provide a great degree of positive feedback about the IBDP curriculum's effectiveness in preparing IBDP graduates for college.

CHAPTER III

METHOD

The primary purpose of the study was to examine the high school correlates of the college first semester freshman GPA and credit hours completed in a non-probability sample of the IBDP graduates. The secondary purpose of the study was to document the perspectives of a sample of IBDP graduates regarding the impact of the program in preparing them for college education. The following research questions guided the study:

1. To what extent does academic achievement in high school explain GPA and course completion among International Baccalaureate Diploma Program graduates?
2. What are the perspectives of International Baccalaureate Diploma Program graduates regarding the usefulness of the program in preparing them for college education?

Research Design

The study employed an Explanatory Sequential mixed methods design (Creswell & Clark, 2011), which is a two-step process. In this research model, the researcher sequentially collects and analyzes the quantitative data first, then follows it with the collection and analysis of the qualitative data, and concludes with the interpretation and synthesis of all results. The paradigm foundation is post positivist in phase one and constructivist in phase two. The level of interaction is interactive. The emphasis is on the quantitative strand. A genuine understanding of both quantitative and qualitative data analyses is required to successfully employ the design. Triangulation requires a combination of multiple methods, data sources, and theoretical schemes

(Patton, 2002). The researcher understood that the study's obtained data were not sufficient to find multiple truths; therefore, triangulation of the data did not occur in the study. The design is depicted in figure 1:



Figure 1. Explanatory Sequential Mixed Methods Design.

Quantitative

The quantitative component of the study employed a correlational design (Gall, Gall, & Borg, 2007) to examine the high school correlates of college first semester freshman GPA and credit hours completed without any control over the setting in which the relationships occurred. The correlational study was predictive in nature, as it was conducted to predict future accomplishments on the basis of the variables, which had been measured at earlier points. Due to the non-experimental design of the study, no causal inferences were drawn.

Qualitative

The qualitative component of the study was conducted to discover meaning, understand a phenomenon, and uncover explanations (Creswell, 2003), and followed the theoretical perspective of interpretivism, which provided a conceptual understanding from the participants' perspectives. Interpretivism is an attempt to understand and explain the social reality of individuals (Crotty, 1998) and can be regarded as the lens through which the researcher views a situation in which problems and research questions are explored to better understand specific issues or topics (Creswell, 2007).

Subject Selection

The non-probability sample consisted of IBDP graduates in a South Texas high school. At the time of conducting the study, the high school had 2015 students. The ethnic distribution was 83.40% Hispanic, 12.30% Asian, 2.60% African-American, 1.60% White, and 0.10% Other (TEA Report Card, 2013-14). There were 200 faculty members of which 90 (45%) had Master's degrees (Subject School Profile, 2014). The total number of IBDP-trained teaching faculty was 34 at the time of study. The IB program was introduced to the school district in 2007 in the gifted and talented schools elementary and middle schools; it was introduced to the study site in 2009, and the IB Diploma program for 11th and 12th grade levels began in 2011 after receiving its accreditation from the International Baccalaureate Organization. The school has graduated three cohorts of IBDP students from 2013 to 2015, of which 27% and 34% enrolled in four-year universities and two-year colleges, respectively (Subject School Profile, 2014). Permission to conduct the study was obtained from the Institutional Review Board at Texas A&M University-Corpus Christi and the IBDP's school district (Appendices A and B).

Quantitative

For the quantitative component of the study, all 2013 and 2014 IBDP graduates ($n = 97$) were invited to participate in the study. Thirty-one (32%) voluntarily participated in the study (see Appendix C – Consent Form). Due to non-probability nature of the sampling, the thirty-one participants were not considered a representative of the population.

Qualitative

The subjects for the qualitative component of the study were recruited from those who had participated in the quantitative component and agreed to take part in the focus group interview. The recommended sample size for a focus group is 6-10 members (Krueger & Casey,

2000). The total number of participants who agreed to participate in the focus group was 12. Although it is considered that a group of more than 10 participants is difficult to manage in a focus group (Morgan, 2007), the researcher did not encounter any problems in the interview. Letters of invitation (Appendices D and E) were sent to the participants and signed consent letters were obtained (Appendix F) on the site of the interview.

Instrumentation and Data Collection

Due to mixed methods nature of the inquiry, quantitative and qualitative data had to be collected and analyzed.

Quantitative

For the quantitative component of the study, the data for the predictor variables of high school GPA and academic achievement in junior and senior English, junior Physics, junior and senior History, and IBDP English and History were obtained from the school district's Office of Assessment and Accountability, the IBDP coordinator, and the IBDP graduates, which also provided the demographic data for gender, race, and socio-economic status. The permission to use the data for the purpose of the doctoral dissertation research was obtained from the school district (Appendix B). The participants provided the data for the dependent variables themselves, namely, first semester freshman college GPA and credit hours completed.

Qualitative

In order to document the perspectives of the graduates regarding the effectiveness of the IBDP in preparing them for college education, one focus group interview was conducted. The researcher served as the moderator, took notes, and digitally recorded the focus group. The researcher explained the nature of the research and the purpose to the focus group before beginning the session. The participants were assured of total confidentiality of their responses to

the focus group questions and signed consent forms were obtained from them. The researcher asked the following leading questions (also see Appendix G) and encouraged open dialog to allow the themes to develop:

1. What are your perspectives as an IBDP graduate about the effectiveness of the IBDP curriculum in preparing you for college?
2. What do you believe has helped you or not helped you in your first semester of college?
3. Did the number of hours you took in your first semester affect your academic performance?
4. What subjects that you took in high school classes prepare you or did not prepare you for the subjects you have taken in college?
5. Are there any other factors related to the IBDP that affected your college experience?

Data Analysis

In accordance with the Explanatory Sequential Mixed Methods Model, the quantitative data were analyzed first and the results were used to formulate the lead questions that were used to collect the qualitative data.

Quantitative

The quantitative data were coded and analyzed, using the Statistical Package for Social Sciences (SPSS). All predictor and dependent variables were continuous. The demographic characteristics were unordered qualitative (nominal) data. Descriptive statistics were used to analyze, summarize, and present the data. Specifically, frequency and percentage distribution tables, measures of central tendency, and measures of variability were employed.

There were eight independent variables: (a) High School GPA, (b) High School Junior English, (c) High School Senior English, (d) High School Junior Physics, (e) High School Junior History, (f) High School Senior History, (g) IB Diploma History, and (h) IB Diploma English.

The two outcome measures were the college GPA and the total number of credit hours completed in the first semester of the freshman year. The Pearson's Product-Moment Correlation Coefficient, Pearson's r , was computed to examine the magnitude and direction of the simple (bivariate) associations (Field, 2013). The level of significance was set, a priori, at 0.05. The coefficient of determination (r^2), which shows the explained variation in the dependent variable by the independent variable (Subject), was used to evaluate the practical significance of the findings.

Qualitative

The transcript (Appendix H) of the focus group was analyzed to develop the themes that were used to document the perspectives of the participants with respect to their beliefs on the impact of the IB program on college readiness. The following steps, as recommended by Creswell (2003), were followed: (1) reading through the transcription carefully to develop a general understanding of the information in the transcribed text; (2) identifying the text segments with brackets; (3) assigning a code word or phrase to describe the meaning of the text segment; (4) making a list and grouping the coded words to form categories; (5) reviewing the transcription; and (6) reducing the codes and creating themes by combining similar codes to form the major categories of the transcription.

The steps used to develop the themes are shown in the example in Figure 2:

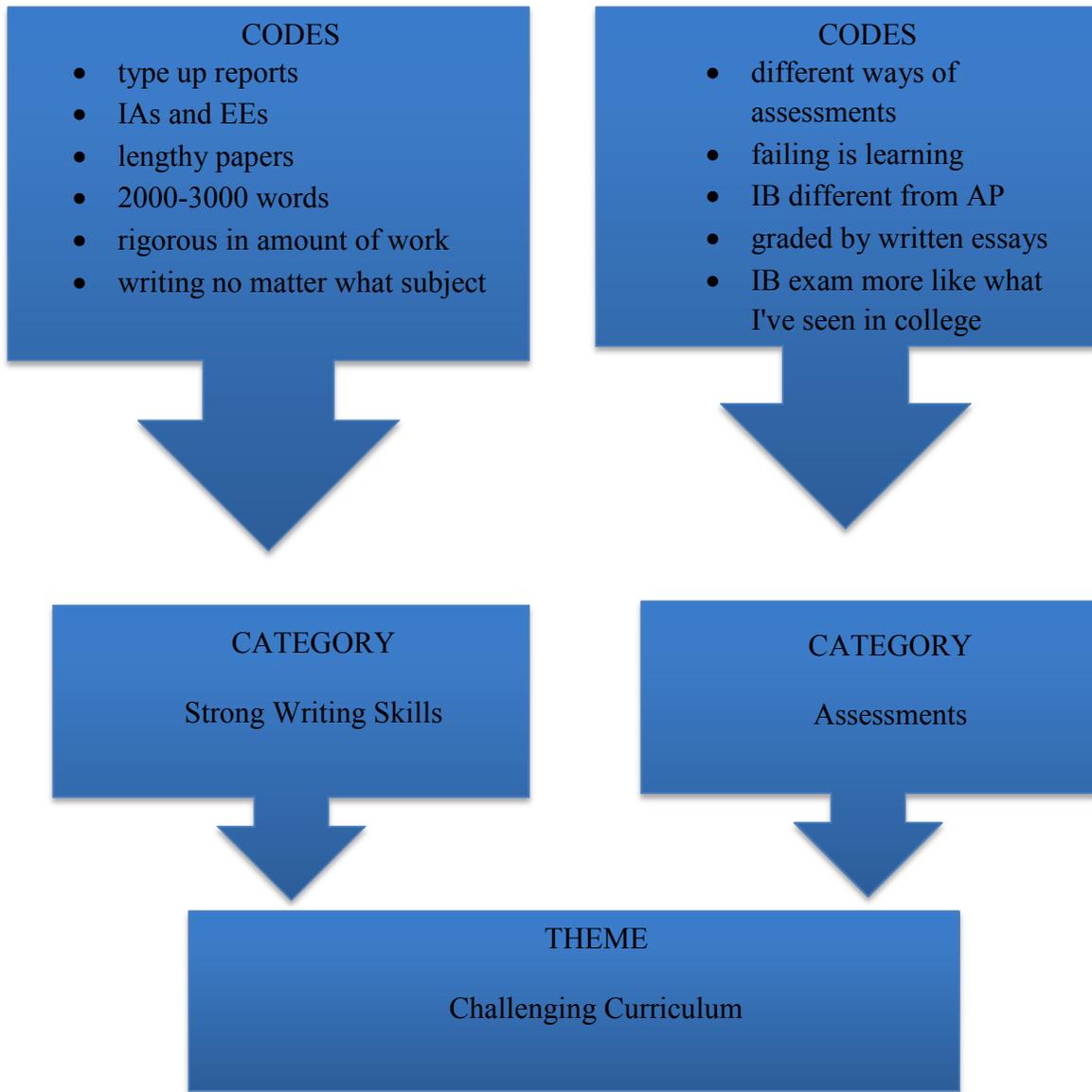


Figure 2. Example of analysis of qualitative data

CHAPTER IV

RESULTS

The primary purpose of the study was to examine the high school correlates of the college first semester freshman GPA and credit hours completed in a non-probability sample of the IBDP graduates, requiring quantitative data. The secondary purpose of the study was to document the perspectives of a group of the IBDP graduates regarding the effectiveness of the program in preparing them for college education, requiring qualitative data. The study employed an explanatory sequential mixed methods design. The quantitative and qualitative data were analyzed separately. Descriptive statistics, correlation coefficients, coefficients of determination, and mean difference effect sizes were used to analyze the quantitative data. For the purpose of analyzing the qualitative data, inductive analysis was performed.

Quantitative Results

Profile of the Subjects

There were 31 college freshman students who voluntarily participated in the quantitative component of the study. All were the 2013 and 2014 graduates of an IB school in South Texas, ranging in age from 18 to 19, at the time of data collection. The majority of the participants were female (61.30%), White (83.90%), and not economically disadvantaged (87.10%). Results are summarized in Table 1.

Table 1

A Profile of Subjects, n = 31

Demographic characteristic	F	%
Gender		
Female	19	61.30
Male	12	38.70
Race		
White	26	83.90
African	2	6.50
Asian	2	6.50
Pacific Islander	1	3.20
Socio-economic status		
Economically not disadvantaged	27	87.10
Economically disadvantaged	4	12.90

Predictor Variables

The predictor variables were high school measures of GPA, junior and senior English, junior Physics, junior and senior History, and IB Diploma English and History. The GPA could range from 1.00 to 4.00. The subject matter scores' theoretical range was 0 to 100. The IB Diploma scores could range from 1 to 7. Measures of central tendency and variability are presented in Table 2. For the skewed distributions, median must be used as the most appropriate measure of central tendency.

Outcome Measures

The outcome measures were first semester freshman college GPA and credit hours completed. The GPAs ranged from 2.46 to 4.00 (Mean = 3.44, Median = 3.53, SD = 0.44). The credit hours completed ranged from 8 to 17 (Mean = 14.65, Median = 15.00, SD = 1.99). A summary of the results is presented in Table 3.

Table 2

High School Predictor Variables, n = 31

	Mean	Median	SD	Minimum	Maximum	Skew coefficient
HS GPA	3.67	3.76	0.22	3.09	4.00	-1.08
HSJ_ENG ^b	91.00	93.00	5.77	73.00	97.00	-1.37
HSS_ENG ^b	93.23	94.00	4.46	84.00	98.00	-0.86
HSJ_PHY ^b	92.24	96.00	6.64	70.00	100.00	-1.71
HSJ_HIST ^b	96.60	98.00	3.03	88.00	100.00	-1.35
HSS_HIST ^b	97.61	98.00	2.54	90.00	100.00	-1.75
IB_HIST ^c	2.87	4.00	1.06	2.00	6.00	-0.09
IB_ENG ^c	5.06	5.00	0.77	3.00	6.00	-0.58

HSGPA – High School GPA; HSJ_ENG – High School, Junior, English; HSS_ENG – High School, Senior, English; HSJ_PHY – High School, Junior, Physics; HSJ_HIST – High School, Junior, History; HSS_HIST – High School, Senior, History; IB_HIST – IB Diploma History; IB_ENG – IB Diploma English

Theoretical Range: ^a 1 – 4, ^b 0 – 100, ^c 1 - 7

Table 3

College Outcome Measures, n = 31

	Mean	Median	SD	Min	Max	Skew Coefficient
College GPA	3.44	3.53	0.44	2.46	4.00	-.795
Credit Hours	14.65	15.00	1.99	8.00	17.00	-1.364

Correlations

The statistically significant correlates of college GPA were high school GPA, high school junior English, and high school junior physics scores. High school GPA accounted for 22% of the variation in college GPA. The contributions of high school junior English and high school junior physics scores were 17.6% and 16%, respectively. High school GPA and high school junior physics scores were also statistically significant correlates of the credit hours completed and accounted for 13% and 14.4% of the variation, respectively. Results are summarized in Table 4

Pearson's Correlation Coefficients, n = 31

	College GPA	Credit Hours
HSGPA	0.47*	0.36*
HSJ_ENG	0.42*	0.28
HSS_ENG	0.33	0.13
HSJ_Phy	0.40*	0.38*
HSJ_Hist	0.22	0.22
HSS_Hist	-0.02	0.10
IB_Hist	0.35	0-.05
IB_Eng	0.25	0.17

* $p < 0.05$

HSGPA – High School GPA; HSJ_ENG – High School, Junior, English; HSS_ENG – High School, Senior, English; HSJ_PHY – High School, Junior, Physics; HSJ_HIST – High School, Junior, History; HSS_HIST – High School, Senior, History; IB_HIST – IB Diploma History; IB_ENG – IB Diploma English

Qualitative Results

One focus group interview was conducted to gather the qualitative data needed to document the perspectives of the IBDP graduates regarding the impact of the IB curriculum in preparing them for college education. The qualitative portion of the study was conducted to better understand the quantitative results. The focus group was conducted on August 28, 2015. There were 12 IBDP graduates (7 females, 5 males; all white) who voluntarily participated in the focus group. The focus group interview was audiotaped and transcribed by the researcher (Appendix G). The following lead questions were used:

1. What are your perspectives as an IBDP graduate about the effectiveness of the IBDP curriculum in preparing you for college?
2. What do you believe has helped you or not helped you in your first semester of college?
3. Did the number of hours you took in your first semester affect your academic performance?
4. What subjects that you took in high school classes prepare you or did not prepare you for the subjects you have taken in college?
5. Are there any other factors related to the IBDP that affected your college experience?

Inductive analysis was used to analyze the qualitative data. The PI coded the transcription of the focus group interview by following Creswell's recommendations, specifically, reducing the data into meaningful segments, naming the segments, and combining the codes into broader themes (Creswell, 2007, p. 148). Table 5 shows the categories that were developed to summarize the data and formulate the themes.

Table 5

Categories for Qualitative Data

Category 1	Strong Writing Skills
Category 2	Different Assessments
Category 3	Study Skills
Category 4	Stress Management
Category 5	Time Management
Category 6	Subject Preparation
Category 7	Comparisons to Peers

The following themes were emerged from the categories: (1) *Challenging Curriculum*, (2) *Independent Learner*, and (3) *Academic Preparedness*.

The first theme, *Challenging Curriculum*, emerged as the IBDP graduates discussed the amount of writing that they had to do in college. For example, Respondent 1 stated:

So in my lab classes, you have to type up reports a lot, so every time that we have to type up one of these like eight page reports, it's usually around 2000 words, so I don't really view it as a big thing because we did all those IA's and the EE's much longer than that. I think in that way it prepared me for the writing that I would have to do.

The IBDP graduates revealed that the writing activities, papers, and assessments that they had to submit across the curriculum for the completion of the IBDP prepared them the most for college writing. As Respondent 2 stated:

The amount of research and the amount of citing citations that you have to do for all of those lengthy papers that at the time they were 2000-3000 words, I thought were really long but became very common place in college and it was very helpful because when I got to college they expected me to be able to cite everything, very

carefully, very nicely, using multiple formats depending on how the professor wanted them. If I hadn't done that in my senior year in IB, we did a bunch of the HL History papers, HL English papers and I had a couple of math and a couple of science ones where I had to do that as well, it would have been extremely difficult, especially during my first semester during the fall, had I not learned how to do that the year before.

All participants agreed that the writing of in-class essays and papers honed their writing and research skills required for college.

As the discussion continued, some respondents revealed that managing the time and combating the stress that resulted from attending six different classes and extracurricular activities in the IBDP assisted them tremendously to effectively manage the curricular expectations in college. Respondent 4 explained that:

I think IB prepared me a lot just with my time management, that's a big one. In IB I had to juggle six different fields of study, as well as like an EE and all the external stuff and I think that just really prepared me to just manage my time well when I got to college.

Respondent 5 added:

I think IB prepared me to handle stress really well because when I first started out with IB, I would get stressed about the amount of work and then as you go along you realize you can do it all. So in college when you are assigned to a lot of work, you realize that there is no need to stress, you are going to get it all done.

As the IBDP graduates discussed the rigor of the IBDP and how it translated to college, they felt prepared to face the challenges in college. On the other hand of Respondent stated she felt burned out:

I think for me, what happened was that I worked really, really hard in high school and so when I got to college, I felt a little bit burned out and so it took me like a couple of semesters to really start like feeling like I really wanted to work hard in school again. I mean I still did work really hard in college, but at first it was like tough and like oh man, I had just graduated and I feel really like finished and now I have to go back to school. So that was kind of tough.

Respondent 10 seconded that viewpoint and pointed out that she was over-prepared, by which, she actually meant that the classes were easy:

Yeah it was almost like over-preparedness, I mean not to say that we went in and we like went through everything with flying colors, because obviously there was still some struggles that we went through or that I personally went through. There were still classes that were harder than others and you had to put more effort into them than others, but I do think that the ones that I kind of expected them to go in you know have to be up studying every single night, but I think that I am still there, most of the classes that I go through, I'm able to get through fairly easily and I think that I guess that could be kind of something that helped me and something that didn't help and maybe some of the time that I spent wasn't necessarily needed in the over preparedness, I guess, maybe.

Respondent 8 felt that she had not tried hard enough in school and it taught her a lesson:

In my experience, I was pretty lackluster during my high school years; I didn't try like I probably should have. Had I tried harder I might have been able to accomplish more towards the end of my senior year. I think taking all that into account and thinking about what I went through and what I could have done, I think that prepared me more so that way I could see myself become more successful in college and I did really well and I wasn't expecting to, but I think because I pushed myself more knowing that I could have pushed myself more, I think that really helped me.

Respondent 3 said that the different assessments he had to take as an IBDP student and the failures he had faced in the IBDP assessments actually prepared him the most for college:

I think as an IB student, I was exposed to a lot of different ways of assessment, whether that was like tactile labs or like audiovisual assessments and like commentaries that we had to give on a variety of subjects. We were expected to present our opinions and be evaluated via these different avenues. When you get into college, it's very much the same way. I know as a Humanities Major, I'm exposed to assessment in the way I speak on a daily basis, in the way I present my musical development and in the way I have to present myself in reports. This constant change in how we have to work as a student was something that I was prepared for as a high school student in the IB program. This, you know, universe of assessment and I'm very appreciative of that because now I'm able to switch back and forth easily as a result of that.

Another participant felt she was over-prepared compared to her classmates but that made her better prepared for college classes and that made her feel happy.

Many of the IBDP graduates took more than 12 hours in their first semester of college and some said they sailed through their classes effortlessly even though some worked part-time after class hours while a few said they cut the hours or changed majors to make adjustments. For example Respondent 6 stated:

I originally took 17 hours when I went in and I feel overall prepared for it, but the problem was like just really learning to focus because we had six classes that we really had to focus in IB and this was like going down to four and somehow it didn't work out for me in doing that. That was something that I learned early on, but then I had to transition into like what works, I had to change my major and I think back and realize that I don't have a set schedule, like how we had in high school. We had very limited choices, like we have to take HL English and HL History and then like change it into whatever I wanted to major in.

As IBDP graduates shared their experiences in college with regard to curriculum, all agreed and re-emphasized that the IBDP, due to its rigor, had prepared them extremely well to handle college classes in their first semester. As Respondent 7 explained the rigor in the program had prepared her well with assessments in college:

I think the fact that the program is so like rigorous in the amount of work that we have to do, like really prepared me for college. Whenever I had like a final, I just thought of it as my like IB test or something like that. I know how to study for those because I went through like six of them and so by the time I got there, I was like, "oh, this is just like what I've been doing for the past two years." So it really helped my stress levels go down a lot and I think I did better because of it on my finals in all subjects.

Most agreed that the assessments were rigorous but that helped them gain credits and reduce tuition in college. Two of the IBDP graduates even received scholarships for being in the IBDP and having high GPA. Respondent 8 commented that even though she didn't get the Diploma or any credits, she received scholarship because of her GPA had risen:

Everyone's talking about all of these credits that they are getting and I didn't get my diploma, so I got no credits at all, but I guess the good thing about it (IB) was that it helped me jump rank and being in the top 10% or whatever, really helped with scholarship money. So if anything, that's definitely a bonus, it's a plus, the scholarship money.

Respondent 11 confirmed by adding:

Okay so for me, I'm in the honors college at my school and if I go on the website and I look at like the requirements to be in honors college, I technically did not need them, like I didn't have a high enough SAT score or something, but I think that by being in IB, they were like "oh ok" and they put me in the honors college, which actually brought the tuition down a lot because I got a scholarship for that and then I live in a dorm with all honors college students and almost all of them know what IB is or have been involved with IB. Like a guy across my room, he said that he knew people who gained like 7's on the Math HL test or something. They got like 60 credits before they even entered into college. It was pretty crazy, but I'm going to school in Michigan, so it's kind of further north than I don't know wherever you guys are, so maybe it's just more common place up there than down here.

Theme one is summarized in Figure 3.

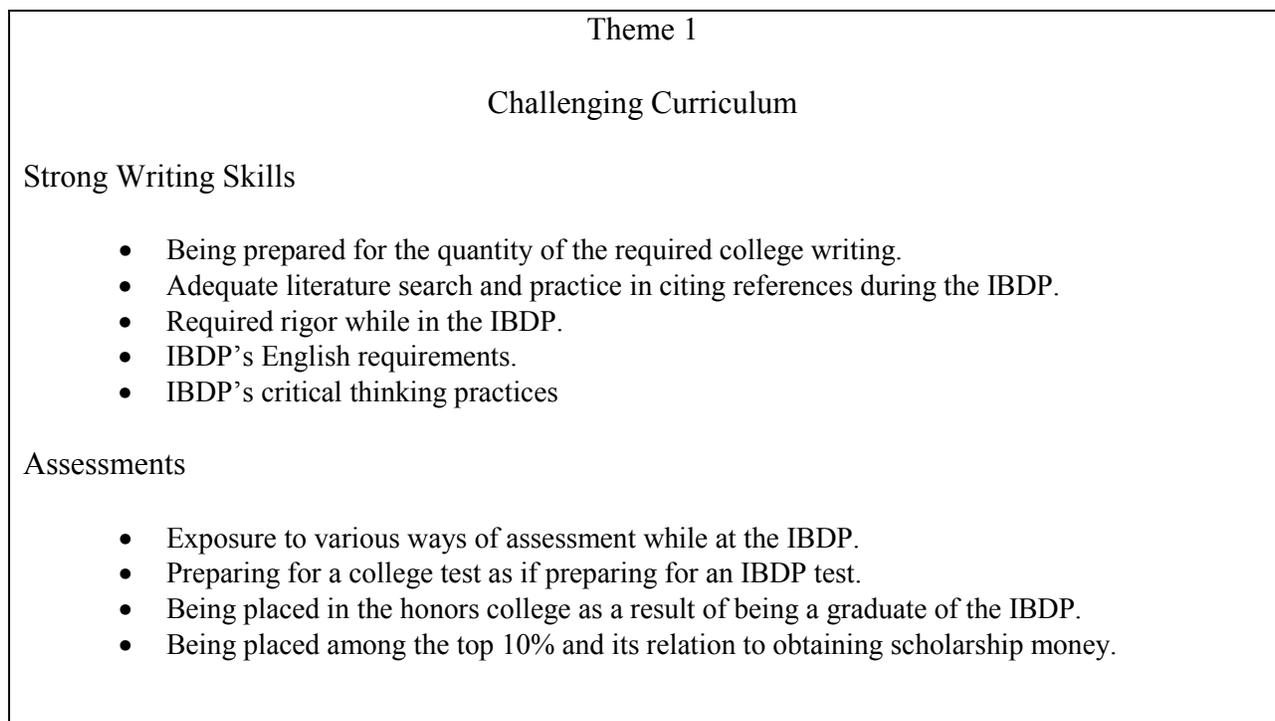


Figure 3. Theme 1: Challenging Curriculum

As the IBDP graduates discussed the rigor of the IBDP curriculum and its impact on college readiness, the theme of *Independent Learner* began to slowly emerge. Most noted that the rigor of the IBDP had prepared them for an efficient use of time, multi-tasking, and stress management. For example Respondent 4 stated:

I think IB prepared me a lot just with my time management, that's a big one. In IB I had to juggle six different fields of study, as well as like an EE and all the external stuff and I think that just really prepared me to just manage my time well when I got to college

Respondent 5 added that:

I think IB prepared me to handle stress really well because when I first started out with IB, I would get stressed about the amount of work and then as you go along you realize you can do it all. So in college when you are assigned to a lot of work, you realize that there is no need to stress, you are going to get it all done.

The participants discussed their skills in time and stress management, emphasizing that the IBDP had taught them to plan time efficiently and manage stress effectively. For example, as mentioned earlier, the music majors in college noted that because of the six core subjects in the IBDP, they did not have enough time to practice music; however, the discipline that was needed to deal with the curriculum's rigor aided them to work harder in college without a great deal of stress.

Many said that the college courses required problem-solving and critical thinking, which had already been firmly established by the IBDP. Respondent 7 talked about independent studying by stating she learned to "absorb information" and related her experience with physics:

In terms of physics, I like didn't take it in IB; I took it like just a normal semester of physics in high school and that definitely did not help me in college. I was like, I got through the first like two classes and that was out of the stuff I didn't know, like it was a mess, but biology, even though our biology teacher wasn't, like our scores weren't that great on the IB test, I kind of learned how to study by myself a lot and so by the time I got to like microbiology, I was able to like know how I learn and know how I can absorb information. So I was able to do really well, but I know there is a lot of people that just took the facts and put them up here and then took the test and then forgot all about it. So they didn't do so well on like the finals and stuff.

All agreed they had become independent learners through the IB program and their critical thinking skills were honed, which was helpful to them during the first semester of college education. Respondent 4 stated:

I think I would agree with that answer to be honest. It also helped a lot with just critical thinking skills because that is something that you encounter a lot, at least most

humanities classes. All of them actually, in all classes. Not really I think, especially like the literature based, in English or in the foreign language really helped me a lot with critical thinking.

Theme two is summarized in Figure 4.

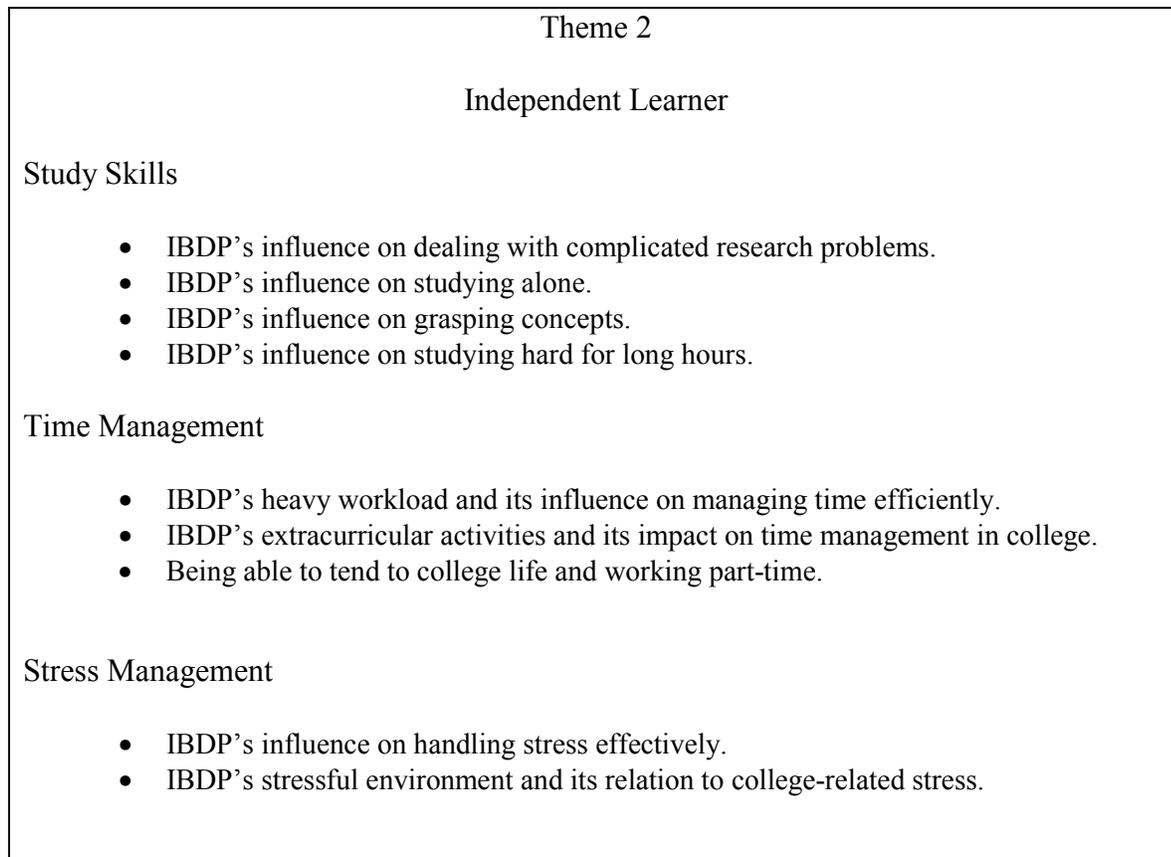


Figure 4. Theme 2: Independent Learner.

Soon after the discussion of the IBDP being instrumental in preparing the focus group participants with skills deemed necessary for college, the theme of *Academic Preparedness* emerged. It began with the question of subject preparation as most agreed that the IB English classes had prepared them for college-level writing skills.

Respondent 2 stated that IB English and second languages (as opposed to AP test) prepared him with college level writing because of the written essays:

For me I think it was English and the Foreign languages and I say that because there is so much writing that you have to do no matter what class you're in and there is IB which is different from AP in that a lot of it was graded by written essays or in the language, everything was done at least sort of suggestively and that's how everything is in college. AP is extremely regimented, extremely multiple choice oriented. I think that difference was very helpful

Respondent 7 added:

Wait, I have one thing. I feel like in IB you were like, you couldn't survive, you studied every single day, thorough about everything that you tried to learn. I feel like that really helped me in college, as opposed to AP where they were like "ok, here's the facts, there you go", answer some multiple-choice questions. I feel like in college nothing is like that, especially like English classes and stuff, because I know my English classes, they started out really fact-based, like "oh the guy walked in", but then as they got later in the semester it was more like "why did he walk in, what was he looking for", you know that was really similar to what I experienced in IB, so I was able to do really well.

Almost all felt that the weakest subject preparation for college was science. Respondent 10 stated science was easy except for chemistry:

It was a breeze. It was.

In my experiences, some of them were. Like I took Biology and then I took like a Natural Sciences class, but Chemistry I felt so stupid. I took Physics and physics to me was easier than chemistry and I was blown away about that. I don't know, I didn't understand it at all. I know that I guess that it kind of differentiates from professor to professor, it was, I'm going to make an excuse, it was an old man and he like every class,

you got in and you were like, you know, kind of just struggling to even stay awake, but I mean, I guess there is kind of variation in that, but for the sciences I felt honestly, not least prepared, but that was one of my lesser prepared classes.

Respondent 6 added:

I had a similar experience, except my teachers were really good, but it just wasn't getting in my head and I went through a year and one quarter of chemistry and at that point I like "um, maybe not,"

Respondent 5 pointed out the time factor involved in the in-depth teaching of various topics as a major reason for subject preparation, compared to students from other school and also referred to the fact that different teachers in different schools could lead to different levels of academic preparation:

My friend in college who took sciences at their high school, but they had better teachers. They were much better prepared for the chemistry class that I took because they were reading a textbook, but they would understand it like the first time around, they didn't have to do all the extra work that I had to do to understand what was going on.

Respondent 5 further added the advantage of block scheduling by stating that it provided teachers with sufficient time to thoroughly teach subject matters like science:

I had a friend who took IB through a private school and she had block scheduling and one of the big things that it sounded like that their Math and Science Departments were more developed that way because in the classes, I guess they had like a lab portion and a lecture portion and it was like all done in the same day and it just sounds like, for me personally Science is not my forte, so it would have been really helpful to get the application on the same days I got the information

Although most IBDP graduates felt unprepared to take the assessments in science in college, most had been able to overcome the initial hurdles because they had already learned to study independently in IBDP classes. As Respondent 1 pointed:

Uh, I'm physics major so I've taken a lot of physics. I like it. About IB preparing me for it, I had to do weird kind of research my first semester and actually for a year and a half I did astronomy research and so it kind of forced me to look at something that I didn't understand or didn't have any experience in and problem solve and I think that IB really helped me in that aspect.

IBDP graduates explained they were better prepared for college than their peers in most areas. One said that the professors in her college were not adequately informed of the IBDP:

I think a lot of people don't really know what it is, so like if I say "oh, I received a diploma" people are kind of like, wait what's that. They don't know what it is. Once I explain it, then they're like, "oh ok, yeah that's pretty good."

She further added when asked if they knew about IB in comparison to AP:

Yeah, with Advanced Placement, they were like ok, well you're in a college, a lot of college students took advanced placement, you know, so it's more of expected that you took advanced placement. Whenever I say that I went through a different program, it's always kind of hard to like, you have to go through that extra stuff of being like this is what I did in high school, I worked really hard and I got so and so, this much.

As IB graduates compared themselves to their peers, they noted that they could complete assignments on time and not procrastinate. Respondent 11 pointed out that despite his procrastination in school, in college he completed his assignments on time:

I was going to say that when I compare myself to my peers, there is two things that I notice, the first thing is that I'm super focused and I'm really goal-oriented when I practice or when I do anything and then my peers are kind of just like, they kind of beat around the bush a lot or they don't really go and just do it, they wait and they sit back. Another thing, when I was like a freshman, I procrastinated a lot in high school, but when I got to my junior year, I started to not procrastinate and I just did everything the night it was assigned and I realized how easy life was when you did that. So in college all my friends procrastinated a ton and then they always freak out like the day before everything is due and I'm just kind of relaxed because I've done it already. They freak out because "you did it already?" I was like "yeah, why not."

Theme three is summarized in Figure 5.

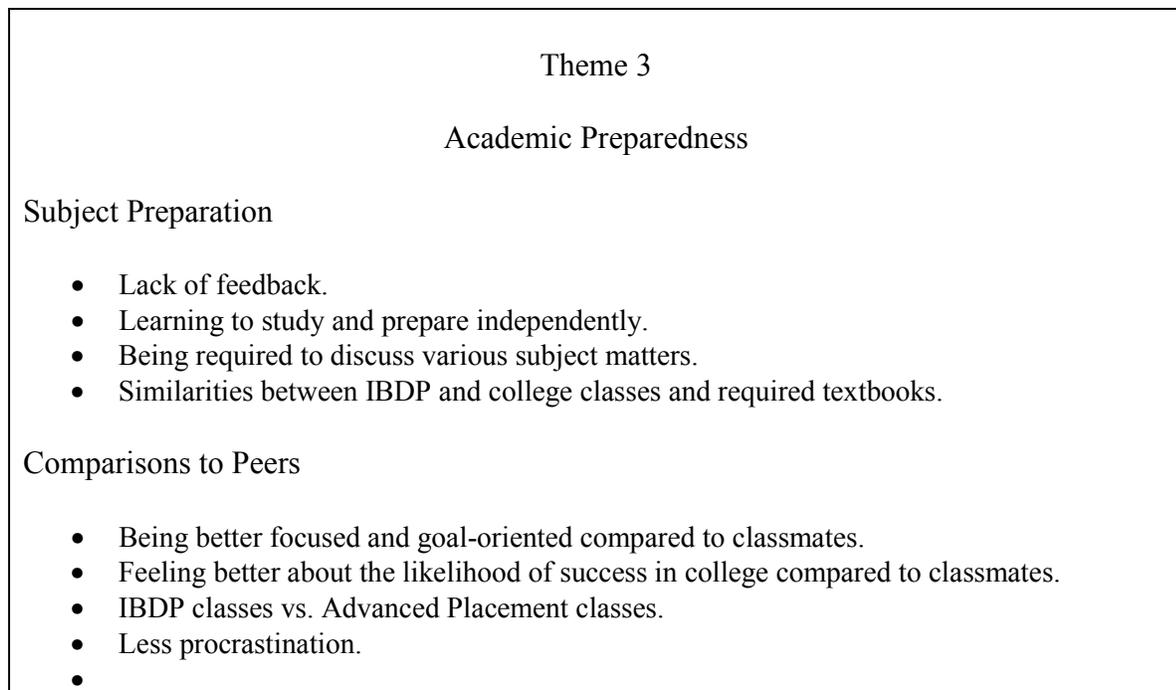


Figure 5. Theme 3: Academic Preparedness.

Some minor themes were also detected, for instance internationalism and cultural adjustments in college. A few others noted that they had met fellow students from other countries and the international exposure they had received via the required reading in various IBDP classes became relevant in college. For example, Respondent 6 connected reading literature from other countries (translated works) provided different perspectives that helped in adjustment in college:

One of the things I found most valuable was the literature. I think the outside texts that we read in IB really helped me to kind of start to understand other perspectives and when I got to college, I got to meet international students and I think reading that type of literature helped me to kind of get a different perspective on things and it wasn't like the usual Shakespeare, the usual like texts that you get in high school, it was outside texts and that's what I really liked.

Most felt that meeting IBDP graduates from other schools helped them adjust to the college's cultural climate. Respondent 12 stated:

Like for my school, it's like 20% of the population is international students, so I've met a lot of students who actually did take IB classes and had the diploma program in India, France and you know other countries, so that was kind of just like a bond that we could have, like "oh you went through that too."

Other respondents seconded this point of view emphasizing the international aspect of IB that is a component of the IB mission statement, and the attributes of the IB Learner profile. The IB mission statement states that its aim is to create a better and more peaceful world where young people foster intercultural understanding and respect (IBO, 2013). The IB Learner Profile provides the attributes that will make an IBDP student a whole individual, one of them, Open –

mindfulness perfectly fits with the international exposure and cultural understanding the IBDP graduates have prior to entering college having been exposed to readings from other cultures in the IBDP curriculum. The other attributes that are tied into the IB curriculum, of being Knowledgeable, Caring and Balanced also provide IBDP graduates with better cultural understanding. These are non-academic qualities of an IBDP graduate which are essential to cultural adjustments in college and have been discussed by Conley(2007, 2014).

Summary of the Results

The quantitative results showed that the study's IBDP graduates had achieved high GPA and completed a large number of credit hours during the first semester of their freshman in college. High school GPA, junior year English, and junior year physics scores predicted college GPA. High school GPA and junior year physics scores predicted the credit hours taken.

The qualitative results supported the quantitative results indicating that the challenging nature of the IBDP curriculum had prepared the IBDP graduates for the first semester of college education. The IBDP graduates were united in their view that the IBDP curriculum's rigor assisted them in college-related required activities such as writing and problem-solving. All agreed that the program had prepared them to manage time and stress in college, because in the IBDP years, they had to meet deadlines and produce quality work for grades, similar to college. The IBDP graduates emphasized that the IBDP assessments were similar to those they faced in college. Overall, all felt that the IBDP had prepared them well for the challenges associated with college education. Some respondents pointed to the lack of awareness among college faculty about the IBDP and others commented on the international exposure received through IBDP readings.

CHAPTER V

SUMMARY, CONCLUSIONS, AND DISCUSSION

Increasing failure rates at the college level have alarmed educators and administrators, leading them to ponder the impact of high school curricula on college readiness. The IBDP has been the subject of study for its effectiveness in preparing students for college. Numerous studies and articles have cited the positive impact of the IBDP curricula on students from a variety of sectors who enter college either within the United States, or internationally (Blake, 2012; Burris, Welner, & Wiley, 2007; Byrd et al., 2007; Coca et al., 2012; Conley et al., 2014; Culross & Tarver, 2007; Duevel, 1999; Foust et al., 2008; Frost, 2011; Hill, 2011; Kyburg, 2006; Kyburg, Hertberg-Davis, & Callahan, 2007; Mayer, 2006, 2008, 2010; Panich, 2001; Poelzer & Feldhusen, 1997; Roderick, Nagoaka, Coca, & Moeller, 2009; Saavedra, 2011; Smith, 2009; Tarc & Beatty, 2012; Thomas, 1988a, 1988b; Tsukada, 1998). The majority of these studies are qualitative, a few are mixed methods, and an even smaller number are quantitative. Most of the studies provide an overall perspective of the program, and some provide quantitative data to verify the IBDP's impact on college success (Burris, Welner, & Wiley, 2007; Culross & Tarver, 2007; Duevel, 1999; Panich, 2001; Poelzer & Feldhusen, 1997; Thomas, 1988a, 1988b; Tsukada, 1998). Since the NCLB (2001) was enacted, more school districts have implemented the IBDP curriculum in order to improve scores on state-mandated and national tests like SAT and ACT (Frost, 2011; Mayer, 2010). The IBDP program provides a path to success for the majority of students who enroll in, and complete the program. The rigorous, yet holistic, nature of the IBDP curriculum provides all students with a strong foundation in college readiness.

The primary quantitative purpose of the study was to examine the high school correlates of the first semester college freshman GPA and credit hours completed, in a non-probability sample of IBDP graduates. The secondary qualitative purpose was to document the perspectives of a group of IBDP graduates regarding the effectiveness of the program in preparing them for college. The study was delimited to two cohorts of the IBDP graduates from one IBDP school in South Texas who were mostly gifted and talented. There were 31 college freshman students who voluntarily participated in the quantitative study, and twelve students participated in the focus group interview. The majority of the participants were female (61.70%), White (83.90%), and not disadvantaged (87.10%).

The theoretical framework for the study was Jean Piaget's (1950) Theory of Constructivism, derived from his research on cognitive learning and furthered by Bruner's (1971) study of cultural learning. Piaget's and Bruner's theories are further emphasized by John Dewey's (1916) Theory of Pragmatism in education, where the traditional and progressive forms of learning find common ground in the process of learning by doing. The constructivist theory provides a different approach to instruction. Since it was derived from psychology, philosophy, science, and more importantly, biology, the theory views knowledge as emergent, developmental, and visible, providing constructed explanations by humans engaged in meaning-making in cultural and social communications (Fosnot, 2005). This theory is incorporated into the IBDP curriculum where students construct knowledge based on their existing mental models, and understanding evolves through inquiry (IBO, 2008). Students in the IBDP are taught to become independent learners through different curricular demands and the teacher is only a facilitator. This was emphasized by the participants of the focus group that, despite their difficulties with science in college, they managed to solve their problems with skills learned

through the IBDP years. As IBDP students they had to write numerous papers, do research on their own for the Extended Essay and Internal Assessments, teachers only provided guidelines that they followed, as one respondent commented about physics; these assessments along with teachers as facilitators, provided the IBDP graduates with skills required to construct knowledge independently.

Further, Maria Montessori's (1914) methods of teaching young students and her definition of the teacher's role are also incorporated into the IB philosophy (Orem, 1966). Orem has discussed Maria Montessori's technique at length in his work. According to his study, Montessori followed a natural physiological and psychological development that she called "sensitive periods of the child" (p. 13), which was divided into three parts: motor, sensory, and language or intellectual education, as discussed in chapter 1. She preferred teachers to serve children as guides without letting them know of their presence. This philosophy of the teacher as a guide is present in the IB philosophy where the teacher's role is that of a facilitator (IBO, 2008). This allows the student to have freedom to maintain enthusiasm for the subjects under study. The IB curriculum, therefore, provides the opportunity for originality of thought and creativity, as facilitated by the teacher, and encourages independent learning, which is a very important element for cognitive development.

This study employed a two-step mixed methods model. Step one was designed to collect quantitative data, which was followed by the collection of the qualitative data in step two. The quantitative component of the study utilized a correlational design, and was guided by the following research question:

To what extent does academic achievement in high school explain GPA and course completion among International Baccalaureate Diploma Program graduates?

For the qualitative component of the study, a focus group was conducted and the following research question guided the study:

What are the perspectives of International Baccalaureate Diploma Program graduates regarding the usefulness of the program in preparing them for college education?

Summary of Results

The non-probability sample for the quantitative component of the study consisted of 31 IBDP graduates. The majority of the participants were female (61.30%), White (83.90%), and not economically disadvantaged (87.10%). The participants were all 18 years of age or older at the time of the study.

The high school and college transcripts of the participants (2013 and 2014) were used for the analysis in the quantitative component of the study. The data were in the form of percentages. The GPA could range from 1.00 to 4.00 ($M = 3.67$, $SD = 0.22$). The theoretical range of scores for the subject matters was 0 to 100 for English, physics, and history in junior and senior years. The IB Diploma examination scores could range from 1 to 7, (1 being the lowest and 7 the highest).

The outcome measures were extracted from June 2013 and 2014 high school transcripts, as well as from December 2013 and 2014 first semester college transcripts. These included high school and college GPAs as well as college credit hours. The mean college GPA was 3.44 ($SD = 0.44$), and the mean credit hours taken was 14.65 ($SD = 1.99$).

High school GPA accounted for 22% of the variation in college GPA. The high school junior English and high school junior physics scores accounted for 17.6% and 16% of the variation in college GPA, respectively. High school GPA and high school junior physics scores

were also statistically significant correlates of the credit hours completed and accounted for 13% and 14.4% of the variation, respectively.

Three themes emerged from the analysis of the qualitative data, namely, *Challenging Curriculum*, *Independent Learner*, and *Academic Preparedness*. The qualitative results showed that the IBDP graduates agreed that the program prepared them for college in both academic and non-academic skills including writing, problem solving, time management, and stress management. They felt most prepared in writing and research skills, and least prepared for science; however, the problem solving skills they learned through the IBDP curriculum aided them in working through difficult concepts in science. This perception supports Piaget's Constructivist philosophy of meaning-making and Montessori's method of discovery learning through the motor, sensory, and language or intellectual education. The IBDP graduates were united in their view that the IBDP curriculum's rigor prepared them in the academic and non-academic skills required to succeed in college. The IB learner profile of ten attributes that aims to produce future citizens who are: (a) inquirers, (b) knowledgeable, (c) thinkers, (d) communicators, (e) principled, (f) open-minded, (g) caring, (h) risk-takers, (i) balanced, and (j) reflective (IBO, 2013) is clearly fulfilled through the IBDP. The combination of these attributes prepares the IBDP students to become responsible members of their communities, nations, and the world (IBO, 2013).

Conclusions

Based on the quantitative results, it was concluded that there is a correlation between high school GPA and high school junior physics with first semester college success. Junior year English and physics also show a variation in correlates. Junior year physics and high school GPA

correlated significantly with college credit hours. The results may be used to justify the value of an IBDP education in college readiness.

Based on the qualitative results, it was concluded that the IBDP graduates view the IBDP as an indicator of college readiness. Furthermore, it can be concluded that the IBDP curriculum is geared toward college preparedness through the mastery of curricular objectives that extend to a set of skills required to succeed in college. Overall, IBDP graduates value the IBDP program and believe it prepares high students to succeed at the postsecondary level.

Discussion

Bivariate associations were computed to examine the magnitude and the direction of the relationship between the IBDP curriculum and college readiness. There were 31 college freshman students who voluntarily participated in the quantitative component of the study. All were 2013-14 graduates of an IB school in South Texas, ranging in age from 18 to 19 at the time of data collection. The majority of the participants were female (61.30%), White (83.90%), and not economically disadvantaged (87.10%). The results showed that the high school GPA and subject scores were predictive of the outcome measures of college GPA and credit hours taken. The statistically significant correlates of college GPA were high school GPA, high school junior English scores, and high school junior physics scores.

The intent of the study was to investigate the impact of IBDP curricula on college readiness through the correlation of IBDP graduates' high school GPAs, first semester college GPAs, and credit hours. The results indicated that there is a correlation between high school GPA, college first semester GPA, and credit hours. Current literature has explored the relationship between the IBDP curriculum and postsecondary success (Blake, 2012; Burris, Welner, & Wiley, 2007; Byrd et al., 2007; Conley et al., 2014; Frost, 2011; Hill, 2011; Hood,

2012; Kyburg, 2006; Mayer, 2006, 2010; Roderick, Nagoaka, Coca, & Moeller, 2009; Saavedra, 2011).

The connection of high school curriculum and college success is documented in several studies. Adelman's (1999) study concluded that high school curriculum, test scores, and class rank combined have an effect on students' postsecondary success, including those students with lower SES. Further, Byrd et al. (2007) confirmed that both AP and IBDP programs prepare students for college; however, they found that the IBO keeps "a tight rein on its programs and teachers" (p. 17) by ensuring that IBO trains schools before they can offer the Diploma Program. They also maintain consistency in course and quality through formative and summative assessments administered internally by classroom teachers, and externally by IB examiners. Burriss, Welner, and Wiley (2007) examined the case of South Side High School in the suburban district of Rockville, New York, and found that the rigor in IBDP courses has a strong impact on high school students' postsecondary achievement. Of the IBDP graduates from the class of 2002, 88% graduated from college in four years, while 32% graduated in more than four years. The results of the Burriss et al. study (2007) indicate that the IBDP curriculum does impact college readiness and student success in college. Kyburg (2006) points out in her research that the Theory of Knowledge core in IBDP provides students with the opportunity to think about abstract ideas that build critical thinking skills. The students in her study were not only highly motivated to go to college, but they also wished to prepare well for college.

A focus group interview was conducted in the second step of the study to further explain the numerical findings. There were 12 IBDP graduates (seven females, five males—all White) who voluntarily participated in the focus group. IBDP graduates in the focus group responded to lead questions, which had been created based on the quantitative findings. The focus group

participants were asked their perspectives on whether the IBDP curriculum had effectively prepared them for college. All agreed that the challenging curriculum of IBDP prepared them mentally and academically for college. They all agreed that although the IBDP curriculum was extremely rigorous, it ultimately prepared them to succeed in college-level classes. The role of IBDP's academically challenging curriculum in promoting college readiness, as evidenced by high GPAs in high school and college has been well supported in literature (Bland & Woodward, 2009; Blake, 2012; Byrd et al., 2007; Coca et al., 2012; Conley, 2007; Conley et al., 2014; Frost, 2011; Kyburg, 2006; Kyburg, Hertberg-Davis, & Callahan, 2007; Mayer, 2006, 2010; Panich, 2001; Roderick et al., 2009).

The IBDP graduates felt that the challenging curriculum led to mental stress. However, they also confirmed that combating stress in high school helped them adjust to college requirements. They also contended that the extensive amount of academic work they had to complete as an IBDP candidate taught them time management, which had a positive impact on their college preparedness. These findings are similar to previous research in the area of stress and academic performance (Foust et al., 2008; Hertberg-Davis & Callahan, 2008; Kyburg, Hertberg-Davis, & Callahan, 2007; Taylor & Porath, 2006).

When the graduates were questioned specifically about what in the IBDP helped or hindered them in college, everyone agreed that they felt the most prepared for college-level writing and research. The writing that was required in IBDP had the most positive effect in college according to the graduates. The mandatory essays in the form of internal and external assessments that were required in every subject area, including mathematics and the sciences, aided the graduates to write at the college level with the greatest ease in comparison to their non-IB peers. This supports the quantitative results indicating junior English scores correlate with

high school and college GPAs. Many of the graduates felt the challenging work they had already accomplished in high school did not help them feel motivated for college work initially, as they were already burned out when they entered college. However, that did not deter them from studying in college. Many of the IBDP graduates taking science courses discovered that their high school science did not prepare them for college science classes. They also contended that the problem solving skills and independent learning they had acquired in IBDP classes assisted them in college science classes. This is supported by research on IBDP (Byrd et al., 2007; Blake, 2012; Conley et al., 2014; Saavedra, 2011). Almost all IBDP graduates in this study agreed that English and history helped them read critically and write using research skills.

Some other comments that emerged from the lead questions in the focus group interview dealt with teacher effectiveness in the IBDP. The IBDP graduates were concerned about their preparation in science subjects due to lack of rigor in those subjects. There is not much literature to support these claims. Most literature is geared towards IBDP's challenging curriculum, its effect on postsecondary success, and the stress related to completion of the curriculum. However, in an interview with the administration, Hood (2012) found that teachers had to be well trained to teach IBDP science and mathematics curriculum. This could support the focus group graduates' perceptions of feeling less prepared in science. On the other hand, the IBDP curriculum aims to make students independent learners, as described by one of the IBDP graduates. In the focus group interview, one of the respondents felt that in physics she had to struggle to learn the matter herself, and that actually aided her in college. Therefore, student accountability in learning is deeply emphasized in the IBDP curriculum. Gifted and motivated students navigate through the IBDP science curriculum with ease (Poelzer & Feldhusen, 1997). The IBDP graduates who had the most trouble with science in college probably were not active, independent learners in high

school and therefore could not manage to keep pace with college-level science. However, the fact that they used their own study skills acquired from their IBDP years clearly explains the strength of the program despite its shortcomings. Teachers' expectations have been amply studied to demonstrate that high expectations of teachers result in improved academic readiness (Hood, 2012; Mayer, 2006, 2010; Sheehy, 1999). However, a study conducted by the Chicago Schools Consortium (Lee, Robinson, & Sebastian, 2012) on non-IBDP students found a difference between English and social science classes, as well as mathematics and science classes. Most students in this study felt more pressure in mathematics and science classes than in English and social science classes. The researchers attributed the difference to the teacher-student relationship. According to the students, they felt comfortable with the teacher-set norms in English and the social science classes, whereas in the mathematics and science classes there was less clarity in teacher expectations that led to more stress in the learning environment. They concluded that apart from having high expectations, teachers must build good, caring relationships with their students in order for them to succeed. This advice could be applied to the IBDP teachers as well.

Some comments were about encountering a lack of understanding of the program at the postsecondary level and the IBDP assessments. These have been discussed in chapter 2, where the study on University administration's perceptions revealed limited knowledge about IBDP curriculum and problems with assessment conversion (Jenkins 2003; Coates et al, 2007).

The IBDP graduates also commented on the number of credit hours they were taking at college. Many of them were taking more than the required 12 hours. Some were taking 15 to 18 hours and also working on campus or outside campus. A few said they did not work at all but focused on studying and research. In addition, the quantitative results revealed there is a

correlation between high school GPA, junior physics course average, and number of credit hours taken in college. This demonstrates that the rigor in the program has a positive effect on the hours taken in college by IBDP graduates and their persistence to take more hours.

Further, most of the IBDP graduates interviewed for this study who went to schools in Texas felt professors did not see the difference between the AP and the IBDP courses. This is supported in literature as well (Hood, 2012; Coates et al, 2007; Jenkins, 2003). Their responses revealed a sense of dejection at having worked hard in high school to no avail. However, IBDP graduates' perspectives on the overall impact of the IBDP curriculum on college readiness were strong indicators of the significance of the IBDP curriculum in preparing IBDP graduates for college.

Other minor discussions were elicited from the qualitative component of this study. One dealt with internationalism. Some students explained that reading translated literature in high school provided them with a better concept of cultural differences in college. Many met students from other IB schools who had lived in different parts of the world and further enriched their cultural understanding. Students who received their diploma at the end of the program were also pleased with the number of college credits they received. They were excused from introductory level courses and could focus on the courses they wished to take, and also saved on tuition. Thus, the credits they received added to their academic preparedness for college. Some of the students studying in Texas also credited the IBDP for the oral language skills they acquired in high school. They could speak in Spanish and also confidently hold a conversation with professors. Even students who did not earn an IB Diploma received credit for individual subjects and also received scholarship money for college due to high GPAs.

A major criticism leveled at the IBDP is that it increases stress due to the rigorous curriculum. However, the effectiveness of the program overrides the stress-related issues with the IBDP curriculum. Kyburg et al. (2006), conducted longitudinal qualitative studies exploring the stress involved in AP and IBDP curricula related to students' college success. They conducted a qualitative study on gifted students taking AP and IBDP courses to explore non-academic advantages and disadvantages of grouping. They found these advantages: a better classroom atmosphere, special bond among participants, pride, and self-confidence. In another study of IBDP students, Suldo et al. (2008) found that despite the extreme rigor of the curriculum, IBDP students display "superior levels of psychosocial adjustment" (p. 963) compared to general education students. Further, they found that IBDP students also had "more positive perceptions of school climate, more academic self-efficacy, better attendance, fewer in-school behavior problems, and higher GPAs" (p. 963). Shaunessy, Suldo, Hardesty, and Shaffer (2006) noted similar findings in their examination of the psychological well-being of IBDP students. Further, Foust et al. (2008) reported similar findings in their study. The present study found comparable results in the qualitative component. The IBDP graduates in the present study pointed to the stress involved in the curriculum, but they also highlighted the fact that the program's rigor and stress prepared them to navigate through college courses as a result of the time-management and problem solving skills they had acquired. Most of the IBDP graduates interviewed for this study explained that the deadlines and writing pressures they faced as IBDP candidates made college easier to handle in the first semester as compared to their non-IB peers.

Limitations and Delimitations

The present study was delimited to one school in South Texas. The two cohorts under study mostly came from the gifted and talented population of the feeder middle school. The two

cohorts were in a magnet program of the IBDP initially. Therefore, the small sample size, with 31 participants for the quantitative aspect and 12 participants for the focus group, lacked diversity; 83.90 % of the total participants were White, and there was a majority of females (61.30) in the qualitative portion of the study.

Implications

In spite of its shortcomings, the study's findings can be of importance to individuals concerned with the growth and success of the IBDP, namely the study site and its district, in addition to present and future IBDP students.

The district may utilize the results of the study to predict college readiness among the IBDP students. The findings could also be used to provide the community with positive feedback on the IBDP and encourage more students to enroll. Moreover, district administrators may be persuaded to view the IBDP curriculum as a model for best instructional practices. The study might also be used to ensure that the best academic programs are in place for students' postsecondary success.

Schools with the IBDP programs may use the study results to identify best practices. For instance, the elements of Extended Essay in the IBDP curriculum could be used in non-IB classes to improve research and writing skills in students. The literature in the study could be used to reference postsecondary academic success for the IBDP graduates. Further, the study might be used to improve gray areas in the implementation of the program.

The study could encourage students to understand the value of an IBDP education through analysis of the results, which shows the correlation between rigor in high school and college readiness. The study may also inspire all students of the community to take challenging curricula for their future postsecondary success.

Recommendations for Further Research

According to the findings of the study, the following are recommendations for future research:

1. Replicate the study with a larger sample from South Texas, which would strengthen the data and affirm the findings of this study.
2. Conduct a longitudinal study, following the IBDP graduates from South Texas through their first four years in college. This study was delimited to only the correlation between high school GPA and first semester GPA and credit hours taken in college. A longitudinal study would allow for a deeper understanding of the relationship between the rigor in the IBDP and college readiness and persistence in students of South Texas.
3. Collect, analyze data on minority students in South Texas enrolled in the IBDP so that all IBDP stakeholders can observe whether the program has a definitive effect on college readiness in the region's minority students.
4. Collect, analyze, and document current IBDP students', teachers', coordinators', and school administrators' perspectives on the effectiveness of the IBDP. A complete perspective of the program would provide necessary data regarding the implementation of best practices that could enhance the growth of the program and increase enrollment.
5. Collect, analyze, and document college administrators' and professors' perspectives on first year IBDP graduates. The studies by Jenkins (2003) and Coates et al (2007) have pointed out to the lack of awareness in college administration and staff.

6. Collect, analyze, and document correlations of high school scores and GPAs of the IBDP graduates to the SAT and ACT in South Texas. This would provide valuable knowledge regarding the effect of rigor and instructional practices on the IBDP graduates' college entrance exams.

Final Thoughts

My initial research plan was to do a quantitative study in order to emphasize the elements of college readiness in the IBDP curriculum but I encountered problems when enough IBDP graduates did not respond. Ultimately, changing the methodology to a mixed methods study proved fruitful because rich data were collected through the focus group interview provided strength to the research as the qualitative results supported the quantitative results.

It was my intent to study whether the IBDP curriculum is related to college readiness. The study revealed that the IBDP had provided the IBDP graduates with college ready skills to allow them to succeed in college. The quantitative data showed statistically significant correlates of college GPA, high school GPA, and high school junior English and high school junior physics scores. In the qualitative analysis, I found that the amount of writing the IBDP graduates had to accomplish in English and history had a significant impact in their college readiness. Further, most IBDP graduates I interviewed had taken more than 12 hours in their first semester; some took 15 to 18 hours. Although history and senior year English are not correlated, nor are the IBDP final examinations for English and history, the quantitative and qualitative data showed that the high school GPA and college GPA correlate. This finding corroborates with the literature in this field (Blake, 2012; Burris & Murphy, 2007; Coca et al., 2012; Frost 2011; Lou, 2013, Mayer, 2006, Roderick, Nagaoka, Coca, & Moeller, 2009, Smith, 2009; Taylor & Porath, 2006). The study will inform concerned individuals that challenging curricula indeed support students in

college. Despite the stress and time involved in the completion of assignments in the IBDP, IBDP graduates explained it was worth it because it provided them with time and stress management skills required for college classes in the first semester and enabled them to sail through their first semester smoothly compared to their peers who did not take the IBDP. This is again corroborated in the studies conducted by Foust et al., (2008, 2009a, 2009b), Shaunessy, Suldo, Hardesty and Shaffer (2006), and Suldo et al. (2008).

The study did not investigate gender differences. Additionally, not all participants had obtained the IB Diploma. In the focus group interview, the IBDP graduates who did not obtain the IBDP Diploma confirmed to me that the challenging curriculum prepared them well for college. Another aspect that was not explored in the study was the difference in expectations in universities with regard to curriculum. Since the IBDP graduates went to different universities across the country, their experiences varied. Most graduates who stayed in the state did not encounter as many problems as graduates who went out of state. This may be an interesting area of inquiry for future studies on college experiences of the IBDP graduates from South Texas.

If the study is replicated, a larger and more diverse sample will definitely provide richer information. A gender analysis will be fruitful in the study of the differences in the performances of boys and girls at college level. This can be further extended by adding a section on the performance of minorities or by attempting to study only the minority population in the IBDP. Further, adding two categories of the IBDP graduates, one category for students who obtain the IBDP Diploma by passing all the IBDP examinations, and one for those who do not obtain the Diploma, will provide a truthful picture of the IBDP curriculum. Another addition to the study could be the number of credit hours taken by the IBDP graduates in comparison to non-IBDP students in college. These additions may strengthen the study if replicated in the future.

Indeed, in many ways the experience of conducting this study revealed to me commonalities between the quantitative data and the qualitative data. The overwhelming acceptance by the IBDP graduates in the focus group, about their college preparedness through the IBDP program is significant to this field of study because it is substantiated by quantitative data collected. The quantitative data reveal the high school GPA of the IBDP graduates is correlated to their college GPA, as are junior year English and physics. Junior year physics also correlates to the number of credit hours taken in college, which verifies that challenging curriculum in high school increases persistence in college freshman. The study, despite its limitations, has provided results that provide credibility to the initial purpose of the research and broadens the scope for further research in the area of IBDP and college readiness.

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APPENDIX A

INTERNAL REVIEW BOARD APPROVAL



OFFICE OF RESEARCH COMPLIANCE
Division of Research, Commercialization and Outreach

6300 OCEAN DRIVE, UNIT 5844
CORPUS CHRISTI, TEXAS 78412
O 361.825.2497 • F 361.825.2755

Human Subjects Protection Program	Institutional Review Board
APPROVAL DATE:	July 19, 2015
TO:	Ms. Usha Gurumurthy
CC:	Dr. Bryant Griffith; Dr. Corinne Valadez; Dr. Chase Young
FROM:	Office of Research Compliance Institutional Review Board
SUBJECT:	Amendment Approval
Protocol Number:	141-14
Amendment #:	1
Title:	International Baccalaureate: A study in college readiness
Review Category:	Expedited
Expiration Date:	February 3, 2016
Approval determination was based on the following Code of Federal Regulations:	
Eligible for Expedited Approval (45 CFR 46.110): Identification of the subjects or their responses (or the remaining procedures involving identification of subjects or their responses) will NOT reasonably place them at risk of criminal or civil liability or be damaging to their financial standing, employability, insurability, reputation, or be stigmatizing, unless reasonable and appropriate protections will be implemented so that risks related to invasion of privacy and breach of confidentiality are no greater than minimal.	
Criteria for Approval has been met (45 CFR 46.111) - The criteria for approval listed in 45 CFR 46.111 have been met (or if previously met, have not changed).	
(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. (NOTE: Some research in this category may be exempt from the HHS regulations for the protection of human subjects. 45 CFR 46.101(b)(2) and (b)(3). This listing refers only to research that is not exempt.)	
Approved Amendments:	(1) Addition of focus group
Provisions:	
Comments:	The TAMUCC Human Subjects Protections Program has implemented a post-approval monitoring program. All protocols are subject to selection for post-approval monitoring.

This research project has been approved. As principal investigator, you assume the following responsibilities:

1. Informed Consent: Information must be presented to enable persons to voluntarily decide whether or not to participate in the research project unless otherwise waived.
2. Amendments: Changes to the protocol must be requested by submitting an Amendment Application to the Research Compliance Office for review. The Amendment must be approved by the IRB before being implemented.

3. **Continuing Review:** The protocol must be renewed each year in order to continue with the research project. A Continuing Review Application, along with required documents must be submitted 45 days before the end of the approval period, to the Research Compliance Office. Failure to do so may result in processing delays and/or non-renewal.
4. **Completion Report:** Upon completion of the research project (including data analysis and final written papers), a Completion Report must be submitted to the Research Compliance Office.
5. **Records Retention:** All research related records must be retained for three years beyond the completion date of the study in a secure location. At a minimum these documents include: the research protocol, all questionnaires, survey instruments, interview questions and/or data collection instruments associated with this research protocol, recruiting or advertising materials, any consent forms or information sheets given to participants, all correspondence to or from the IRB or Office of Research Compliance, and any other pertinent documents.
6. **Adverse Events:** Adverse events must be reported to the Research Compliance Office immediately.
7. **Post-approval monitoring:** Requested materials for post-approval monitoring must be provided by dates requested.

APPENDIX B

SCHOOL DISTRICT APPROVALS



Office of Assessment and Accountability

CORPUS CHRISTI INDEPENDENT SCHOOL DISTRICT

P. O. Box 110 Corpus Christi, Texas 78403-0110

3130 Highland Avenue Corpus Christi, Texas 78405

Office: 361-844-0396 Fax: 361-886-9371

Website: www.ccisd.us

December 19, 2014

Ms. Usha Gurumurthy
International Baccalaureate Faculty Member
[Name of school and
Address deleted to
Preserve anonymity]

Dear Ms. Gurumurthy:

The CCISD External Research Review Committee members granted you **Approval** to conduct your research entitled *International Baccalaureate: A Study in College Readiness* in the Corpus Christi Independent School District.

Additionally, this **Approval** indicates that your request meets all research/evaluation and FERPA standards. In that connection, we will also need your approved IRB proposal from TAMU-CC once that occurs.

Thank you for submitting all the required consent and confidentiality forms as part of your application. Additionally, Dr. Moynihan-McCoy will establish a Google Chrome Cloud shared drive for you to view those forms via the Internet making it possible for you to have unlimited data space to upload any additional documents.

When we return from the holiday break, she will forward your data request to our OAA Service Request mailbox at oaaservicerequest@ccisd.us for data mining and retrieval. Please use that mailbox when the time comes to make specific data requests to us as you need them. Mr. Ric Allen, Systems Programmer/Analyst, in our office will be your contact through that mailbox.

Page Two
Letter to Ms. Gurumurthy

It is a pleasure to welcome you to the District as a researcher as you begin your study, Ms. Gurumurthy.

Finally, at the conclusion of your work, please provide us with a copy of the final study. We want to share your findings with the educators across CCISD.

Should you need additional assistance during your research, please feel free to contact Dr. Toni Moynihan-McCoy at 361-844-0396, ext. 44256 and/or via e-mail at Toni.Moynihan-McCoy@ccisd.us.

Sincerely,



Dr. Eida E. Garcia
Interim Executive Director
Office of Assessment and Accountability

EG/tmm

Enclosures

cc: Roland Hernandez, Ph.D., Superintendent of Schools
Maria Luisa Guerra, Ed.D., Deputy Superintendent
Bernadine Cervantes, Ed.D., Assistant Superintendent for School Leadership Services
Janis Jordan, Ed.D., Assistant Superintendent for Curriculum and Instruction
Toni Moynihan-McCoy, PhD, Accountability Research;
External Research Committee Member
Debbie Seeger, Director, Office of Strategic Initiatives;
External Research Committee Member
Ric Allen, Systems Programmer/Analyst;
External Research Committee Member
Erin Sherman, MA, Research Compliance Officer, TAMU-CC
Bryant Griffith, Ph.D., Regents Professor, Curriculum and Instruction, TAMU-CC



Office of Assessment and Accountability

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EXTERNAL RESEARCH CAMPUS PRINCIPAL CONSENT FORM

My signature on this form indicates that I have read the information provided and have decided to participate in the project titled, International Baccalaureate Programme: A Study in College Readiness to be conducted for IB Graduates of the classes of 2013 and 2014.

The purpose/context of the study

This quantitative study will investigate the effectiveness of the IB curriculum in preparing students for college. It will correlate the high school GPA and subject scores to the College GPA and subject scores of IB graduates from the cohorts of 2013 and 2014. Contextually, several studies have been conducted to study this correlation between the GPA of high school and college but there are next to none for the region of South Texas. Bland and Woodworth (2009) conducted case studies on Lamar Academy, McAllen, Texas and Hillsborough High School (HHS) of Hillsborough County in Tampa, Florida. In their study they state that students at Lamar Academy report that they were “highly prepared for postsecondary education”. Several studies have been done on the Chicago Public Schools (Roderick et al 2007). Conley and Eugene (2007) came up with the framework of college readiness; Conley et al., conducted a recent mixed methods, three phase study on IB graduates and found significant results that demonstrate the impact of IB on college success (2013). Further, Coca et al., 2012; Frost 2011; Saavedra 2011), all have done studies on IB and the academic success of IB students.

This study aims to bring light into South Texas education by throwing light on the excellence of IB curriculum and its impact on the students from this region.

I agree to the conditions listed below with the understanding that I may withdraw my participation in the project at any time, and that I may choose not to answer any questions that I do not want to answer. I understand my participation is completely voluntary.

1. Teachers will not be involved in this study. Data - test scores of the IB cohorts of 2013 and 2014. - will be collected from the IB Coordinator. The time could be from one day to a week depending on the availability of time for the Coordinator. Data will be taken only once, unless the researcher has any questions.

2. Only test scores for the different IB subject groups and data of IB exam results of the IB graduates will be collected for the study. High school GPA will be collected from the Office

of Testing and Accountability. The data will be used to compare with the IB students' scores of first semester and first Year College to determine a relationship in academic success.

3. This request will not affect any student from eligibility to participate in Child Nutrition Programs as the participants have already graduated from the school.

4. The identity of the participants will be kept confidential. Their names will not be utilized in the study only gender will be utilized and the Research site. Only the researcher will have access to the data with the names for one year after the completion of the study. My committee will not have access to the names or identity of the students.

5. The data will be used for a quantitative analysis to investigate a correlation between high school GPA and scores and College GPA and scores. The researcher will use the SPSS software to analyze data. It will be reported as part of the researcher's Doctoral Dissertation.

6. There are minimal risks to the participants in this study, risks that are part of normal life. The names will be kept confidential only the site name will be exposed in order to place the study. Under no circumstances will names of participants be revealed, as data will be destroyed after study.

7. The study aims to provide a pathway to the community's future generations a highly successful model of secondary education that will benefit them for years to come. The District will benefit with the data analyzed, the school will have data to demonstrate the effectiveness of a rigorous curriculum and its value in the future. The participants will feel a sense of pride in being part of the study and will be a motivator for future cohorts of the programme as well as future students in the community. Parents will have an informed choice while deciding a worthy school program for their children.

Every student a learner...every learner a graduate...every graduate a success!

OAA 9/20/2014



Office of Assessment and Accountability

CORPUS CHRISTI INDEPENDENT SCHOOL DISTRICT

P. O. Box 110 • Corpus Christi, Texas 78403-0110

3130 Highland Avenue • Corpus Christi, Texas 78405

Office: 361-844-0396 • Fax: 361-886-9371

Website: www.ccisd.us

**EXTERNAL RESEARCH
CAMPUS PRINCIPAL CONSENT FORM**

KEEP THIS PAGE FOR YOUR RECORDS

As a campus staff member, you are making a decision about participating in this study. Your signature on this page indicates that you have read the information provided above on previous pages and have decided to participate in the study. If you later decide that you wish to withdraw consent to participate in the study, simply tell me. You may discontinue your participation at any time.

Researcher Contact Information:

Usha Gurumurthy

4809 Lake Livingston Dr.,

Corpus Christi, TX 78413

ushagurumurthy@gmail.com



Office of Assessment and Accountability

CORPUS CHRISTI INDEPENDENT SCHOOL DISTRICT

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Website: www.ccisd.us

EXTERNAL RESEARCH

CAMPUS STAFF [OTHER THAN TEACHER] CONSENT FORM

My signature on this form indicates that I have read the information provided and have decided to participate in the project titled, International Baccalaureate Programme: A Study in College Readiness to be conducted in for IB Graduates of the classes of 2013 and 2014.

The purpose/context of the study

This quantitative study will investigate the effectiveness of the IB curriculum in preparing students for college. It will correlate the high school GPA and subject scores to the College GPA and subject scores of IB grades from the cohorts of 2013 and 2014. Contextually, several studies have been conducted to study this correlation between the GPA of high school and college but there are next to none for the region of South Texas. Bland and Woodworth (2009) conducted case studies on Lamar Academy, McAllen, Texas and Hillsborough High School (HHS) of Hillsborough County in Tampa, Florida. In their study they state that students at Lamar Academy report that they were “highly prepared for postsecondary education”. Several studies have been done on the Chicago Public Schools (Roderick et al 2007). Conley and Eugene (2007) came up with the framework of college readiness; Conley et al., conducted a recent mixed methods, three phase study on IB graduate and found significant results that demonstrate the impact of IB on college success (2013). Further, Coca et al., 2012; Frost 2011; Saavedra 2011), all have done studies on IB and the academic success of IB students.

This study aims to bring light into South Texas education by throwing light on the excellence of IB curriculum and its impact on the students from this region.

I agree to the conditions listed below with the understanding that I may withdraw my participation in the project at any time, and that I may choose not to answer any questions that that I not want to answer. I understand my participation is completely voluntary.

1. Teachers will not be involved in this study. Data - test scores of the IB cohorts of 2013 and 2014.- will be collected from you, the IB Coordinator. The time could be from one day to a week depending on the availability of your time for the researcher. Data will be taken only once, unless the researcher has any questions.
2. Only test scores for the different IB subject groups and data on Diploma recipients will be collected for the study. High school GPA will be collected from the Office of Testing and Accountability. The data will be used to compare with the IB students scores of first semester and first Year College to determine a relationship in academic success.

3. This request will not affect any student from eligibility to participate in Child Nutrition Programs as the participants have already graduated from the school
4. The identity of the participants will be kept confidential. Their names will not be utilized in the study only gender will be utilized and the Research site. Only the researcher will have access to the data with the names for one year after the completion of the study. My committee will not have access to the names of the students.
5. The data will be used for a quantitative analysis to investigate a correlation between high school GPA and scores and College GPA and scores. The researcher will use the SPSS software to analyze data. It will be reported as part of the researcher's Doctoral Dissertation
6. There are minimal risks to the participants in this study, risks that are part of normal life. The names will be kept confidential only the site name will be exposed in order to place the study. Under no circumstances will names of participants be revealed, as data will be destroyed after study.
7. The study aims to provide a pathway to the community's future generations a highly successful model of secondary education that will benefit them for years to come. The District will benefit with the data analyzed, the school will have data to demonstrate the effectiveness of a rigorous curriculum and its value in the future. The participants will feel a sense of pride in being part of the study and will be a motivator for future cohorts of the programme as well as future students in the community. Parents will have informed choice while deciding a worthy school program for their children.

Every student a learner...every learner a graduate...every graduate a success!

OAA 9/20/2014



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**EXTERNAL RESEARCH
CAMPUS STAFF [OTHER THAN TEACHER] CONSENT FORM
KEEP THIS PAGE FOR YOUR RECORDS**

As a campus staff member, you are making a decision about participating in this study. Your signature on this page indicates that you have read the information provided above on previous pages and have decided to participate in the study. If you later decide that you wish to withdraw consent to participate in the study, simply tell me. You may discontinue your participation at any time.

Researcher's Name and Contact Information:

Usha Gurumurthy
4809 Lake Livingston Dr.
Corpus Christi TX 78413
ushagurumurthy@gmail.com

STATEMENT OF CONSENT

Campus Staff Member Signature _____ Date _____

Signature of Person Obtaining Consent _____ Date _____

Researcher/Investigator Signature _____ Date _____

APPENDIX C

CONSENT FORM

International Baccalaureate: A study in college readiness

Introduction

The purpose of this form is to provide you information that may affect your decision as to whether or not to participate in this research study. If you decide to participate in this study, this form will also be used to record your consent.

You have been asked to participate in a research project studying the effectiveness of the International Baccalaureate Programme in preparing high school students for college. The purpose of this study is to evaluate the effectiveness of the IB Programme by correlating the high school GPA and subject scores to the IB graduates' Freshman year first Semester/ Freshman year GPAs and subject scores to investigate if there is a correlation between the two GPAs. You were selected to be a possible participant because you are an IB school graduate and are a college freshman/sophomore presently.

What will I be asked to do?

If you agree to participate in this study, you will be asked to provide your College GPA and subject scores for your freshman first year semester/Freshman year and consent to use your high school transcripts for data collection and examination to derive results. This study will not take much of your time, except the time you take to send the information, approximately one and a half months. After the collection of data, the study will take approximately one and a half months for analysis and final writing of the findings will take another three months, approximately. A rough draft will be ready by April 1st 2015.

What are the risks involved in this study?

The risks associated in this study are minimal, and are not greater than risks ordinarily encountered in daily life. The name of the school will be evident; however participant name will be kept confidential.

What are the possible benefits of this study?

You will receive no direct benefit from participating in this study except that you receive a feeling of pride at being part of a study in this region. This study will create an interest in the community to join the Programme with purpose and help increase awareness of the benefits of taking rigorous academic courses in high school to become better prepared for college.

Do I have to participate?

No. Your participation is voluntary. You may decide not to participate or to withdraw at any time without your current or future relations with Texas A&M University-Corpus Christi being affected.

Will I be compensated?

You will receive \$10 gift cards from Barnes & Noble. Disbursement will occur after the study is completed in 2015.

Who will know about my participation in this research study?

This study is confidential and no identifiers linking you to this study will be included in any sort of report that might be published. Your names will not be used for the study. Research records will be stored securely and only I will have access to them.

Is there anything else I should consider?

The study will mention the name of the location the high school the students were selected from. If this will be an impediment to your participation in the study, you are welcome to reconsider or not participate in the study.

Whom do I contact with questions about the research?

If you have questions regarding this study, you may contact me Usha Gurumurthy at ushagurumurthy@gmail.com.

Whom do I contact about my rights as a research participant?

This research study has been reviewed by the Research Compliance Office and/or the Institutional Review Board at Texas A&M University-Corpus Christi. For research-related problems or questions regarding your rights as a research participant, you can contact Erin Sherman, Research Compliance Officer, at (361) 825-2497 or erin.sherman@tamucc.edu

Signature

Please be sure you have read the above information, asked questions and received answers to your satisfaction. You will be given a copy of the consent form for your records. By signing this document, you consent to participate in this study. You also certify that you are 18 years of age or older by signing this form.

Signature of Participant: _____

Date: _____

Printed Name: _____



APPENDIX D

INVITATION TO PARTICIPATE

International Baccalaureate: A study in college readiness

Dear Student,

You are invited to participate in a study evaluating the effects of the International Baccalaureate Curriculum conducted by Usha Gurumurthy, Texas A & M University, Corpus Christi. . The study involves a correlation of your GPAs and grades in high school with your grades and GPAs in your first semester first year of college. Students in their first year and in their second year are the target group.

Compensation will be provided. It is voluntary for you to participate.

A Consent Letter is attached for you to sign and email to me. If you have any further questions, feel free to email at: ugurumurthy@islander.tamucc.edu/ushagurumurthy@gmail.com

APPENDIX E

ONLINE RECRUITMENT POSTING

International Baccalaureate: A study in college readiness

I am going to begin my research on the effectiveness of IB and request you to inbox me or email me your working email ids please.

I will email consent letters that have to be signed and sent to me via email to:
ugurumurthy@islander.tamucc.edu/ ushagurumurthy@gmail.com

OR

Take a picture of the signed consent letter with your smart phone and send it to me via email, messenger or mobile text.

The participation is voluntary. Your participation will be greatly appreciated and valuable for your school community.

Compensation will be provided.

Thank you,

Ms. Usha Gurumurthy

APPENDIX F

FOCUS GROUP CONSENT FORM

International Baccalaureate: A study in college readiness

Introduction

The purpose of this form is to provide you information that may affect your decision as to whether or not to participate in this research study. If you decide to participate in this study, this form will also be used to record your consent.

You have been asked to participate in a research project studying the effectiveness of the International Baccalaureate Programme in preparing high school students for college. The purpose of this study is to evaluate the effectiveness of the IB Programme by correlating the high school GPA and subject scores to the IB graduates' Freshman year first Semester/ Freshman year GPAs and subject scores to investigate if there is a correlation between the two GPAs. You were selected to be a possible participant because you are an IB school graduate, are a college student presently and provided the quantitative data for this study.

What will I be asked to do?

If you agree to participate in this study, you will be asked to participate in a focus group and be directly involved in an interview that will take approximately 30-45 minutes in length to complete. This interview will take place as soon as it has been reviewed and approved by the University and upon IRB approval. Possible expected date could be as early as mid July 2015. Your participation will be audio recorded. There is a possibility that a follow-up interview could occur if needed.

What are the risks involved in this study?

The risks associated in this study are minimal, and are not greater than risks ordinarily encountered in daily life. The questions based on your participation in the International Baccalaureate Programme in preparing you for college may bring conflicting thoughts or cause some discomfort. Please understand that all questions and answers will remain confidential.

What are the possible benefits of this study?

You will receive no direct benefit from participating in this study.

Do I have to participate?

No. Your participation is voluntary. You may decide not to participate or to withdraw at any time without your current or future relations with Texas A&M University-Corpus Christi or Corpus Christi Independent School District being affected.

Who will know about my participation in this research study?

This study is confidential and no identifiers linking you to this study will be included in any sort of report that might be published. Your names will not be used for the study. Research records will be stored securely and only Usha Gurumurthy will have access to them.

If you choose to participate in this study, you will be audio recorded. Any audio recordings will be stored securely and only Usha Gurumurthy will have access to the recordings. Any recordings will be kept for three years and then erased.

Is there anything else I should consider?

The focus group will consist of 6-10 participants. If more than 10 participants respond a selection will be made.

Whom do I contact with questions about the research?

If you have questions regarding this study, you may contact Usha Gurumurthy at ugurumurthy@islander.tamucc.edu or ushagurumurthy@gmail.com or my cell phone (361) 290-2085, mailing address: 4809 Lake Livingston Dr., Corpus Christi TX 78413.

Whom do I contact about my rights as a research participant?

This research study has been reviewed by the Research Compliance Office and/or the Institutional Review Board at Texas A&M University-Corpus Christi. For research-related problems or questions regarding your rights as a research participant, you can contact Erin Sherman, Research Compliance Officer, at (361) 825-2497 or erin.sherman@tamucc.edu

Signature

Please be sure you have read the above information, asked questions and received answers to your satisfaction. You will be given a copy of the consent form for your records. By signing this document, you consent to participate in this study. You also certify that you are 18 years of age or older by signing this form.

**Only include the following if recording is optional:*

_____ I agree to be audio [/video] recorded.

_____ I do not want to be audio [/video] recorded.

Signature of Participant: _____ **Date:** _____

Printed Name: _____

**Only include the following if someone other than PI or co-PI is obtaining consent:*

Signature of Person Obtaining Consent: _____ **Date:** _____

Printed Name: _____

APPENDIX G

FOCUS GROUP INTERVIEW GUIDE

Focus Group questions:

1. What are your perspectives as an IB graduate about the effectiveness of the IB curriculum in preparing you for college?
2. What do you believe has helped or not helped you in your first semester of college?
3. Did the number of hours you took in your first semester affect your academic performance?
4. What subjects that you took in high school IB classes prepared or did not prepare you for subjects you have taken in college?
5. Are there any other factors related to the IB Programme that affected your college experience?

APPENDIX H

FOCUS GROUP TRANSCRIPT

Researcher	Respondent
<p>Good evening. Thank you for coming and participating in this focus group for my study, International Baccalaureate :A Study in College Readiness.</p> <p>My first question to you is, what are your perspectives as an IB graduate about the effectiveness of the IB curriculum in preparing you for college? Who would like to speak?</p>	
	<p>R 1- So in my lab classes, you have to type up reports a lot, so every time that we have to type up one of these like eight page reports, it's usually around 2000 words, so I don't really view it as a big thing because we did all those IA's and the EE's much longer than that. I think in that way it prepared me for the writing that I would have to do.</p>
<p>The IA's you mean, the science ones, the ones you worked for the science and this was in your first semester?</p>	
	<p>R 1- Uh, just throughout because I've had to take lab classes each semester for the past two years.</p>
<p>Was the first semester different for you?</p>	
	<p>R1- The first semester was obviously figuring out college and what was expected, so it was definitely more challenging than the following, but yeah I guess that's what IB most prepared me for, was the amount of writing that I would have to do in the first semester.</p>
<p>OK, anybody else?</p>	
	<p>R 2- The amount of research and the amount of citing citations that you have to do for all of those lengthy papers that at the time they were 2000-3000 words, I thought were really long but became very common place in college and it was very helpful because when I got to college they expected me to be able to cite everything, very carefully, very nicely, using</p>

	<p>multiple formats depending on how the professor wanted them. If I hadn't done that in my senior year in IB, we did a bunch of the HL History papers, HL English papers and I had a couple of math and a couple of science ones where I had to do that as well, it would have been extremely difficult, especially during my first semester during the fall, had I not learned how to do that the year before.</p>
Any other views?	
	<p>R 3 -I think as an IB student, I was exposed to a lot of different ways of assessment, whether that was like tactile labs or like audiovisual assessment and like commentaries that we had to give on a variety of subjects. We were expected to present our opinions and be evaluated via these different avenues. When you get into college, it's very much the same way. I know as a Humanities Major, I'm exposed to assessment in the way I speak on a daily basis, in the way I present my musical development and in the way I have to present myself in reports. This constant change in how we have to work as a student was something that I was prepared for a high school student in the IB program. This, you know, universe of assessment and I'm very appreciative of that because now I'm able to switch back and forth easily as a result of that.</p>
Okay, anyone else want to add anything?	
	<p>R 4- I think IB prepared me a lot just with my time management, that's a big one. In IB I had to juggle six different fields of study, as well as like an EE and all the external stuff and I think that just really prepared me to just manage my time well when I got to college.</p>
	<p>R 5- I think IB prepared me to handle stress really well because when I first started out with IB, I would get stressed about the amount of work and then as you go along you realize you can do it all. So in college when you are assigned to a lot of work, you realize that there is no need to stress, you are going to get it all done.</p>
	<p>R 6 - One of the things I found most valuable was the literature. I think the outside texts that</p>

	we read in IB really helped me to kind of start to understand other perspectives and when I got to college, I got to meet international students and I think reading that type of literature helped me to kind of get a different perspective on things and it wasn't like the usual Shakespeare, the usual like texts that you get in high school, it was outside texts and that's what I really liked.
It exposed you to an international outlook?	
	R 6- Uh hum.
Anything else about the program?	
Haley	R 7- I think the fact that the program is so like rigorous in the amount of work that we have to do, like really prepared me for college. Whenever I had like a final, I just thought of it as my like IB test or something like that. I know how to study for those because I went through like six of them and so by the time I got there, I was like, "oh, this is just like what I've been doing for the past two years." So it really helped my stress levels go down a lot and I think I did better because of it on my finals in all subjects.
Any other perspectives?	
	R 8- In my experience. I was pretty lackluster during my high school years, I didn't try like I probably should have. Had I tried harder I might have been able to accomplish more towards the end of my senior year. I think taking all that into account and thinking about what I went through and what I could have done, I think that prepared me more so that way I could see myself become more successful in college and I did really well and I wasn't expecting to, but I think because I pushed myself more knowing that I could have pushed myself more, I think that really helped me.
So, you talked about what has helped you most, what has not helped you in your college with IB? What is it that did not work in IB that did not really help you in the first semester?	
	R 9- I think for me, what happened was that I worked really, really hard in high school and so when I got to college, I felt a little bit

	burned out and so it took me like a couple of semesters to really start like feeling like I really wanted to work hard in school again. I mean I still did work really hard in college, but at first it was like tough and like oh man, I had just graduated and I feel really like finished and now I have to go back to school. So that was kind of tough.
Anybody else feel like that?	
	Most respondents- A little bit.
You felt burnt out already?	
	R 10- Not quite.
	R 10 -Like honestly I was kind of like let down because I thought college was going to be like IB 2.0 x 15, you know, but when I got there I was like, "oh this isn't as bad as I thought it was, this is completely doable."
	R10 -Yeah it was almost like over-preparedness, I mean not to say that we went in and we like went through everything with flying colors, because obviously there was still some struggles that we went through or that I personally went through. There were still classes that were harder than others and you had to put more effort into them than others, but I do think that the ones that I kind of expected them to go in you know have to be up studying every single night, but I think that I am still there, most of the classes that I go through, I'm able to get through fairly easily and I think that I guess that could be kind of something that helped me and something that didn't help and maybe some of the time that I spent wasn't necessarily needed in the over preparedness, I guess, maybe.
When you say over preparedness, are you comparing yourself with other students that were with you, who are in your classes, have you looked at that aspect?	
	R 10- Yeah like in the college classes that I'm in, I would say that I'm over-prepared as opposed to other people who are also doing well. I just think that I have maybe a little bit more, I did a little bit more in high school and so having done all the things that we did, we came in expecting it to be a lot harder. I don't

	know if it was a letdown, but I was kind of excited about it.
The first semester was like that?	
	Yeah, it was almost to me coming in and it was like "oh, this is doable," because you know r 10high school teachers like to scare you. They're like; this is going to be the worst time of your life.
Well IB does teach you at the level of sophomore year.	
	Many Respondents together- Right.
So you all took different hours isn't it, most of you take 12 hours, some took 15, some took 16, 18. Now, did the number of hours that you took in college in the first semester, what was its effect on your academic performance?	
Sarah	R 6- It did not work out well for me.
It did not work out well for you?	
	R 6- Because I originally took 17 hours when I went in and I feel overall prepared for it, but the problem was like just really learning to focus because we had six classes that we really had to focus in IB and this was like going down to four and somehow it didn't work out for me in doing that. That was something that I learned early on, but then I had to transition into like what works, I had to change my major and I think back and realize that I don't have a set schedule, like how we had in high school. We had very limited choices, like we have to take HL English and HL History and then like change it into whatever I wanted to major in.
So how many of you are taking courses, like Science. How were the sciences, those of you who are taking the sciences, were you prepared?	
	R 10- It was.
	R 10- It was a breeze. It was. In my experiences, some of them were. Like I took Biology and then I took like a Natural Sciences class, but Chemistry I felt so stupid. I took Physics and physics to me was easier than chemistry and I was blown away about that. I don't know, I didn't understand it at all. I know that I guess that it kind of differentiates from professor to professor, it was, I'm going

	to make an excuse, it was an old man and he like every class, you got in and you were like, you know, kind of just struggling to even stay awake, but I mean, I guess there is kind of variation in that, but for the sciences I felt honestly, not least prepared, but that was one of my lesser prepared classes.
	R 6 -I had a similar experience, except my teachers were really good, but it just wasn't getting in my head and I went through a year and one quarter of chemistry and at that point I like "um, maybe not,"
Was it just for chemistry?	
	R 10- Just chemistry, that's what really took me down.
Not physics?	
	R 5- I didn't even get to physics. I had to like start Bio before I took physics.
	R 5- My Biology class was great. I had a really good teacher though. It was one of the ones in my first semester. I feel like the first semester I took was the easiest one.
What about you?	
	R 1- Uh, I'm a physics major so I've taken a lot of physics. I like it. About IB preparing me for it, I had to do weird kind of research my first semester and actually for a year and a half I did astronomy research and so it kind of forced me to look at something that I didn't understand or didn't have any experience in and problem solve and I think that IB really helped me in that aspect.
The problem-solving?	
	R 1- Yeah.
Was it just physics or was it the math classes also that you took?	
	R-1- Uh, math has been a little harder. The first semester on the first year was really easy, but this year, it's math that I haven't been exposed to, so it's definitely taking more work and just more time.
Anybody else with experiences like that?	
	R 7- In terms of physics, I like didn't take it in IB, I took it like just a normal semester of physics in high school and that definitely did not help me in college. I was like, I got

	through the first like two classes and that was out of the stuff I didn't know, like it was a mess, but biology, even though our biology teacher wasn't, like our scores weren't that great on the IB test, I kind of learned how to study by myself a lot and so by the time I got to like microbiology, I was able to like know how I learn and know how I can absorb information. So I was able to do really well, but I know there is a lot of people that just took the facts and put them up here and then took the test and then forgot all about it. So they didn't do so well on like the finals and stuff.
Does it have to do with the study skills?	
	R 7- Uh huh, yeah.
Skills that you acquired during the IB time? Because you were forced to study a certain number of hours and do certain kinds of assignments. Could that be a reason?	
	Several respondents- Yeah. Definitely.
	R 6 – For me, in IB I think one of the hardest classes I took was physics because the teaching style was more like you learn on your own and I think that was very different from the other classes, the ones who like drilled, but I think it did help me because the professors aren't there to help you really. They are just there to guide you, but you have to learn on your own and I think what really helped me was that in that time, especially physics, like R 5 and like R 1, I learned how to kind of make myself grasp a concept as best I could.
To become an independent learner?	
	R 6- Uh huh and I think that really helped me.
Ok, anything else? I know not everybody is taking science and some of you are taking Music and different things, you're into Communications and all that. So let's move on, you were talking about the subjects that prepared you. Which subjects actually prepared you the most to tackle college?	
	R 3- For me I think it was English and the Foreign languages and I say that because there is so much writing that you have to do no matter what class you're in and there is IB which is different from AP in that a lot of it

	was graded by written essays or in the language, everything was done at least sort of suggestively and that's how everything is in college. AP is extremely regimented, extremely multiple choice oriented. I think that difference was very helpful.
So taking the AP test and taking the IB exam helped mesh them?	
	R 3- Yeah, the IB exam is much more what I've seen in college. The AP exam is absolutely nothing like what I've seen in college. That could just be my own personal experience, but it definitely is. In college you just have to write because you have assignments to do every month or two months or maybe one just for the whole semester, you've got a giant paper, that just it, so either you are writing no matter what subject matter it is, it has to be really good and especially with HL English, that was helpful. Then for foreign languages, I go to a school that is really big on foreign languages and that's why I wanted to go there. I felt that since IB again was graded similarly with a little bit more multiple choice there than English, but still mostly written, mostly subjective stuff, mostly fill in the blank, that it was really nice to have that experience than having to write a lot before I got up there.
Anybody else?	
	R 4 - I think I would agree with that answer to be honest. It also helped a lot with just critical thinking skills because that is something that you encounter a lot, at least most humanities classes. All of them actually, all classes. Not really I think, especially like the literature based, in English or in the foreign language really helped me a lot with critical thinking.
But most of the kids that who are in the sciences also have to read.	
	Several respondents-Uh hum.
Was that a problem?	
	R 5- My friend in college who took sciences at their high school, but they had better teachers. They were much better prepared for the chemistry class that I took because they were reading a textbook, but they would understand

	it like the first time around, they didn't have to do all the extra work that I had to do to understand what was going on.
So what I am hearing from all of you is that a lot of you have talked about teacher effectiveness, the teaching style, has been one of the major importance for you to know which subject you were better prepared in which you were not. So do you think that, even though IB is a rigorous program, the teaching style matters?	
	All respondents- Yes.
	R 1- Yeah for sure.
The teaching style matters for you to be prepared for college?	
	All Respondents- Yes.
But at the same time you have study skills that you feel that you can incorporate.	
	R 3- I wondered, I think what we were talking about earlier, one thing that IB wasn't as good on was the amount of reading. The amount of reading when I got to college shocked me really bad and maybe I should have just read more when I was here because with maybe the exception of one class or two, I mean not just like as one subject like English but I mean like one class, like one semester or two, I did not read anything even close to what I have to read up at school. Maybe my college just has me read a whole lot, but there would be times that I had to read like half of Leviathan in 2-3 days and then actually understand it and be able to analyze it and talk about it in a group where I get a participation grade. Whereas I may have to read that many pages in two weeks here, which would be nothing. So, I don't want to say obviously that I wish there was more reading because we already had plenty to do workflow wise, but I did not quite feel it is comparable in the amount of reading.
Could it also be because in high school you're involved in other activities? Whereas when you go to college, you may have one activity that your focused on, but the rest of the time it goes into your academic learning, whereas in	

<p>high school you are doing multiple things. Which probably eat into your time of outside reading.</p>	
	<p>R 2- I would like to make a comment on that, I think because of the nature of IB, we have six classes, six areas that we focus on, it's very holistic and I'm thinking that's what the IB program is very proud of. You know, we have produced well rounded learners, but the drawback to that is that when you have a program that's almost one size fits all, if you think about it, then all the graduates that it produces are always going to have something that was missing because the program isn't tailored, you know, to stem careers or to people who want to enter the arts profession or whatever. So as a result of that, inherently you always have struggling to do when you go into college and that was something that as I reflected on, you know my first semester I thought about how much I missed and realized that was a result of the curriculum for better or worse and that's just a compromise. That's something I think students should be made aware of because if you are aware of that, you take steps to compensate for that. I think the little and limited extracurricular time that you have as IB students can also go towards making up for that. It's a kind of drawback. That really only became apparent to me in the first semester, how much of a flaw that advantage is.</p>
<p>Ok, anybody else wishes to add to that?</p>	
	<p>R 11- Nothing really applies to me because my first semester, well IB was cool because it helped me get rid a lot of like general education things, so my first semester was all music. All that was nothing really based on what I did in IB. The only thing that I would say, like going back to your like way previous question about if the IB program didn't help you in any way, was that since I was spending so much time on like every other subject except music, when I got to school for music, I felt really underprepared and like everyone was so much better than me because they had</p>

	<p>enough time to spend focusing on just their instrument when they were in school. So for me, I came in like, I had all this knowledge in like History and English, but then I was like, I didn't use it for anything when I got there.</p>
<p>Ok, let's move on. Apart from all this talk, we've talked about academics and the curriculum and how you were prepared for college and how you were not prepared for college, are there any other factors related to the IB program that affected your college experience as a whole? Anything else that you would like to talk about that has not been mentioned here and you feel that that was one of the reasons your college experience was this way or that way. Which is stemming from being in an IB program.</p>	
	<p>R 6- I think one of the biggest things for me was in IB after middle school and after the first two years of high school, I was used to multiple choice. I think I kind of, when I first saw those couple of practice exams, and you just see the blank space, that's really daunting. If you're used to multiple choice and the thing is, that blank space didn't change when I went to college, it stayed there and it terrified me every time. But I think getting those first two years in the diploma program, getting used to that, I think I was able to deal with it better and to kind of work around that fear and to try to focus on the problem. I think overall that helped me because that is the same thing with essays. The blank space.</p>
	<p>R 7- I mean like just in general, I got a lot of credit hours and so I get credit for classes and at my school, it's a liberal arts school so you have to take a lot of classes that don't apply to your major, so I was able to just get credit for those and start focusing on like the classes I needed to take for accounting and business and so I didn't necessarily have to worry about taking a History class and so something that might have stressed me out a lot would have been having to take a college history class and I just had already gotten that out of the way and so it benefited me a lot that I didn't have to</p>

	<p>worry so much about fitting everything into my schedule because I came in and it was like ok I already have this semester of credits and so I can just focus on the classes that I want to take and do what I want to do and I don't have to worry about these extra classes that may not have been as fun for me.</p>
	<p>R 3- The credits were really nice and I was able to get a bunch from IB and that was very helpful to me especially because in my college I have to have so many to get my major. The one thing that I didn't like about the tests was that the price was really high and I think that's really a deterrent for a lot of people, especially now that IB at this school is a satellite, you can sign up for it, you don't have to test. Is that right, you don't have to test in anymore? Those people who might want to do it and then realize that at the end they have to pay six or seven hundred or eight hundred dollars in test fees, where as AP is much, much cheaper and offers a lot better help if you need it. IB doesn't. I just think that would be really helpful. As for the differences between, what was the question before, for college and for how we are I guess evaluated for it, the one thing that I didn't like was that IB's grading was so specific, like so much what you had to learn was almost how IB was going to grade you, not the actual content, especially for math. Math was really bad about that, you are going to get one mark for showing this step, you get a mark for showing this step, you get a mark for showing this other step and then you get a mark for doing the whole thing right. For English it was like that too, you have to demonstrate your understanding of this, this and this and often times, especially in English and History, we didn't even know what that was until after the test, what they were looking for. Which I thought was really weird. Whereas in college, it's so much freer, I think. If you know it and you show the professors that you know it, whether it's math or whether it's a paper, then you get credit for it. At least that has been my experience, if you</p>

	demonstrate the knowledge in the way that whatever perspective the professor asks you then your good. It did teach me that you have to cater to professors at least a little bit, not completely of course, you don't want to sell your soul, but if they have a certain set of expectations and every professor has a different syllabus and different rules that you have to follow and I did even if it was difficult sometimes it did teach me that you are going to have to deal with that in college.
	R 11- Um, to add on to what he was talking about grading, I kind of see it a bit differently. I think it was very kind of strange in terms of math, like the way it had to be very specific, but like in my case, in like History and English, I thought it was really easy to kind of just get points for not really trying hard. I got a five in History and my senior year I didn't take History, that entire year I wasn't in a history class and I just read a text book and then I got a five, so I don't think it wasn't very difficult to get those points in English and History, maybe because I'm better at writing than I am at math, but I thought it was easy to kind of just like pull points out of nowhere per say, as opposed to like having to be very specific for English and History.
Ok.	
	R 8- Everyone's talking about all of these credits that they are getting and I didn't get my diploma, so I got no credits at all, but I guess the good thing about it (IB) was that it helped me jump rank and being in the top 10% or whatever, really helped with scholarship money. So if anything, that's definitely a bonus, it's a plus, the scholarship money.
Do you think colleges look more at you that you were from an IB school?	
	R 7- I think a lot of people don't really know what it is, so like if I say "oh, I received a diploma" people are kind of like, wait what's that. They don't know what it is. Once I explain it, then they're like, "oh ok, yeah that's pretty good."
Compared to Advanced Placement.	

	<p>R 7- Yeah, with Advanced Placement, they were like ok, well you're in a college, a lot of college students took advanced placement, you know, so it's more of expected that you took advanced placement. Whenever I say that I went through a different program, it's always kind of hard to like, you have to go through that extra stuff of being like this is what I did in high school, I worked really hard and I got so and so, this much.</p>
<p>That's very common. Some of them don't even know about advanced placement too. You'd be surprised to know.</p>	
	<p>R 11- Okay so for me, I'm in the honors college at my school and if I go on the website and I look at like the requirements to be in honors college, I technically did not need them, like I didn't have a high enough SAT score or something, but I think that by being in IB, they were like "oh ok" and they put me in the honors college, which actually brought the tuition down a lot because I got a scholarship for that and then I live in a dorm with all honors college students and almost all of them know what IB is or have been involved with IB. Like a guy across my room, he said that he knew people who gained like 7's on the Math HL test or something. They got like 60 credits before they even entered into college. It was pretty crazy, but I'm going to school in Michigan, so it's kind of further north than I don't know wherever you guys are, so maybe it's just more common place up there than down here.</p>
<p>Well the system is definitely different in college. It's much more challenging and you meet people from all over the world. The foundation skills that you need to go to college prepared were provided in high school. Any other things that affected your college experience socially or academically?</p>	
	<p>R 1- I think like communication was a really good skill that I learned through IB; having to talk to like Ms. Fawn or just any of the professors, like , "hey I'm not understanding this, can you go back through this?" I have to</p>

	do the same thing when I go into office hours and say this is the exact thing that I don't understand; I need you to break this down for me, so that I can understand it. I think that helped a lot. Also taking Spanish all four years was great for communicating with people and staying in Texas and still being here, you can talk freely with the Hispanic population. It's great, like I talked to a woman for like four hours the other day and like I didn't really know her, but it was great to learn her story and there was no way I would have done that if I didn't know the language. Yeah, it helps, communication wise.
Anyone else?	
	R 12- Like for my school, it's like 20% of the population is international students, so I've met a lot of students who actually did take IB classes and had the diploma program in India, France and you know other countries, so that was kind of just like a bond that we could have, like "oh you went through that too."
So they could understand that you understood what they went through and what you went through in the program?	
	All respondents- Yeah and just like, yeah.
	R 4- I had a similar experience to that during my semester abroad. A lot of the students there were in the programs and that was kind of just interesting to share experiences.
That's good.	
	R 2- I actually didn't find IB to be an empowering experience by any means, as a matter of fact at times it felt horrifying and I think a lot of that is because I felt spread so thin, I'm on six different subjects that there were a lot of times in high school where I was turning in things that I was really quite ashamed to be putting my name on. The quality of work that I turned in at times was shockingly low, so when I got to college and you begin to understand the real implications of the work that your turning in, I know I told myself, I never want to do that again. There were so many mistakes that I made in IB that it was the most preparatory thing that could have

	<p>ever happened to me, was to fail at so many high stakes things and IB was great because there were so many assessments and there were so many different opportunities for you to fail as an IB student that I realized that failing is learning and that's what is great about IB, is that I was able to learn that.</p>
<p>Anything else? Does anybody want to add anything else?</p>	
	<p>R 10- I guess not necessarily like academically related whatsoever is kind of like just in the aspect of time management, you said like the college experience in general, I don't like spend, I go to class and I leave and I mean that's kind of more for like when I was in IB we had a bunch of classes and we had a bunch of things to do, but I was also an athlete, so when it comes to that I think that being able to kind of go to my classes and get my work done as well as, I work at two different places and I still have a couple of hobbies here and there, I think that kind of just is an aspect of time management and being able to have an actual life, being able to juggle school work and kind of not like Jake said, spread yourself so thin that you just can't do anything for yourself. I think that kind of I did spread myself pretty thin, making it to where I was struggling to be able to kind of well in my school work, as well as kind of excel in what I wanted to do athletic wise and so when it came to that, kind of being able to juggle different things and being able to do stuff outside of school as well, that helped a lot, just in the aspect of preparedness for having a social life in some form of the word. That helped a little bit.</p>
<p>Well some of you have moved out of the city and some have gone to the north, some have gone to the west, northeast and all that, was the experience very different moving out of a small place and going to a bigger place?</p>	
	<p>Some respondents- Uh huh.</p>
	<p>R 5- That's one reason why I mentioned the international thing, I think that was the biggest shock for me, I was used to this demographic and when I got there it was very different and I</p>

	think on top of that, I was used to the same kids. I had been with them since six grade and some people had been since kinder and I think that was one of the biggest shocks too, I was used to having similar experiences with the same people so when I go there, it was kind of like uhhh..., you know there wasn't that kind of foundation there either.
So internationalism is one of the things that you probably think was a positive one? Do you agree? That you were exposed to different people?	
	All respondents-Yeah.
	Some Respondents- Yeah.
That's one of the things from IB that you're talking about. Those of you who had more than 12 hours in the first semester, how many of you had more than 12 hours? You all had more than 12 hours. Did you all work? Do any other work apart from just school?	
	Some Respondents- Yes.
	Some Respondents- Yes.
	R 1- Not my first semester.
Not your first semester. Some of you worked?	
	R 1- I did research, but that was apart from my classes.
Ok. Thank you. Now, did that hamper in any way your academic work?	
	R 3- No I had it pretty good, not as doing this on purpose, but it was a good experiment to see how my GPA would change based on whether I was playing a sport or not, because the first semester I tried to walk on to play baseball and the practice there, I was on it for a little over a month before I got cut, it was like five hours a day for 5-6 days a week. It was five hours, that was with transport before. My GPA that semester when I had baseball going on right in the middle of it was almost exactly the same as my GPA in the spring when I wasn't playing ball. So I do think that, especially since it was something I'd be doing in high school with IB, which was doing all the IB work and doing sports at the same time for several hours a day. I was quite used to it and it was nice to be able to have that experience

	and not let it affect my grades too much.
That's a good point because one of the contentions is that IB in public school is very difficult to be successful, whereas in a private school, where there are not as many activities, any sporting activities compared to public school, they are more successful they say. When you say this that means public school can have a successful IB program.	
	R 3 -I would say it can, but it wasn't pleasant. I know in school I was an outlier in a sense that very few people were walking on and the people that were there playing baseball were already recruited there in the school. The school is certainly not the main reason why they were there, only maybe 3-4 of the kids on a 35 men roster were there for school first and not baseball first. But I do agree that it is certainly possible and something I wanted to do and something that doing IB and doing sports would allow me to try and experience how that was. So I am certainly glad that I had the preparation that I did before because otherwise it probably would have seemed really daunting.
Anything else that you would like to add to all of this?	
	R 10 - I did cut my work hours. I started off as full time when I was working and then kind of as the semesters went on, it wasn't necessarily because it was affecting my school work, it was just affecting like my overall happiness and so I went down to part time when it came to work, so I think that kind of lessening the load on one side helped me to sort of even out a little bit.
Ok. So the ones who worked that is and the ones who did not work or maybe you moved on and were planning to work, do you think you would be working in the future?	
	R 8 - I know that I didn't work my first year because I did feel kind of burned out and I wanted a nice easier transition into college. It was nice not working my first semester and then my second semester, once I got pretty good in my time management I was like I have

	a lot of free time and I felt like I needed to do something else and then my sophomore year I decided that I wanted to get a job and so I started working and it was great. It was just nice to have something else to do, I feel like that wasn't school and I just felt more independent having a job. It was pretty easy to balance everything.
How many of you feel that IB did prepare you for your first semester of college? One, two, three, four, five, six. You all agree to that?	
	R 8- Yeah I think in some way or the other.
	Many respondents together- Yeah.
	R 1- The first semester I had to take this Roman History class and I was really into it and it was really cool, but I was like there is no way I'm going to use this class in the future, it was super cool, but I spent so much time learning these things and I was like "why am I doing this?" Ok, just to get an "A", I've done that before, so that was effective.
Getting the "A" mattered.	
	R 5- To me the point was to where quantity over quality, so we were given a lot of work, but we weren't always taught the best way to do it or always given enough feedback to know how to do better, which hurt in college because there were definitely kids who knew how to write an amazing paper and when I was (to write) I would have to go to the professor and ask for help.
Ok, anything else?	
	R 11- Um, a lot of my music major friends think I'm a workaholic because I'm always practicing. If I stop doing something and I just sit in my room, I get really bored, like really fast, so I'm always working and I don't think I was always like that. I'm pretty sure it's because IB was like, I was always constantly doing something that I felt like I needed to keep doing something otherwise I was wasting my time.
So you had the stamina to continue?	
	R 11- Yeah.
You had the stamina to continue like it doesn't matter, you could still go on despite the stress?	

Did you have the stamina to continue working?	
	Several Respondents together- Yeah.
	Several Respondents together- Yeah.
<p>Well some don't. Just be honest. That's it, nothing else to add.</p> <p>So maybe after years have gone by, once you graduate from college, you will go back and look at your years in school and then you will see the difference that you went through. I'm not saying it is the best program at all, especially being here, but I have taught different students in a different curriculum and I feel that this program has the best rigor. I have taught different and I'm not rigorous in class, all the years have gone down actually in rigor, but having taught different types of curriculum, I feel that this program has everything in it. It has everything in it and kids look at it as a rigorous program, it's too much work and they are always complaining about it and all that, but once they go to college, there is so much work that they suddenly realize that what were we complaining about in school. I think the difference is that here in high school you have like six classes together, whereas when you go to college the time is spread out. You may not have to go to the same class every day, you just go for one class and then you go to the next class that way you meet different people, like if it was block scheduling in high school, it would be like that. But we don't have block scheduling. Many IB schools have block scheduling, but we don't. And block scheduling helps educators too. In completing something on the way they want to complete. Many teachers probably feel that is the reason why they have not been able to teach well because of the time. They could not get the number of hours they needed. It has to be rushed and rushed quickly whereas in college, the professor does not have to tell you what to do, they just say okay this is the thing and you have to read and you're on your own, but in high school that's what IB has to be, but it does not work like that. Our job is to make</p>	

<p>you independent learners, a teachers job is in an IB program is to make you independent learners. You should have the curiosity to learn.</p> <p>If you can go to college and do that on your own, that means IB must have accomplished something in that area to make you study. If you were to compare yourself to your peers who were in school with you who were taking advanced placement classes, what would you say your position is?</p>	
	R 12- Better.
Better in what sense?	
	R 12- Like, ok my university does a lot of discussion based classes instead of lecture based classes, so like in IB we did a lot of you know discussion we had to do like seminars, especially with books and stuff like that, so I would say that's because with the exams, you know we have to do all the writing and make sure we got our thoughts you know organized correctly, but with AP they didn't have to do that as much. I feel that that was a big plus to know how to speak and discuss something.
Ok, anything else?	
	R 11- Comparing myself to someone else who didn't do IB, we did the long assignments, we had to write the 4000 word essay and often times when I had to write something, I said "is this going to be harder than my EE, no, well then it will be pretty easy" and just the past semester, so like a junior-level class, this was the first class that was actually harder than my EE. So I guess that was refreshing because everything else up to this point was pretty easy.
	R 6- I recently changed my major, Comparing myself to someone else who didn't do IB, we did the long assignments, we had to write the 4000 word essay and often times when I had to write something, I said "is this going to be harder than my EE, no, well then it will be pretty easy" just that experience of being under that type of pressure and it's nice to have, just in general, something like that stressful and knowing that you can make it through.

	<p>R 11- I was going to say that when I compare myself to my peers, there is two things that I notice, the first thing is that I'm super focused and I'm really goal-oriented when I practice or when I do anything and then my peers are kind of just like, they kind of beat around the bush a lot or they don't really go and just do it, they wait and they sit back. Another thing, when I was like a freshman, I procrastinated a lot in high school, but when I got to my junior year, I started to not procrastinate and I just did everything the night it was assigned and I realized how easy life was when you did that. So in college all my friends procrastinated a ton and then they always freak out like the day before everything is due and I'm just kind of relaxed because I've done it already. They freak out because "you did it already?" I was like "yeah, why not."</p>
That's it?	
	<p>R 7- Wait, I have one thing. I feel like in IB you were like, you couldn't survive, you studied every single day, thorough about everything that you tried to learn. I feel like that really helped me in college, as opposed to AP where they were like "ok, here's the facts, there you go", answer some multiple-choice questions. I feel like in college nothing is like that, especially like English classes and stuff, because I know my English classes, they started out really fact-based, like "oh the guy walked in", but then as they got later in the semester it was more like "why did he walk in, what was he looking for", you know that was really similar to what I experienced in IB, so I was able to do really well.</p>
Evidenced-based.	
	<p>R 1- Uh huh, whereas in AP I feel like it's not as in depth in the curriculum, so I was able to like take an easier time like at the beginning of the semester and then by the end I was like this isn't even that bad.</p>
So if you have talked to kids who have come from other IB schools, what do you think was different from your experience? What was the difference between their experience and your	

experience?	
	R 7- One of my roommates was at an IB school in Houston and there was like six kids in that school and she said it was like very different from what we have here, especially in Math. They took all of their SL's in their first year, like at the end of the first year they took all their SL's and then the next year they took all their HL's. Which I thought was kind of like, instead of taking all six tests at the same time, you could kind of focus on what you wanted to focus on. I told her that there was like six kids or something taking Math HL and her mind was blown because at her school, no one takes Math HL because they don't really have very good math teachers. I thought like that's what makes the program so different in all the schools with the different teachers and I think that kind of effects it's like ability to prepare its students. She was really good at Spanish, even though we had taken the same curriculum, I wasn't that good at Spanish just because of what we had gone through in high school.
	R 5- I had a friend who took IB through a private school and she had block scheduling and one of the big things that it sounded like that their Math and Science Departments were more developed that way because in the classes, I guess they had like a lab portion and a lecture portion and it was like all done in the same day and it just sounds like, for me personally Science is not my forte, so it would have been really helpful to get the application on the same days I got the information.
The in depth study that you need for college you could have got with that.	
	R 10- Yes and I definitely like struggled with Science. Since then I've only taken one Science class.
That is always a struggle in IB schools where you have a 49-minute class, like we have. Every day we meet, but that doesn't really help.	
	R 3- I don't know if there is any way to fix this issue, but it's very difficult getting all of your test scores back your senior year as AP which

	<p>is your junior year, it makes planning where you want to go really hard because you have to pick your college based on a lot of guesses on how you're going to do, credit wise, subject wise, what you're going to do and that's really, you can't ask, IB can't ask all colleges to wait until the end of the senior year for applications, you don't have enough time. But IB with the very rigorous and huge curriculum that it is, isn't going to get finished by the end of Junior year, so something's gotta give or you are going to have to do what we did, what we all did which was we just kind of had to make our best guess as to how it was going to turn out and go on from there.</p>
<p>That's just in the United States and Canada because in Europe and the rest of the world, college admissions happen only after the 12th grade. But it is just here that the process begins and that is one of the problems that many schools don't want to have IB because of the system of admissions. It's only just here that this occurs, everywhere else you get your score and then you apply depending on what points you get. Like if you get 34 and above, then you can go into schools like Cambridge and Oxford and that's how it is whereas they have point system, like you have these many points, you can go. Here too there are point systems. Here to we have point systems, they look at the points you get and they give you admission to one of the IVY league schools, but that is just one of the problems that kids in the United States face. That's one of the problems, because this is basically a program from Europe. It was set up for kids of Diplomats who travel around the world. Not many kids. But it is growing. The US actually has the most number of IB schools in the world now.</p> <p>Thank you everyone for taking time off for this interview. I wish you all the best.</p>	