PROFESSIONAL DEVELOPMENT AND THE INTERNATIONAL BACCALAUREATE PROGRAMME: A CASE STUDY ON THE IMPACT OF PROFESSIONAL DEVELOPMENT OFFERED BY THE INTERNATIONAL BACCALAUREATE PROGRAMME ON TEACHER PEDAGOGICAL PRACTICES

A dissertation submitted in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

to the faculty of the

DEPARTMENT OF ADMINISTRATIVE AND INSTRUCTIONAL LEADERSHIP of THE SCHOOL OF EDUCATION at ST. JOHN’S UNIVERSITY

New York

by

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Submitted Date 3/11/2021 Approved Date 5/19/2021

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ABSTRACT

PROFESSIONAL DEVELOPMENT AND THE INTERNATIONAL BACCALAUREATE PROGRAMME: A CASE STUDY ON THE IMPACT OF PROFESSIONAL DEVELOPMENT OFFERED BY THE INTERNATIONAL BACCALAUREATE PROGRAMME ON TEACHER PEDAGOGICAL PRACTICES

Ricardo Soto

Over the past two decades legislators have made two significant attempts to reform the field of education by placing more emphasis on assessments and accountability. In 2002, President George W. Bush signed the No Child Left Behind Act (NCLB) and during Barack Obama’s presidency the Race to the Top (RTTT) competitive grant was initiated. The NCLB Act and the RTTT initiatives focused on increasing rigor in the classroom, the development of standardized expectations and assessments, and building the capacity of teachers. These historic acts led to an emphasis on professional development (PD) as the vehicle used to bring about educational reform throughout the country.

The purpose of the qualitative case study was to identify the perspectives of teachers and administrators regarding the impact of PD offered by the International Baccalaureate (IB) Programme and their perceptions concerning the components of a successful PD program versus the PD offered by the IB Programme. The site of the study was a Long Island school district that was in the process of implementing the IB
Programme in each grade of the district. The study was conducted with a purposeful sampling of 21 individuals that consisted of tenured teachers and administrators that had all participated in PD offered by the IB Programme. The researcher made a concerted effort to include an equal number of male and female participants in the study. Data was generated from one-to-one interviews, focus groups, and collected documents that outlined the PD process associated with the implementation of the IB Programme. The information obtained from the data collection methods was analyzed utilizing NVivo coding software to identify patterns and themes that emerged as a result of the study.

There is a significant amount of research that has been conducted regarding the link between professional development and student achievement, but there is little research concerning the PD associated with the IB Programme and its relationship to increasing student achievement. The purpose of this research was to contribute to the lack of literature on the topic. This information will assist districts in the development of meaningful PD experiences.
DEDICATION

I dedicate this accomplishment to my wife, Regina. Thank you for supporting me throughout this process and for your initial push to start me on this path. I also dedicate this dissertation to my sons, Nathaniel and Nelson who have been understanding throughout this process by allowing me space and time to complete this journey. I hope that my dedication, time, and resilience can inspire you as you pursue your dreams in the future. Please know that I will always be your greatest support and cheerleader. You can accomplish anything that you set your mind to!
ACKNOWLEDGEMENTS

I want to express my gratitude to all the teachers and administrators who participated in this study. They were sincere and enthusiastic to share their thoughts, perceptions, and experiences concerning the professional development offered by the International Baccalaureate Programme.

Thank you to my dissertation committee members. Each of you played a significant role throughout my doctoral journey at St. John’s University. To my mentor Dr. Anthony Annunziato, I cannot thank you enough for your support, encouragement, and the guidance that you have provided. Your expertise and passion for qualitative research has provided me with a sense of confidence and thorough guidance throughout my research. Dr. Ann Macaluso provided support, guidance, and personal expertise that helped me greatly to focus my research. Dr. Catherine DiMartino has been instrumental in helping me expand the scope of my research to include data points that enriched the process and my findings.

Also, I want to thank all of my professors at St. John’s University. I have been very fortunate to learn from great educational leaders that have kept me focused throughout my journey.

Finally, I would like to thank each of my doctoral program cohort members. It has truly been an amazing journey and I am very fortunate to have shared it with such dedicated professionals that were collaborative and supportive throughout the process. I wish you all the best of luck as you continue your independent leadership journals.
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CHAPTER 1

Introduction

Throughout the 20th and into the 21st-century, policymakers have made numerous attempts to reform the education system in the United States. For example, in 1944 the Servicemen's Readjustment Act, in 1958 the National Defense Education Act, in 1964 the Elementary and Secondary Education Act in 1964, and in 1994 the Improving America's Schools Act, lobbyists have attempted to reimagine the United States educational system. Over the past two decades, legislators have made two significant attempts to reform education by placing more emphasis on assessments and accountability. In 2001 President George W. Bush signed the No Child Left Behind Act (NCLB), and in 2009, President Barack Obama assisted with initiating the competitive Race to the Top (RTTP) grant. The NCLB Act and the RTTT initiatives focus on increasing rigor in the classroom, developing standardized expectations and assessments, and building the capacity of teachers. As suggested by Jaiani and Whitford (2011), “The cognitive paradigm of ‘accountability’ played an important role in the creation of the NCLB policy” (p. 19).

Unlike previous educational reform efforts, O’Brien and Roberson (2012) argued that NCLB shifted the goal of reform efforts from teacher capacity development, which is described as the audit and inspection process, to accountability, which is contrary to useful school research on school improvement efforts. Furthermore, O’Brien and Roberson (2012) asserted that NCLB “blurred the unit of analysis, failed to include researcher-practitioner coalitions, and substituted comparative, system-encompassing, summative evaluation schemes for simple diagnostic student assessments” (p. 365).
Essentially, the attempts to improve the educational system distorted the fundamental
tenets of effective school reform by forcing educators to "teach to the test" and abandon
nurturing learning environments that monitor progress and plans around the needs of
students (O'Brien and Roberson, 2012).

Although many in the field acknowledged the implications of NCLB as it relates
to accountability and the development of universal expectations, Samuel and Suh (2012)
noted that it is imperative to look at policies through the lens of educational theorists such
as John Dewey who shift the focus to the child and the curriculum stating "it has to be
based on the demands of the 21st-century skills such as critical thinking, creativity,
innovation, collaboration, and other higher-order skills" (p. 380). The child's focus is an
element that is missing in the reform efforts that were established by policymakers when
they initiated NCLB.

Similar to NCLB, Race to the Top focused on accountability. Still, the legislation
emphasizes accountability by using a competitive grant to entice innovation at the state
and local levels of government. RTTT does not replace the NCLB Act or the high stakes
standardized testing that is attached to it but crafts the initiative differently to focus on
adding value, in the form of funds, to the evaluation of students, teachers, and the
performance of a school district (Tenam-Zemach & Flynn, 2011). Additionally, RTTT
introduced the idea of whether a student was learning across a school year and if these
gains were transferable to college and career readiness. This adds a global comparison of
students that graduate from the United States system.

Despite the competitive nature of RTTT, which pitted states against one another
to win the available funding associated with the grant, Howell (2015) believed that the
initiative led to progressive policies and procedural changes at the local levels. In his review, Howell stated “legislators from all states reported that Race to the Top affected policy deliberations within their states” (p. 6). Changes in educational policy are the perceived results of the initiative. Although NCLB and RTTT may have been developed without the insight of effective school research, there is little doubt that these historic initiatives emphasized professional development (PD) as the vehicle used to bring about educational reform throughout the country.

Countless studies have focused on the positive impact that professional development can have on teachers’ pedagogy and student achievement. As noted by Darling-Hammond, Hyler, and Gardner (2017), “a growing number of rigorous studies establish that well-designed PD can, when effectively implemented, lead to desirable changes in teacher practice and student outcomes” (p. 1). The growth occurs when PD planners can design learning opportunities for educators that are well designed, linked to the needs of those participating in the activities, includes teachers in the planning process, and have an evaluative component that ensures continuous review and improvement (Darling-Hammond et al., 2017). Ultimately, successful educational systems incorporate well-designed and effectively implemented PD that addresses the needs of teachers providing students’ continued growth while addressing the needs of students.

Martin, Kragler, Quatroche, and Bauserman (2019) suggest that PD should be designed to work on the identified needs of teachers and the overachieving goals of the district. The growth of teachers should be the goal of any professional learning activity. As noted by Martin et al. (2019), “teachers appear to be the objects of professional development policies as well as the method for change desired by policymakers” (p.
Well-designed learning activities are also a way to retain teachers. As suggested by Gupta and Lee (2020), "Customized, sustained professional development programs that align with the needs of both the schools and the staff is an important means of retaining high-quality teachers” (p. 417).

The success of a well-designed PD experience is also contingent on the willingness of the participants. As noted by Pharis, Wu, Sullivan, and Moore (2019), "Educators, focused on continual improvement of teacher quality and student achievement, participate in a variety of professional development activities to enhance their abilities to provide high-quality instruction for all students" (p. 30). School systems have and will continue to employ PD initiatives that include all members to drive school improvement efforts and change classroom practices (Pharis et al., 2019). The inclusivity of the growth of a system is noted by Pharis et al. (2019), “Among crucial features of effective teacher professional development in participating schools were teams of teachers and principals, learning together, throughout the year” (p. 43). Systemic growth of a system occurs when all participants understand the purpose of an initiative, are involved in the learning activities, and the learning practices permeate every component of its philosophy and practices.

The concept of the permeation of a system through a comprehensive professional development (PD) initiative can be realized by incorporating the PD offered by the International Baccalaureate (IB) Programme. To study the impact of PD provided by the IB Programme on teachers' pedagogical approach, the researcher conducted a qualitative case study of a suburban Long Island school district that is in the process of implementing the IB Programme at all grade levels, K-12.
One unique aspect of the IB program is the commitment to ongoing PD required of all districts and schools that receive authorization from the International Baccalaureate Organization (IBO). The IB PD requirements entail intensive initial training for all teachers that will be teaching IB courses at the secondary level, grades 7-12, and training for all elementary staff at any school seeking to become a Primary Years Program (PYP) school. The training sessions, which involve a three to four-day intensive training regimen at a location outside of the tri-state area; i.e., Houston, Florida, St. Louis, etc., also includes all administrators that will be charged with coordinating the program. The training also includes building-specific coordinators assigned to each program. Although this approach involves a significant monetary commitment from the district, it is viewed as a full immersion professional development plan intended to provide participants with a thorough understanding of the philosophical and pedagogical practices espoused by the IBO (IBO, 2017).

**Figure 1**

*International Baccalaureate Worldwide Growth (International Baccalaureate Organization, 2017).*
According to the IBO, the program has increased by 39.3% from 2012 to 2017. This growth is representative of each of the IBO programs, including the PYP, Middle Years Programme (MYP), and the Diploma Programme (DP). Based on the data available, in 2017 52.6% of the schools that offer IB programs are in the Americas, 26.5 are in Africa, Europe, and the Middle East, while the remaining 20.9% are in the Asia-Pacific portion of the world.

The researcher focused on teachers' perspectives concerning IB's approach to PD, compared traditional PD to IB PD, and determined if teachers believe that the IB PD has caused them to change their pedagogical practice.

This qualitative case study was significant as it will provide the field with an analysis of teacher's perspectives concerning the effectiveness of the IB PD program and impact educational reform as well as pedagogical practices. Desimone (2013) suggested “In the past decade, a growing body of evidence has suggested that professional development that emphasizes subject matter content and how students learn that content (1) increases teachers’ knowledge and skills, and (2) improves instruction in ways likely to result in increased student learning” (p. 11). The researcher used qualitative methods to gather the data, such as interviews and observations.

The data collected and the researcher's findings will contribute to the educational field by providing insight into the planning and implementation of professional development initiatives, the IBO approach when designing professional learning activities, and the link between PD and the pedagogical approach followed by teachers. Additionally, this study can be used as a guide for professionals who are responsible for planning and implementing professional learning activities.
Purpose of the Study

The purpose of this qualitative case study was to examine teacher’s perceptions concerning the components of a successful PD program, the PD offered by the IB Programme, and the impact of the IB PD program on the pedagogical approach of teachers. The researcher investigated whether the IB Program's PD has a positive effect on the perceptions of teachers concerning the delivery of their instruction.

An extensive amount of literature supported the notion that effective professional development (PD) practices lead to increased teacher capacity and, ultimately, to student achievement (Pharis et al., 2019). Still, there is a plethora of research that speaks to the ineffectiveness of PD when it fails to follow essential principles. Guskey and Yoon (2009) identify the pitfalls of ineffective professional learning activities, which include one-shot workshop models, reactionary PD activities, and not involving the teachers in the design, implementation, and evaluation of professional learning initiatives.

Additionally, Kennedy (2016) identifies the need to consider teachers in the process by stating, "Mandated PD creates a problem for PD developers, which is analogous to the problem teachers face: Attendance is mandatory, but learning is not" (p. 973). The PD planner is faced with the challenge of developing an understanding of staff’s needs, what motivates them, and the methods that will improve their learning and growth (Kennedy, 2016).

Additionally, the alignment of PD initiatives with the district/building/department's goals is imperative to support the health and growth of a system (Pianta, 2011). A misalignment of learning activities to the explicit goals of a system leads to fragmentation, disconnecting the professional development plan's intent
to the overachieving objectives of the organization. The success of a professional development plan relies on clearly communicated goals, learning activities that align with goals, and continuous reflection on the outcomes of the plan (Stacy, 2013).

Unfortunately, PD planners, including administrators; teachers; and professional consultants, fail to follow these procedures when orchestrating learning activities for staff, which warrants the need to reassess our practices to ensure that PD is aligned and provides the support of professionals to reach the identified goals.

Although there is sufficient research on the successful components of professional development and positive adult learning practices, research on teachers' perceptions concerning the professional development offered by the IB Programme and its impact on teachers' pedagogical approach is limited in the literature. This study provides a review of teacher perspectives concerning PD offered by the IBO, which will add to the body of literature.

**Theoretical Framework**

The theoretical frameworks that the researcher included are Change Theory, Systems Theory, and Adult Learning Theory. Michael Fullan's Change Theory guided the researcher's study while Peter Senge's Systems Theory and Malcolm Knowles’ Adult Learning Theory enabled the researcher to frame his approach and data collection process. The connections with the authors mentioned above are their work with organizational change, the understanding of the impact that every member of a system has on its success, the psychology behind the change, the knowledge of how educator's learn, and the role that leaders play in implementing and sustaining change in a school system.
Specifically, the researcher implemented Fullan’s assessment of the six components (Love Your Employees, Connect Peers with Purpose, Capacity Building Prevails, Learning is the Work, Transparency Rules, and Systems Learn) that outlines the components of sustainable change in a system. Additionally, there is a clear relationship with Senge’s work on systems; specifically, the five disciplines (Systems Thinking, Personal Mastery, Mental Models, Building Shared Vision, and Team Learning), which outlines the thinking behind organizational thinking. Lastly, the researcher used Knowles’ Four Principals of Andragogy (Adults need to be involved in the planning and evaluation of their instruction, Experience (including mistakes) provides the basis for the learning activities, Adults are most interested in learning subjects that have immediate relevance and impact to their job or personal life, and Adult learning is problem-centered rather than content-oriented), to frame the researcher’s study concerning how adults learn.
Significance of the Study

The current study sought to identify characteristics of a PD initiative that resulted in sustainable pedagogical changes. The study will provide insight into the methods that work in PD initiatives and the need to implement immersive learning activities. Additionally, this study considered the development of multiple aspects of the students and gives educators the tools to develop and implement instruction that prepares students to be active and global thinkers. This sentiment is echoed in the IBO mission statement, which reads, "The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect" (IBO, 2017).
This study will also give school leaders and policymakers insight into how educators learn, how systems implement sustainable change, and how to positively change teachers’ pedagogical approach. Lastly, because the study's site has endorsed an 'IB for All' perspective, all students within the system will benefit from the exposure to the program, thus providing more significant preparation for college and career readiness.

Research Questions

In this study, the researcher has attempted to answer three research questions:

1. What is the impact of professional development offered by the International Baccalaureate (IB) Programme on teachers' pedagogical approach?
2. What are teachers' and administrators' perceptions concerning the International Baccalaureate (IB) Programme's professional development compared to traditional PD programs?
3. What are teachers' and administrators’ perceptions concerning the components of a successful professional development plan?

Design and Methods

This study employed the qualitative research method and the case study design to examine and draw conclusions regarding teacher perceptions concerning the components of a successful PD program versus their perceptions concerning PD offered by the IB Programme and the IB PD program's impact on their pedagogical approach. As the researcher examined a district that implemented IB PD across all grade levels, a case study was the appropriate design for the study. According to Creswell and Poth (2018), "A qualitative case study can be composed to illustrate a unique case, a case that has an unusual interest in and of itself and needs to be described and detailed" (p. 98).
This study's setting was a suburban Long Island school district that was in the process of implementing the IB Programme at every grade level from Kindergarten through 12th. The district is comprised of 1,512 students in grades K-12, 1% Asian, 5.6% African American, 17% Hispanic, 4% Native American, and 72% White. Additionally, 27% of the population are economically disadvantaged and 9% are English Language Learners. There are three buildings in the district, one elementary school that services 585 students in grades K-5, a middle school with 377 students in grades 6-8, and a high school with 552 students in grades 9-12. The district employs 135 teachers, and approximately 60% will be participating in the PD offered by the IB Programme.

The researcher employed qualitative methods in the form of interviews, focus groups, and the review of documents to collect data that applies to the study's research questions. To understand the impact on the PD offered by the IB Programme at all levels of the district, the researcher interviewed teachers and administrators who participated in the PD in each building. Data collection programs, such as NVivo, was used to code and collect the data. Based on the data, the researcher identified prevalent themes to draw conclusions concerning teachers' perspectives regarding the IB Program's PD and its impact on their pedagogical approach.
Definition of Terms

**Adult Principles of Learning (Andragogy).** A theory on how adults learn with an emphasis on the process of learning. The learning approach emphasizes collaboration, self-direction, problem-based, and relevancy (Knowles et al., 2012).

**CAS - Creativity, Action, and Service.** A 200-hour voluntary work requirement for the IBDP students to receive their diploma (IBO, 2017).

**Educational change.** Educational change is the change in practice via innovation or a new method, implementing a new or revised curriculum and unique teaching methods, and altering beliefs and assumptions (Fullan, 2019).

**Evaluation.** A systematic investigation to determine merit or worth (Guskey, T. R., 2014).

**International Baccalaureate (IB).** An organization founded in Geneva, Switzerland, by teachers in 1968 to generate a standard curriculum across the world would create students who are inquiring, knowledgeable, and caring to develop peace and intercultural understanding (IBO, 2017).

**International Baccalaureate Diploma Program (IBDP).** A challenging two-year program is open to any student between the ages of 16 and 19 (IBO, 2017).

**Middle Years Program (MYP).** The IB program from Grade 6 to Grade 10 (IBO, 2017).

**Models of Professional Development.** Delivery strategies/models proven to be effective for adult learners and learners in general (edglossary.org/professional-development).
**Primary Years Program (PYP).** The PYP is IB's elementary school program from Kindergarten to fifth grade (IBO, 2017).

**Professional Development.** Specialized training or professional learning is intended for teachers and administrators to improve their professional knowledge, competence, skill, and effectiveness (edglossary.org/professional-development).

**Professional Development Planner.** For this study, the term professional development (PD) planner refers to any individual(s) that coordinates professional learning activities, including administrators, teachers, professional consultants, and representatives from the International Baccalaureate Programme.

**Systems Thinking.** A process of understanding how parts within a system influence one another in a whole (Senge, 2006).

**Organization of the Dissertation**

This dissertation follows the Bloomberg and Volpe (2018) format for qualitative method designs. Chapter one provides the introduction, purpose, problem statement, and the methodology that will be followed in the study. Chapter two is a review of the related literature: the planning of PD, teacher involvement in PD, the evaluation of PD, the IB Programme, the Primary Years Programme, the Middle Years Programme, the Diploma Programme, PD offered by the IB Programme, and the theoretical/conceptual framework that is followed in the study. Chapter three identifies the design and methodology followed in the research, including the setting, sample, rationale, and methods of gathering and analyzing the data. The study's analysis and findings are found in chapter four, and the synthesis and implications of the findings are reviewed in chapter five of this dissertation.
CHAPTER 2

Introduction

PD has been a source of research for many decades as it is believed to be the key to school reform. As identified by Desimone (2011):

Teacher professional development is one of the keys to improving the quality of U.S. schools. Many education reforms rely on teacher learning — and the enhanced instruction that ideally follows — to increase student learning, so understanding what makes professional development effective is critical to understanding the success or failure of school reform. (p. 68)

Initially, the research conducted on teacher PD’s effectiveness was on a small scale, which used teacher reports to determine the efficacy of different PD efforts (Hill, Beisiegel, & Jacob, 2013). As the research on the subject of PD continued, there was a shift in the studies that focused on three factors: the development of objective measurements, a comparison of different program features, and random assignment of teachers to various treatment conditions (Hill, Beisiegel, & Jacob, 2013).

The glossary of education defines PD as “a wide variety of specialized training, formal education, or advanced professional learning intended to help administrators, teachers, and other educators improve their professional knowledge, competence, skill, and effectiveness” (Concept, L., 2013). Although this definition may still hold when deriving an interpretation of PD, recent researchers have expanded this concept to include the conceptualization of PD as an essential element when planning and assessing the effects of professional learning activities (Desimone, 2009).
The researcher hopes to address the gaps in the literature regarding teacher perspectives concerning the implementation of the IB Programme, its relationship with effective PD initiatives, and the pedagogical shifts in teacher practices that may result from the IB program's PD. Additionally, the researcher used adult learning theory, systems theory, and change theory as the theoretical frameworks to guide the study.

As a result of this qualitative case study, the researcher believes that important information will be added to the field that identifies teachers' perspectives as it relates to the implementation of the IB Programme, the PD offered by the program, and its relationship to pedagogical shifts. Ideally, the researcher hopes that this qualitative case study will be used as a guide for decision-makers (teachers, administrators, boards of education, and community stakeholders) concerning the implementation of the IB Programme, the importance of developing and implementing quality controlled PD programs, and the relationship of these components as it relates to educational reform.

**Theoretical Framework**

*Adult Learning Theory*

In addition to the importance of the planning, teacher involvement, and evaluating the implementation of effective professional learning activities, the way teachers learn and interact is an essential element that must be factored in when planning and implementing PD programs. The theory that speaks to this PD area is Malcolm Knowles’ Adult Learning Theory.

The process of teaching adults is known as andragogy. According to Knowles, Holton, and Swanson (2012), “…andragogy is an honest attempt to focus on the learner. In this sense, it does provide an alternative to the methodology-centered instructional
design perspective" (p. 1). Andragogy is believed to provide an understanding of the ways that adults learn to enable those that design and implement professional learning activities to utilize this information to design compelling learning experiences (Knowles et al., 2012). As Knowles et al. (2012) suggested, “...a better understanding of the various learning theories will result in better decisions regarding learning experiences, more predictable outcomes, and more desirable results” (p. 8). Those that plan professional learning activities must take the time to build an understanding of how adults learn.

The proper use of adult learning theory has impacted how adults are trained and the methods used to help adults learn and teach (Knowles et al., 2012). To effectively design appropriate learning opportunities for adults, the professional learning activities planner must understand how the term adult is defined. Knowles et al. (2012) define the term adult using what they describe as the psychological definition, stating, "Finally, the psychological definition: psychologically, we become adults when we arrive at a self-concept of being responsible for our own lives, of being self-directing. Concerning learning, it is the psychological definition that is most crucial" (p. 62). This is the definition used to understand and plan activities that are appropriate for adult learners. Additionally, Knowles et al. (2012) identify the differences between the andragogical and the pedagogical (the art of teaching students) model:

The andragogical model is based on several assumptions that are different from those of the pedagogical model:

1. *The need to know.* Adults need to understand why they need to learn something before undertaking to learn it."
2. *The learners’ self-concept.* Adults have a self-concept of being responsible for their own decisions, for their own lives.

3. *The role of the learners’ experiences.* Adults come into an educational activity with both a greater volume and a different quality of experience from that of youths.

4. *Readiness to learn.* Adults become ready to learn those things they need to know and be able to do in order to cope effectively with their real-life situations.

5. *Orientation to learning.* In contrast to children’s and youths’ subject-centered orientation to learning (at least in school), adults are life-centered (or task-centered or problem-centered) in their orientation to learning.

6. *Motivation.* Adults are responsive to some external motivators (better jobs, promotions, higher salaries, and the like), but the most potent motivators are internal pressures (the desire for increased job satisfaction, self-esteem, quality of life, and the like) (p. 65-67).

The effective utilization of these six components of the andragogical model will help PD planners effectively orchestrate professional learning activities that will be meaningful and beneficial to teachers and the growth of a system as it devotes the time necessary to understand the science behind adult learners.
Determining Needs

Factoring in the andragogical model components, the PD facilitator must plan each learning activity accordingly to allow the planner to establish procedures that will include all those involved in the action. The defined processes must prepare the learner, establish a conducive learning environment, develop the methods used for mutual planning, diagnose the learners' needs, formulate objectives, design learning experiences, provide necessary resources, and provide adequate assessment tools (Knowles et al., 2012). These are essential elements to the effective planning and implementation of any learning experience that will, hopefully, yield positive results for teachers and students. Through the proper understanding and implementation of these elements, the PD planner will design professional learning experiences that will be meaningful to teachers.

When designing a PD program, the planner should find a way to determine the learning needs of the adult learners within a system. Knowles et al. (2012) believe that the PD planner must develop activities that aim to construct the learners' desired outcomes, positing that three components should be considered when creating the model, which are the individual, the organization, and the society.

Evaluation of Learning Activities

In addition to determining the needs of the adult learners, the PD planner must find ways to conduct valid and reliable assessments of their learning activities to gauge their effectiveness. Teaching theorists value the importance of the evaluative process, and behaviorists hold to the notion that corrective actions are immediately implemented; likewise, if an instructional initiative does not produce the desired results, it will be modified or abandoned (Knowles et al., 2012). A prompt and active response to
professional development plans is necessary when working with adult learners in a climate that must engage its stakeholders and be responsible to those supporting the system.

Other factors help to shape the learning experience for adults, which Knowles et al. (2012) have in the outer rings of their conceptual framework, including individual, institutional, and societal growth:

*Individual growth.* The traditional view among most scholars and practitioners of adult learning is to think exclusively of personal growth.

*Institutional growth.* Adult learning is equally powerful in developing better insinuations as well as individuals.

*Societal growth.* Societal goals and purposes associated with the learning experience can be illustrated through Friere's work (1970) (p. 150).

The middle ring of their conceptual framework are variables that are grouped into categories of subject-matter differences, situational differences, and individual learner differences. The subject matter differences relate to disciplines that may require different learning strategies to be useful as "not all subject matter can be taught or learned in the same way," situational differences address any unique factors that could arise in a particular learning situation. Individual differences reflect how adult learners' differences can impact the learning process (Knowles et al., 2012).

It is the PD planners' role to utilize the experiences of staff to design professional learning experiences that will be conducive to achieving the intended goals of the learning initiatives (Knowles et al., 2012). Those that plan professional learning activities must review the participants' core learning principles to determine what strategies to use.
that will best fit the cognitive abilities and learning styles of the audience (Knowles et al., 2012). The method chosen must match the learning styles, the comfort level of the educators involved in the learning and may be designed to enhance the learners’ future learning abilities (Knowles et al., 2012). The approach identified by Knowles et al. (2012) is one that encouraged flexibility, as they state, "This flexible approach explains why andragogy is applied in so many different ways" (p. 154).

Knowles et al. suggested a three-part process for the analysis of adult learners; a thorough understanding of the core principles of andragogy, an analysis of the learners that includes a profile of learner and material, and a concentration on the intended goals and purposes for the adult learning activities that act as the framework for the initiative (Knowles et al., 2012). All PD planners should use this analysis model as it provides clear guidance to the planning process, the importance of educators' experience in this process, the role of the evaluation process (formative and summative), and the delineation of the goals of the learning activities.

Teacher Collaboration

The idea of collaboration and sharing of control regarding the goals, activities, and expected outcomes of professional learning activities is a prevalent concept that should guide the practices of those organizing professional learning activities for staff (Knowles et al., 2012). Although the need for collaboration and control is acknowledged, the level of that control must be considered and dispensed appropriately. The PD planner should determine the staff's needs (Knowles et al., 2012) to inform better practices that will be developed to achieve the learning initiatives' desired outcomes.
Although the planner is responsible for identifying the needs, there is a shift in the role of the learner in this process, requiring an individual to take a more active part in the process, which presumes that the learner is fully aware of his or her needs, can identify the learning that is needed, and possesses the motivation to engage in learning activities (Knowles et al., 2012). Based on the shift in control, this dictates that the PD planner must do everything in his/her power to ensure that good collaboration occurs and that responsibilities are equally distributed between the planners and participants. The PD planners must learn how to relinquish the need for control and allow for a collaborative approach to the process (Knowles et al., 2012).

Planners must acknowledge that a critical component of successful adult learning occurs with the identification and acceptance that authentic learning occurs when adults take control of their learning. The shift moves to a self-directed model. Some factors must be considered when utilizing the self-directed model: learning style, previous experience with the subject matter, social orientation, efficiency, prior learning socialization, and locus of control (Knowles et al., 2012). An adult’s readiness to learn can vary based on the learning situation. As suggested by Knowles et al. (2012), “Learning professionals who notice learners who do not seem ready for learning in an andragogical manner must understand within which dimension the need exist” (p. 193). Once this is realized, the PD planner must adjust his/her practices to accommodate the learners' identified needs in the professional learning activities.

**Learner Preparedness**

Knowles et al. (2012) identify two dimensions, direction and support, regarding a learner's readiness to learn. Direction reviews learners need to acquire assistance from
another. At the same time, support refers to the learner's level of engagement, which corresponds with the level of commitment and confidence that a learner has in the process and material of the professional learning activity (Knowles et al., 2012). The confidence level of the learner will dictate the level of support that is required, and the PD facilitator must be able to recognize this fact and act accordingly, "Instructors are encouraged either to capitalize on learner strengths or to help learners develop a broader range of capabilities" (Knowles et al., 2012, p. 203).

The process of recognizing where the learner is at in the learning process is identified as the “aptitude-by-treatment interaction,” which means that the treatment (instruction in this case) interacts with individual aptitudes abilities, which includes styles, and traits, in producing learning outcomes (Knowles et al., 2012). This is an essential component when attempting to understand how adult learners respond to learning activities and their expectations.

In addition to understanding the learning process, Knowles et al. (2012) point out the importance of learners' cognitive styles as a factor that can contribute to the planning process of effective PD practices. According to Knowles et al. (2012), “Cognitive styles are thought to be more stable traits and refer to a person’s typical manner of acquiring and processing information” (p. 210). There are three learning styles: acquiring information; the unique ways that learners prefer to receive news, processing information; the way that learners process information; and learning style; learners' preferred modes and environments for learning (Knowles et al., 2012). To effectively plan professional learning activities, PD planners should develop methods to assess their staff to determine which learning styles exist amongst their staff to fashion the learning
experiences around these learning styles. This approach will ensure that every possible opportunity is afforded to all staff to acquire and retain the learning associated with the objectives identified in each learning activity.

The proper understanding and use of andragogy in the planning of professional learning activities for teachers will help PD planners tailor adult learning experiences to fit the needs of those they support. Additionally, PD planners will consider the cognitive abilities, learning-style preferences, and individual differences of adult learners to develop flexible learning approaches to accommodate the needs of all staff involved in the professional learning activities (Knowles et al., 2012). This concept applies to any initiative with a PD aspect to its implementation, such as the IB Programme.

**Systems Theory**

Peter Senge (2006), in his seminal work on organizations, *The fifth discipline: The art and practice of the learning organization*, defines five domains of learning organizations, which include systems thinking, personal mastery, mental models, building shared vision, and team learning. Senge identifies systems thinking as a “conceptual framework,” personal mastery as the “discipline of continually clarifying and deepening our personal vision,” mental models as “deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action,” building a shared vision as “the capacity to hold a shared picture of the future we seek to create,” and team learning as “the intelligence of the team exceeds the intelligence of the individual” (Senge, 2006, p. 7-9). These components are necessary for individuals within an organization to learn and grow as a system working within a team structure (Senge, 2006).
Systems thinking is a shift in one’s personal mindset. Senge uses the word metanoia to capture the meaning of what occurs in learning organizations regarding the process of change. Senge wrote, “To grasp the meaning of “metanoia” is to graph the deeper meaning of “learning” for learning also involves a fundamental shift or movement of mind” (p. 13). Those involved in the change process within an organization must view all the components of a system by looking at the interrelationships of all elements of the organization (Senge, 2006). According to Senge (2006), “Systems thinking is a discipline for seeing the “structures” that underlie complex situations, and for discerning high from low leverage change” (p. 69).

Personal mastery involves an individual’s willingness to continue to learn and grow. This concept translates to the growth of an organization as Senge (2016) suggests, “Organizations learn only through individuals who learn. Individual learning does not guarantee organizational learning. But without it no organizational learning occurs” (p. 130). The process of personal mastery also addresses an individual’s ability to develop and sustain “creative tension” (Senge, 2006). Additionally, those that work within the framework of personal mastery have a sense of purpose that is aligned with their vision and goals, there is a specific image of the desired future, and there is a balance between the tension that arises from the desired vision and the current reality of an organization (Senge, 2006).

Mental models address deeply held perspectives of how things work that may limit the acceptance of new ideas and principles. All new concepts are filtered through the lens that applies to our mental models. Based on Senge's position, new ideas are not implemented because they are contrary to the accepted notions of those responsible for
evaluating the initiative (Senge, 2006). Mental models determine how we respond to ideas. Through inquiry and advocacy, Senge (2006) suggests that individuals within a system must recognize the espoused mental models prevalent in a system and work toward bringing them to the surface. To communicate effectively, the planner must understand the decision-makers' mental models and the gaps between the desired and current vision, which is a skill that should be developed and worked on throughout the change process (Senge, 2006). Senge (2006) suggests that individuals should create a "left-hand column" that documents the thoughts and mental models during a conversation to identify the biases that may exist when engaging in a dialogue. The skilled facilitator engages in inquiry and advocacy during a discussion; the speaker needs to know when to inquire into others' views and when to advocate for their position—all speakers must be validated and heard to accept proposed changes to their mental models. A conversation should include a level of investigation and the surfacing of truths. As suggested by Senge (2006), “That is why the discipline of managing mental models—surfacing, testing, and improving our internal pictures of how the world works—promises to be a major breakthrough for building learning organizations” (p. 163). Understanding and using mental models to guide conversations is a skill that must be harnessed in leaders. Senge (2006) wrote, “Reflective practice is the essence of the discipline of mental models. For managers this requires both business skills and reflective and interpersonal skills” (p. 177).

Developing a shared vision in an organization is a unification of all those within a system. For a vision to come to fruition, there must be a collective understanding and commitment to its execution; each member must actively play a role in accomplishing the
steps toward the vision. For a system to find success, every member must believe in the organization's mission; the vision cannot live in isolation among the governing council or its leader. This is true for any institution or instructional initiative. The shared vision provides focus to an organization and gives its members a purpose shared by all those within the system. Although Senge (2006) believes that shared vision emerges from individual visions, he espouses that organizations must give up the notion that visions are leadership-driven. Instead, they stem from a planning process developed by the institution that includes its membership. As suggested by Senge (2006), "When visions start in the middle of an organization, the process of sharing and listening is essentially the same as when they originate at the top. But it may take longer, especially, if the vision has implications for the entire organization" (p. 201).

The process of team learning involves the growth and alignment of all the members of an organization. As Senge indicates, “Team learning is the process of aligning and developing the capacity of a team to create the results its members truly desire. It builds on the discipline of developing shared vision” (p. 218). A team's alignment leads to standard directions, a harmonization of energies, and less wasted energy (Senge. 2006). As the goals of a system are unified, each of its members work together to lessen the burden that can be involved in the accomplishment of identified goals. Senge identified three critical dimensions that are involved in team learning, which include “the need to think insightfully about complex issues,” the need for “innovative, coordinated action,” and the “role of members on other teams” (Senge, 2006, p. 219).

Team learning involves developing dialoguing and discussion, which are the two ways teams converse (Senge, 2006). Senge (2006) identifies the difference between
dialogue and discussion in the following way, “In a discussion, decisions are made. In a
dialogue, complex issues are explored” (p. 230). To successfully engage in a dialogue,
the speakers must hold back their assumptions, be open to the inquiry process, and
continuously hold back their opinions until the full dialogue is concluded (Senge, 2006).
Organizations learn through the process and art of conversations. As Senge (2006)
indicated, "Learning a new language, by definition, means learning how to converse with
one another in the language. There is simply no more effective way to learn a language
than through use, which is exactly what happens when a team starts to learn the language
of systems thinking” (p. 252).

Change Theory

Educational reform in the United States has seen many initiatives, whether you
are studying the No Child Left Behind legislation or the Common Core State Standards
initiative. Each reform intends to bring about organizational change that results in student
achievement. Fullan (2015) summarizes the failures of school reform of the 1960s,
1970s, and the 1990s as either a “top-down or a bottom-up change,” which refers to a
too-tight/too-loose of a reform process. In contrast, Fullan asserts that “Large-scale
reform is about shared meaning, which means that it involves simultaneous individual
and social change” (Fullan, 2015, p. 11).

Relationship Building

In addition to the concept of shared meaning as a necessary component of large-
scale reform, Fullan (2015) believes that establishing relationships plays a pivotal role in
positive change. One of the significant reasons for ineffective school reform is the fact
that teachers and staff tend to work individually, which is a concept that must be
addressed and repudiated for real change to occur. Fullan states, “In order to combat isolationism and privatism in education systems’ we must apply intensive action sustained over several years to make it possible both physically and attitudinally for teachers to work naturally together in joint planning; observing one another’s practice; and seeking, testing, and revising teaching strategies on a continuous basis” (Fullan, 2015, p. 8).

Although intrinsically, we believe that this suggestion may hold the keys to successful educational change, the implementation remains an elusive concept. To resolve the situation we must commit to providing the necessary resources to support systemic changes throughout a system. In this regard, Fullan (2015) believes that organizational change fails and is not sustainable when the infrastructure is weak, unsupportive, and is not aligned.

**Teacher Perspectives**

When analyzing the meaning of real educational change, educational reformers must examine it from teachers' perspective, which are the agents of change. Fullan asserts that there is a difference between voluntary and imposed change, but that “all real change involves loss, anxiety, and struggle” (Fullan, 2015, p. 19). Fullan further posits that change occurs when a system shares in a collective experience defined by uncertainty, which can lead to a sense of mastery, accomplishment, and individual growth (Fullan, 2015). This belief will result in real pedagogical change over time, which is the basis for instructional change.

**Components of Change**
When considering change, Fullan enumerates various elements that contribute to the change process. According to Fullan, in addition to establishing good relationships, the change process must "be fueled by good ideas" (Fullan, 2015, p. 41). Additionally, policies that are developed but fail to bring about sustainable change is identified as “wrong drivers.” A wrong driver is any initiative that moves the system in a negative direction. Fullan believes that “intrinsic motivation, instructional improvements, teamwork, and “allness” are the crucial elements for whole-system improvement” (Fullan, 2015, p. 42).

In contrast, Fullan (2015) asserts that organizations must utilize the right drivers that build capacity, establish procedures for collaborative work, and encourage sound pedagogical practices. These efforts will lead to the collective efficacy of the members of a system. The premise is that, over time, every member of a system will improve and result in more significant student achievement.

Concerning successful instructional practices that lead to effective organizational change, Fullan identifies five specific components that must be present in the process, which are the following:

1. Focus on a small number of ambitious goals.
2. Make sure that instruction and student achievement are the heart of the matter.
3. Commit to whole-system reform-100% of the system involved from day 1.
4. Build individual and collective capacity in tandem. Work toward significant social capital as the accelerator of broader and more profound reform.
5. Establish transparency of results and practice as the norm avoiding heavy-handed accountability (Fullan, 2015, p. 46).
In addition to the review of the process, Fullan identifies specific elements that should be part of any successful change initiative, which include the following:

1. Define closing the gap as the overarching goal.
2. Recognize that all successful strategies are socially based and action oriented—change by doing rather than change by elaborate planning.
3. Assume that lack of capacity is the initial problem and then work on it continuously.
4. Stay the course through continuity of good direction by leveraging leadership.
5. Build internal accountability linked to external accountability.
6. Establish conditions for the evolution of positive pressure (Fullan, 2015, p. 47).

Considering the six items that Fullan has identified as necessary elements of change, it is evident that the process requires time, dedication, and a willingness and acceptance from the entire system that change is needed. Conditions must be created to provide teachers with the intrinsic motivation to change, which will lead others within a system, to begin to see the validity of the change.

In his review of change, Fullan identifies factors that affect the initiation of a change process, which our existence and quality of innovation, access to innovation, advocacy from central administration, teacher advocacy, external change agents, community pressure/support/apathy, and new policy-funds (federal/state/local) (Fullan, 2015). Fullan believes that all the items mentioned above have a direct effect on the process of initiation. In the area of innovation, Fullan believes that innovation is readily available and continually changing to address the time and situation (Fullan, 2015). He
asserts that central and building administration is the role to support innovation and make it available to teachers. In this regard, Fullan states that "The principal has always been the "gatekeeper" of change, often determining the fate of innovations coming from the outside or teacher initiatives on the inside" (Fullan, 2015, p. 62).

In addition to the critical role that the principal plays in the success or failure of the innovation, Fullan believes that the role of a community is pivotal to the process as well and suggest that school districts should partner with parents and others in the community to establish initiatives (Fullan, 2015). Although the notion of partnership/collaboration is so vital to any change initiative, it is something that is found to be missing in most systems as districts tend to act independently.

**Obstacles to Change**

When implementing change in a system, districts tend to allow the change process to consume them and get bogged down with the process's intricacies (Fullan, 2015). As Fullan indicates, “The more complex the reform, the greater the problem of clarity” (Fullan, 2015, p. 70). The answer to this dilemma is to work towards establishing the rationale for the change continuously. Additionally, to bring about sustainable change in a system, we need to engage all stakeholders in the process and ensure that clarity is reviewed and understood.

To bring about educational reform, change agents must examine the impediments to change related to the planning, implementation, and the realities of change. Fullan (2015) asserts that leaders and institutions invest too much time and energy in the planning process and not the implementation of the designed plan. This leads to a misalignment in the intent to the execution of the plan. Although the planners may be
well-intended if they fail to consider the context and culture of the system that is the intended location of change, the efforts may be in vain. Fullan (2015) asserts that the solution to this dilemma is the development of learning organizations, which is a popular professional development model.

Additionally, leaders must understand the implications of change and how others within the system will respond to the change. Concerning the interrelatedness of this relationship related to change, Fullan (2015) believes that planners must be aware of their assumptions regarding the change, as these assumptions can predict the initiative's outcome.

Change in education results from what teachers do and how they view their role in the change process. Fullan (2015) believes that real educational reform is the outcome of strong recruitment efforts and a positive learning environment. A system fails to grow when the teachers/staff are not empowered to be part of the solution. Fullan believes that one of the most critical pillars of educational change is altering a system's culture. He states, "Reversing the trend of dissatisfaction and disengagement must be at the heart of any serious reform effort" (Fullan, 2015, p. 97).

Facilitating Change

Fullan posits that an effective way to increase educational change is to ensure that all learning activities for teachers are based around “one-to-one and group opportunities to receive and give help and more simply to converse about the meaning of change” (Fullan, 2015, p. 108). He concluded that “Purposeful interaction is essential for continuous improvement” (Fullan, 2015, p. 108). An effective learning community is one that believes in the notion of collaborative work cultures, which is an environment
that fosters collegial interactions and continuous, non-judgmental collaboration for the betterment of the system and growth of students. There is little doubt that establishing relational trust helps to facilitate mutual understanding of expectations and development. Teachers/staff are more eager to engage in the growth and/or change process when they have a deeper understanding of the need for change, have a thorough understanding of expectations, and feel that the support is available to implement the change (Fullan, 2015).

This collaborative approach to teaching and the management of buildings/districts is exemplified in the development of professional learning communities, which have grown in population over the past few decades (Fullan, 2015). Fullan defines PLCs as "consisting of six interrelated elements: a focus on learning, a collaborative culture with a focus on learning for all, a collective inquiry into best practice, an action orientation (learning by doing), a commitment to continuous improvement, and a focus on results" (Fullan, 2015, p. 119).

The Role of the Principal/Leader

The next element to organizational change of a school system is the principal's role and his/her role in the change process. Fullan (2015) believes that the principal stands as the mediator of change between the teachers and external agents of change; he states, "The principal is in the middle of the relationship between teachers and external ideas and people" (p. 123). The principal is seen as “the gatekeeper of change” (Fullan, 2015, p. 124).

Even though many in the field of education may believe that Fullan's position regarding the importance of the principal's role is essential, he believes that the
dependency on the role of the principal has become overwhelming and diluted the effectiveness of the leader (Fullan, 2015). Essentially, despite the importance of the role, the other component of the position, such as building management, student discipline, and parent/community relations, have prevented the principal from facilitating the change process. This situation results in a significant problem with retaining good principals. In interviews with principals that express dissatisfaction with the job, Fullan identifies lack of achievement, personal sacrifices, lack of growth, lack of recognition, relations with subordinates, and lack of support as contributing factors (Fullan, 2015).

**Teacher Leadership**

The resolution to this problem associated with leadership is developing teacher leaders within the system (Fullan, 2015). Manageable change can occur through shared leadership and ownership of the change process. Additionally, the principal must be a part of the learning community; he/she must be the "lead learner" (Fullan, 2015, p. 127). Fullan believes that the successful principal actively works to establish a culture that is inclusive, includes a strong focus on student learning, efficient management practices, and combined pressure and support (Fullan, 2015). Fullan concludes that the principal must live by the adage, “If you want to change the group, use the group to change the group” (Fullan, 2015, p. 135).

**Stakeholder Involvement**

In addition to the teacher and principal's role in bringing about change, Fullan identifies the student's perspective; he contends that "In a word and at best, students are bored with traditional schooling" (Fullan, 2015, p. 139). Fullan asserts that education must shift its practices to incorporate more innovation to accommodate the student. The
root of the discontent surrounding the teacher and student relationship is that students feel that teachers do not care about them. Findings indicate that teachers do indeed care, but most educators “fail to make connections with students that will develop into caring relationships, thus leading to sustainable change” (Fullan, 2015, p. 146).

The reality of the disengagement of students in the educational process leads to advocating for student-centered learning environments. There are three components to the student-centered environment: aspirations, learning, and belonging (Fullan, 2015). To balance students' incongruence and educational institutions of learning, the field of education must shift its practices to a more student-centered learning approach. The way students learn and respond to content should remain the focus of educational reform (Fullan, 2015).

The next element of change that Fullan reviews are the parent and community's role in the school district's growth. Fullan feels that there is a genuine correlational relationship between parental involvement and the educational success of a child, he states, "The closer the parent is to the education of the child, the greater the impact on child development and educational achievement" (Fullan, 2015, p. 158). To achieve this interconnectedness, educators must involve themselves in the communities where they work. This involvement will lead to a deeper understanding of a community, its children, and systemic, sustainable change.

Fullan provides plenty of statistics regarding the link between increased student performance and parental involvement in schools. To get more parents involved in the process, Fullan offers the following suggestions, "student-led conferences, taking community walks with district leaders, and hiring community liaison workers--to involve
parents and community members to be an integral part of focusing on student learning” (Fullan, 2015, p. 166).

Another element to bringing about systemic change in a system is the development of successful school boards. Fullan asserts that Boards that bring about change possess the following traits, knowledgeable about district programs and practices, have clear goals based on values and beliefs, and engage in activities that allow them to articulate their goals (Fullan, 2015). In addition to the items mentioned earlier, Fullan (2015) concludes that successful boards work more closely with their superintendent and district administration to ensure alignment to goals and proper appropriation of resources. In contrast, Fullan outlines obstacles to successful school boards, which are the following:

- External funding from federal and state sources fragments programs and promotes a “command-and-control” mindset;
- Individual board members, elected by constituencies, often do not vote in the interest of the whole community;
- There is large turnover, with new majorities often being established every 2 to 4 years;
- It is hard for school board members to learn as a team because they are frequently in public, political settings (Fullan, 2015, p. 169).

These conditions outlined are relevant factors to the relations of a school board. Although change can be healthy for a system, too much change can lead to inconsistency in practice and a lack of focus regarding change initiatives.
Additionally, district level administration plays a pivotal role in decisions that result in change. In a 1985 study of superintendents, Fullan summarizes Blumberg's work by stating that, "Superintendents talk about politics, school boards, teacher unions, stress, public exposure, conflict, and so on" (Fullan, 2015, p. 180). The result of this study reveals that little time is spent on curriculum development or instructional improvement, but on other stressful factors and, potentially, do not improve a system (Fullan, 2015).

Despite the difficulties involved in school reform, Fullan contends that three components are necessary for successful school reform, "improved student learning: closing the achievement gap, improved instruction: teacher learning through professional development, restructuring the organization to support student learning and instruction" (Fullan, 2015, p. 186). The effective district leaders realize the time necessary for effective change to form and respond accordingly to this need (Fullan, 2015). Although change may take time, Fullan believes that the “pace must be steady, even pushy, but not overwhelming. They expect results, not overnight, but also not open-ended” (Fullan, 2015, p. 193).

When examining school reform, we must look at it from the perspective of the government’s role. Over the past few decades, the field of education saw a few accountability movements, No Child Left Behind in 2002, Race to the Top in 2009 with very little change occurring. According to Fullan, "Since about 2000, the interest in system-wide success--states, provinces, and countries--has been developing at an increasingly intense rate. It is worth noting that this field of system change is only about a decade and a half old” (Fullan, 2015, p. 218).
Based on the work done involving school reform and the initiatives seen in other countries, Fullan identifies eight "levers to successful system improvement," a small number of ambitious goals, leadership at all levels, high standards and expectations, investment in leadership and capacity building, proper use of data, intervention in a non-punitive manner, supporting conditions/reducing distractions, and being transparent, relentless, and increasingly challenging (Fullan, 2015). The errors faced in implementing school reform involve missing elements of the eight features identified by Fullan. It is challenging to successfully develop all school reform components, especially considering the many distractions that exist at the district, school board, and building level. As Fullan suggests, “governments must go beyond standards and accountability and focus on capacity building linked to results, engaging all three levels of the system: local, intermediate, and central” (Fullan, 2015, p. 227).

The role of the teaching profession is seen as a catalyst to school reform. When considering the three strategies that may lead to school reform (teacher evaluation, professional development, and collaborative cultures), Fullan (2015) posits that the most effective approach is developing and cultivating collaborative cultures. Concerning this position, Fullan states, “Effective schools and school systems create conditions where leaders and participants continually develop a shared depth of understanding about the nature of the work” (Fullan, 2015, p. 229).

Concerning teacher, professional standards, Fullan (2015) has found that one of the best set of criteria has been developed by the Australian Institute for Teaching, which is the following:

1. Know students and how they learn.
2. Know the content and how to teach it.
3. Plan for and implement effective teaching and learning.
4. Create and maintain a supportive and safe learning environment.
5. Assess, provide feedback, and report on student learning.
7. Engage professionally with colleagues, parents/careers, and the community

(Fullan, 2015, p. 233).

Unfortunately, Fullan has found that most teacher preparation programs in the United States do not prepare teachers for successful careers that will lead to sustainable school reform (Fullan, 2015). The lower quality programs lead to retention problems, “In the United States 46% of newly hired teachers leave in the first 5 years of teaching, and 33% leave after 3 years” (Fullan, 2015, p. 245).

When considering change theory, its implications to professional development efforts, and the implementation of the International Baccalaureate Programme, the thoughts of Michael Fullan, which are delineated in his work *The Meaning of Educational Change*, work very well as a theoretical framework when investigated the impact of an instructional initiative in a district, primarily, the work associated with the IB Programme and its professional development program. The initiative that the researcher is examining requires a leap of faith on the part of the staff and a thorough understanding of all the components of a system to ensure successful implementation.

**Related Literature**

*Professional Development*
Researchers have expanded on conceptualization by creating a core conceptual framework that includes essential components that all effective PD should contain. Desimone (2009) identified the following items in her conceptual framework of PD, "(a) content focus, (b) active learning, (c) coherence, (d) duration, and (e) collective participation" (p. 183). Content focus is the link between PD activities and the subject matter taught by the teachers attending the PD with a focus on increases in student achievement. Active learning is a process that involves the teacher in the activity and entails interactive feedback and discussions, coherence entails the alignment of state reforms and policies to PD programs, duration ensures that sufficient time is dedicated to the PD initiative, and collective participation looks at whether or not all those within a school, department, or grade (the intended audience) are receiving the PD (Desimone, 2009). Desimone (2011) believes that these “five core features should be present in any program of professional development” (p. 70).

Although the framework mentioned above can provide practitioners with an excellent blueprint to follow, PD is thought to be a complex system with many components to consider, which can be difficult to factor in trends and needs when designing and implementing effective PD practices (Desimone, 2011). In addition to the conceptual framework outline by Desimone (2011), she believes that all successful PD must follow these fundamental steps:

1. Teachers' experience with professional development.
2. Professional development increases teachers' knowledge and skills, changes their attitudes and beliefs, or both.
3. Teachers use their new knowledge, skills, attitudes, and beliefs to improve their instruction content, approach to pedagogy, or both.

4. The instructional changes that the teachers introduce to the classroom boost their students’ learning (p. 70).

The concept of student achievement and learning is at the core of all valid professional development initiatives. When designed and implemented correctly, professional development efforts have a close alignment with increased student performance scores. Painta (2011) stated that “student-skill gains can be considerable—on average, ten percentile points on standardized achievement tests and as much as 15 percentile points for disadvantaged students” (p. 6). Yoon, K. S., Duncan, T., Lee, S. W. Y., Scarloss, B., & Shapley, K. L. (2007) posits that PD affects student achievement through three steps; the enhancement of teacher knowledge and skills, better understanding and skills improve classroom instruction, and improved teaching increases student achievement. Yoon believed that if one link were missing from this design, student learning would not be accomplished. Yoon et al., (2007) felt that PD should:

- Be of high quality in its theory of action, planning, design, and implementation
- Be intensive, sustained, content-focused, coherent, well defined, and strongly implemented
- Be based on a carefully constructed and empirically validated theory of teacher learning and change
- Promote and extend effective curricula and instructional models—or materials based on a well-defined and valid theory of action (p. 4).

Planning
Additionally, Yoon et al., (2007) believed that teachers must have the motivation and skills to apply what is taught in PD. Furthermore, schools must establish the support mechanisms necessary to encourage collaboration and follow up with the PD coaches/facilitators, and systems must have appropriate evaluative processes in place for all PD initiatives. Effective PD requires thoughtful planning followed by a proper implementation that includes a feedback component to ensure that teachers are learning what the PD intends (Mizell, 2010).

There is significant criticism regarding the design and implementation of current professional development programs that may lack teacher involvement in its development, sustainability, and a valid diagnostic component. Most PD opportunities afforded to teachers have little application to their daily practice. Guskey and Yoon (2009) commented that “a lot of workshops are wasteful, especially the one-shot variety that offers no genuine follow-up or sustained support” (p. 496). Additionally, many teacher professional development opportunities are provided without the teachers' input, leading to a problem faced by most teachers, which is "Attendance is mandatory but learning is not" (Kennedy, 2016, p. 973). It has become abundantly clear that despite the existence of high-quality PD opportunities, there is a shortage of programs characterized by coherence, active learning activities, adequate duration, the participation of the recipients, and meaningful reform (Yoon et al., 2007).

Kennedy (2016) posits that there is a need to replace the way we approach the design and implementation of PD for teachers; he believes that the organizers of PD "must consider what teachers do, what motivates them, and how teachers learn and grow" (p. 974) before the planning process. Regarding the planning of PD, Guskey (2014)
believes that any professional development activity's success relies heavily on how well it is planned. As suggested by Matherson and Windle (2017), “The effectiveness of sustained professional development depends on how carefully educators conceive, plan, and implement it” (p. 31).

The planning of PD can lead to its success or failure; as Guskey (2014) points out, “One thing on which all groups agree is that professional learning experiences, whether group-oriented or individually structured, are rarely well planned. Consequently, they lack purpose, cohesiveness, and direction” (p. 12). Guskey (2014) compares failed PD planning to the process followed by teachers when planning for lessons as a "familiar trap" that are based on processes, such as project-based learning activities, use of technology, and hands-on activities, instead of desired outcomes. If PD activities are meaningful and work to increase student achievement, they must provide teachers with the purpose of the activities, the reasons for the PD, and what the activities hope to accomplish (Guskey, 2014). Guskey (2014) suggests that to determine the value, worth, and appropriateness of any professional learning activity, the PD planner must have a clear intention for each activity presented to staff based on intended learning outcomes.

This process requires PD planners to work from a backward design model. Guskey (2014) identifies this process in the following manner, “The order of steps for professional learning planning thus becomes (1) student learning outcomes, (2) new practices to be implemented, (3) needed organizational support, (4) desired educator knowledge and skills, and (5) optimal professional learning activities” (p. 13). Desired student learning outcomes speak to the evidence collected that reflects those outcomes, and new practices reflect the instructional processes used to attain the learning outcomes,
which answers the questions of how and why the techniques used in the setting are appropriate. While needed, organizational support speaks to the mechanism to ensure the required supports are in place; once the supports are in place, the PD planner must assess what the educators need to deliver the prescribed practices, and the final step would be to determine the best learning activities to utilize to accomplish the set outcomes (Guskey, 2014).

Effective professional development practices link its activities to student learning that can be measured and tracked to the sessions' PD. The goal of professional learning activities is to provide teachers with the tools needed to introduce practices that will lead to comprehensive learning, what will extend content knowledge, and provide them with a thorough understanding of how students learn (Killon & Hirsh, 2012).

In addition to the planning process reviewed, one central point to consider is whether or not the process designed and delivered, with success, can be replicated with the same level of success in another context with a different community of learners (Guskey, 2014). As Pianta (2011) points out, “…to implement a proven-effective model at a statewide or districtwide scale, it must be replicable and embedded in systems of incentives, management, and evaluation that enable high levels of participation and fidelity” (p. 5). Yoon et al. (2007) describe this process as the development of an "empirical link" between PD and student achievement that is established by two points; links between PD, teacher learning and practice, and high-quality evidence that proves results.

The concept of an empirical component of PD is elaborated further by Yoon et al. (2007), who identify the four elements that should be present to establish the "empirical
link," which are the following, the establishment of strong internal validity that the PD adds to student learning apart from other contributing factors, the design must be executed with high fidelity, measurement tools are chosen must be valid (age-appropriate, reliable, and aligned with the intervention), and the analytical methods employed to assess the PD must be appropriate. If a PD planner hopes to find success, the empirical links described by Yoon et al. should be present when designing and implementing a PD initiative.

A review of the features of PD that relate to improved teacher practice and student achievement in the planning of PD is described by Pianta (2011) to be up-to-date knowledge of students' skill targets, support to teachers to promote effective teacher-student interactions, aid in the implementation of curricula, and support for the link between student performance outcomes and the PD activities provided to staff. In the area of student-teacher relations as a positive component of PD, Pianta (2011) commented, “In fact, findings are almost uniform in demonstrating significant and meaningful benefits to children when teacher-child interactions are supportive, organized, and cognitively stimulating” (p. 9). These findings support developing and maintaining a positive relationship with students as it leads to creating a trust mechanism in the classroom that translates to student achievement.

**Teacher Involvement**

In addition to the need to dedicate sufficient time and energy to the planning of effective PD learning activities for teachers, many in the field have identified and advocated for the shift in planning for PD to be at the teachers' hands within a system. Guskey and Yoon (2009) stressed the importance of teacher-led PD when they stated that
"Many writers in education today stress that professional development should be strictly site-based and should build on the combined expertise of in-house staff members" (p. 496). Although the emphasis is on teacher-driven PD, this does not eliminate the need for sufficient planning time and for that time to be used constructively to identify and develop PD that is thoughtful and meaningful. As suggested by Guskey and Yoon (2009), “simply providing more time for professional development yields no benefit if that time is not used wisely” (p. 497).

There is little doubt that the most significant impact of any PD initiative is the change that is realized in teacher practices that lead to student success. Professional learning activities should have the teachers at the forefront of each movement and rationalize their approach based on the needs identified in the staff participating in the learning activities. As Avalos (2011) noted, “professional development is about teachers learning, learning how to learn, and transforming their knowledge into practice for the benefit of their students’ growth” (p. 10). Additionally, teachers must be involved in developing the learning activities to invest themselves, emotionally, in the process (Avalos, 2011).

PD planners cannot lose sight of the fact that “teachers continue to be both the subjects and objects of learning and development” (Avalos, 2011, p. 17). Instead, PD planners must develop opportunities for teachers to naturally talk with one another about the instructional process, student growth, and PD activities while attempting to minimize the isolation that can accompany the process of teaching (Avalos, 2011). As Thomson and Turner (2019) commented regarding the importance of teacher involvement in the planning process:
According to CVT (Control Value Theory), if teachers perceive they do not have some control concerning the implementation of the PD (e.g., they feel coerced to do so) and they do not see some value for the innovation, they will experience both negative emotions and low/no motivation to participate. The specific emotions that teachers experience, and their related motivations, will depend on how they perceive they have control and the degree to which they value the innovation (p. 2).

By encouraging teachers' voices in the conversation regarding the planning of PD, we add credibility and legitimacy to the learning activities used in PD initiatives as they are identified and supported by the teachers who will be the activities' subjects (Wei et al., 2009).

Concerning the emotional value attached to professional learning activity participation by teachers Gaines, Osman, Maddocks, Warner, Freeman, and Schallert (2019) commented, "One of the most prevalent antecedents of unpleasant emotions was redundancy in PD programming, which teachers often attributed to administrative mismanagement. Teachers used a range of emotional words to describe their experiences during PD they perceived as redundant and, therefore, as a poor use of their time" (p. 60). Teachers want to feel a sense of autonomy, as though their voices are heard, are a part of the decisions regarding their professional growth, and, ultimately, can choose which instructional practices to adopt and utilize in their classroom (Gaines et al., 2019). When teachers are not afforded these liberties, they tend to express emotions "including frustration, annoyance, and dread" (Gaines et al., 2019, p. 60). One way to avoid
frustration experienced by teachers is to ensure that adequate time is afforded to them during the professional growth process (Killion, 2013).

Some argue that the emotional investment of teachers/staff experiencing the PD has a significant impact on the success or failure of the initiative. Newberry, Sanchez, and Clark (2018) argue that effective PD must look beyond the activities involved in traditional models, such as the development of learning communities; mentoring programs; the construct of evaluations; and the number of individuals trained, to the relationships of individual teachers to one another and to their administrators that can have the most significant impact on building teacher capacity. As Newberry et al. (2018) suggest, the planner must take "a different approach to PD, one that is more about the social experience of learning rather than purely the cognitive approach, can yield both personal and professional growth that extends beyond classroom teaching” (p. 46).

These experiences can also have immediate and long-term ramifications to the success of the professional learning opportunities that are afforded to staff. Gaines et al. (2019) pointed out that “The consequences of unpleasant emotional experiences included immediate behavioral consequences (e.g., disengagement from PD, rude behavior during PD), and long-term consequences (i.e., disinclination to implement practices presented during PD)” (p. 61). The negative emotional response to ill-prepared professional learning activities can affect teachers' classroom practices and their impressions of all future PD opportunities, thus minimizing the effect size of any well-developed PD planning endeavor (Gaines et al., 2019). Additionally, Gaines et al. (2019) commented that "Findings indicated that emotions in PD are consequential, and that pleasant emotional experiences in PD had positive consequences for these teachers, whereas
unpleasant emotional experiences had negative consequences" (p. 63). This notion adds more credence to the fact that teachers must be involved in the planning process of any professional learning activities.

Stacy (2013) believed that "When empowered to direct their professional development, teachers claim ownership of their work and invest in it accordingly" (p. 40). Additionally, when given this sense of empowerment, teachers will lobby for their professional growth, the reforms required in a district, and the processes that bring about student growth (Stacy, 2013). The added benefit of including teachers in the PD planning process is that teachers will have the opportunity to engage with other teachers by participating in a collaborative and supportive approach that will lead to all those involved in the learning activities. Stacy (2013) also commented that “Teacher-led professional development also combats scripted curricula. Teacher-led professional development provides teachers a voice in the decision-making process regarding curricula by facilitating dialogue that focuses on assessing student achievement within the curricula” (p. 45). Instead of reinforcing the teaching process as an isolated activity, teacher-led PD can create a collaborative environment that encourages teachers to engage in self-reflective practices and work together to improve their practices to lead to student growth (Stacy, 2013).

Concerning teacher involvement in planning and facilitating professional learning activities, Steeg & Lambson (2015) elaborate further on the concept of participation of educators by stating that “School cultures that support teacher leadership approach problem solving with enthusiasm, focusing on students as the cornerstone for all decisions” (p. 105). The role of development and facilitating learning opportunities for
staff should be a shared responsibility, which will increase accountability and 
communication between administrators and the entire school community. Schools that 
have a desire to improve their classroom practices through professional learning activities 
need to embrace teachers as partners, use a collaborative model, develop quality PD 
programs, and celebrate teachers who are willing to take risks (Steeg & Lambson, 2015). 

School districts must acknowledge the importance of teacher involvement and 
collaboration when planning systemic changes in an educational organization. Teacher 
involvement and collaboration is crucial for change to be effective and sustainable. 
Meaningful teacher engagement and embedded collaborative protocols that work to 
strengthen instructional planning and practice collectively will ensure that more students 
experience impactful teaching and learning in the classroom (Hirsch, 2019).

**Evaluation**

The next aspect of a successful PD initiative is the assessment component of the 
plan. As previously noted, professional learning activities viewed as isolated events have 
little to no impact on changing teaching practices. The idea of sustainability and follow- 
up is a pivotal component to any professional growth initiative that positively impacts 
student learning (Guskey & Yoon, 2009). The planners of PD activities must learn how to 
critically evaluate the effectiveness of the learning activities that they plan, demand better 
evidence from those delivering the PD activities, and the presentation of new PD 
strategies should start incrementally through carefully controlled pilot attempts to 
determine its effectiveness with the chosen sample (Guskey & Yoon, 2009). This 
approach should elevate PD to an inquiry-based planning process that involves the 
planners and teachers in the evaluative component of PD initiatives. According to Mizell
(2010), professional development must yield three levels of results: the learning of new knowledge and skills, the use of what teachers learned to improve their instruction, and the growth of student achievement as a direct result of the PD sessions.

Klein and Riordan (2009) described the inquiry-based planning process in the following way, “Teacher professional development (and student learning expeditions) is launched with a 'mystery piece,' in which participants view a picture, listen to an audiotape, visit a site, or read a short text intended to spark curiosity and inquiry into an event” (Klein & Riordan, 2009, p. 66). The inquiry process is realized when planners and teachers understand the nuances of how PD is implemented, how the learning activities are being used in the classrooms, acknowledges their prior experiences, contribute to their professional growth, and how the learning activities relate to themselves as adult learners (Klein & Riordan, 2009). The inquiry framework is a model that all systems should utilize to engage with their staff to determine the needs and relevance of the planned and implemented professional learning in their district.

The inquiry model is an essential factor of any successful PD initiative. Still, it is only one aspect of the assessment process that planners and participants must successfully evaluate a PD initiative's impact. As Guskey (2002) suggests, "In simplest terms, evaluation is the systematic investigation of merit or worth” (Joint Committee on Standards for Educational Evaluation, 1994, p. 3). “Systematic implies a focused, thoughtful, and intentional process” (p. 46). The planner and participants of the learning activities associated with a professional development plan must understand the PD initiative's goals and choose the appropriate metric systems that will be utilized to
determine whether or not the learning activities are addressing those goals (Desimone, 2011).

Desimone (2011) described an approach that districts should incorporate when assessing the effectiveness of the learning activities designed and implemented by a system, which includes the following:

Observations also will enable coaches and principals to determine whether teachers are using reform practices perfunctorily or effectively. Interviews with teachers can provide detailed insights into the challenges, and successes teachers experience with any new curriculum or reform, highlighting principals and districts' additional support. Surveys by nature lack detail and complexity, but they're the best way to produce statistics about events, behavior, or practice, which allow a comparison of teacher experiences across schools and districts and analysis of trends over time (p. 70).

These methods should be employed to determine the process's effectiveness from the perspective of those participating in the learning activities. Planners must become accustomed to the evaluative process to ensure that the learning activities achieve the intended outcomes and lead to student learning. Desimone (2011) noted that the real test of the effectiveness of professional development is whether the learning activities lead to student learning. Yoon (2007) also advised the planners of PD to include a valid and reliable assessment component to the development of a PD initiative when he states, “Even if professional development enhances teacher knowledge and skills and improves classroom instruction, a poorly designed evaluation or inadequate implementation would
make it difficult to detect any effects from the professional development” (Yoon et al., 2007, p. 4).

In the area of evaluative practices for professional learning activities, Guskey (2014) identified five levels that the planners and teachers must consider, which are the following "(1) participants' reactions to the activities, (2) participants' learning of new knowledge and skills, (3) organizational support and change, (4) participants' use of new knowledge and skills, and (5) student learning outcomes" (Guskey, 2014, p. 13). The first level looks at the reaction that the participants will have of the professional learning activities and is viewed as the most manageable information to gather, the second level focuses on the knowledge and skills that were acquired as the result of the PD, the third level shifts the focus of the PD initiative to the organization and the level of support that is provided by the system, the fourth level specifies the indicators that will be observed to determine if participants are utilizing the new instructional practices, and the final evaluative level determines whether or not the outcomes were achieved (Guskey, 2014). The evaluation process is an essential component of any successful PD program and should be an ongoing aspect of the program. As Desimone (2009) noted, “Professional development is a key to reforms in teaching and learning, making it essential that we use best practice to measure its effects” (p. 192).

**International Baccalaureate Programme**

**History of IB**

The International Baccalaureate program was founded in Geneva on October 25, 1968. It was influenced by educators like John Dewey for his views of students' natural curiosity, A.S. Neill for his beliefs regarding student autonomy, Jean Piaget for his
position on cognitive cycles, and Jerome Bruner for his position that students learn by doing (IBO, 2017). The initial founders of the IBO used these early influencers of the program because of their student centrist viewpoints, which, at the time, was contrary to the practices found in traditional schools across the world. The IBO took a progressive position regarding education, which focused on critical analysis, student choice, constructivism, whole child planning, open plan rooms, and the incorporation of multiple educational perspectives (IBO, 2017).

Additionally, the IBO identifies others that were instrumental to the formation of the organization, such as Robert Leach for being one of the first promoters of IB and organizing the Conference of Internationally-minded Schools in 1962, which is where the term International Baccalaureate was first mentioned. Additionally, John Goormaghtigh who was an attorney and treasurer of the International Schools Association, and later the president of the IB council of foundation from 1968-1980. Further, Alec Peterson who was one of the pioneers in the development of the IB curriculum, and Kurt Hahn who was the founder of the Atlantic College in 1962 whose theory of Outward Bound inspiring the development of the Creativity, Activity, Service (CAS) program, which is a requirement of the IB DP Programme (IBO, 2017). These gentlemen were the program's founders and helped to establish the foundation of what we see today.

**Evolution of IB**

Throughout the decades that followed the inception of the IBO in 1968, the program branched out to different world areas, establishing offices in Buenos Aires, London, and Singapore (IBO, 2017). Additionally, the program began to expand its scope to include other aspects of students' educational experience. In 1994 the IBO developed
the Middle Years Programme, and the Primary Years Programme was formed in 1997. In response to the career technical education component of education, the IBO created the career-related program in 2012.

During the first few years of the IBO, Peterson was instrumental in developing the IB curriculum and authored the Arts and Science in the Sixth Form in 1960. Peterson’s work centered on broader education, ethics in science, critical analysis skills, and a deeper understanding of mathematics, which helped to shape the IB framework and ultimately the IB DP Programme (IBO, 2017).

The IB DP requirements are the completion of one course in each subject group (studies in language and literature, language acquisition, individuals and societies, Sciences, Mathematics, and the Arts) that ends with a summative assessment. In addition to the six courses that are required, candidates for the IB DP must take the three core elements of the program, which is the Theory of Knowledge course; a course that provides insights into the nature of knowledge, the extended essay; which is an independent, self-directed 4,000-word research paper, and the completion of a community-based project that focused on the three concepts of creativity, activity, and service (IBO, 2017). Successful completion of the IB DP Programme is the acquisition of 24 points from the six courses and the fulfillment of the program's three core areas.
As the table suggests, the IBO has seen a significant increase over seventeen years in the number of schools that have qualified students for the IB diploma program. These statistics indicate that the IBO continues to increase the interest of those in the educational field toward the program's benefits as its participation numbers rise.

The International Baccalaureate Organization offers three programs, the Primary Years Programme (PYP), which is an elementary program designed for students in grade K-6, the Middle Years Programme (MYP), which works with students in grades 7-10, and the Diploma Programme (DP), which is a high school program for students in grades 11-12. Most school districts offer one or two programs, while very few offer all three components of the program. The school district that the researcher is examining is choosing to provide all three branches of the IB program, which will make it the only school on Long Island to offer the program in every educational setting of the district.
This initiative is a massive commitment for the district as it requires resources in the form of time and financial support to implement and sustain the program. Implementing an IB curriculum at all educational levels is a way of embracing a global perspective of education. According to the International Baccalaureate Organization, "Becoming an IB World School means joining over 4,500 schools worldwide in delivering IB Programme, and becoming part of a community of educators that is growing and developing constantly. The IB's unique implementation is strengthened through our relationships with schools, governments, and international organizations globally" (IBO, 2017).

**Authorization Process**

The authorization process varies by the IB Programme but typically takes between two to three years and consists of many elements to the process. Initially, a school must submit a letter of interest to the IBO, the head of school (IB’s term for building or district leadership) must attend a category one workshop. The district must pay an application fee. The next component is the submission of an application for candidacy, feedback in response to the application is then provided to the district by the IBO, and 14 days is allotted to the school to provide evidence to resolve any matters identified in the report. Once a school has completed the application process, it starts the candidacy phase, including correspondence with the school's IB Programme manager. The next step of the process is the payment of all associated candidacy and consultant service fees. The school then begins a one-year trial teaching while working collaboratively with a consultant assigned by the IBO that is provided to guide the process. The next step in the process is to schedule a consultation visit with a consultant.
from the IBO. Once the consultation visit is complete, the district/school receives an IBO report that summarizes its findings.

The district is then allowed to request the opening of their authorization application. The district then gets an end of consultancy report that determines whether the facilities and staffing meet the criteria of IB, all mandatory PD courses are completed, and all necessary fees are received. Once the report is received, a district can submit the application for authorization. The district will then receive an authorization report from the IBO and verification visits will be planned based on the application. Evidence may be requested from the IBO district to address any matters identified in the process. The district then arranges for the verification visit. Once the verification visit is complete, feedback is submitted to the district by the IBO. The district is provided the opportunity to present evidence to resolve the concerns identified in the report. If the district addresses all matters, the school will be officially authorized by the IBO. Following initial authorization, schools undergo regular re-evaluations to ensure ongoing quality and adherence to the IB Program principles. Each school/district must pay an annual fee to the IBO, which is $11,650 for the DP Programme, $10,050 for MYP Programme, $8,520 for the PYP Programme, and other consultant fees.

**Professional Development offered by the IB Programme**

The PD offered by the IBO is presented in three categories. According to the IBO (2018), “Category 1 workshops are where you begin. Category 2 workshops are where you continue to learn. These workshops are keyed to your growth when you are new to the IB or gaining teaching experience. Once you complete your basic requirements, you are free to move to Category 3 workshops, where exciting collaboration, networking, and
information-sharing commonly occur” (IBO, 2017). The IBO defines the category three workshops as training opportunities that are geared to inspire the participants to make connections between the philosophical frameworks of IB and its practical application in the classroom and “to probe more deeply into what an IB education means, exploring each unique element, such as approaches to learning, trans-disciplinary learning, inquiry, and international-mindedness” (IBO, 2017).

There are four PD formats offered by the IBO, which include subject/program-specific three day face-to-face workshops that are held all over the world, online workshops that can span for weeks to review approximately 15 hours of learning, e-learning, and blending learning opportunities that typically includes three hours online alongside a two-day face-to-face workshop, and in-school and cluster workshops that utilize the chance to train an entire building that typically runs for two days and/or multiple after school sessions.

The choice of workshop format depends significantly on the stage that the school and/or individual is in at the time of the session. Individuals that are new to IB will benefit from taking either category one or two workshops that focus on introductory skills and content-specific material. In contrast, category three workshops are intended to deepen the learner's understanding of the philosophy of IB or the content. Whether it is the PYP, MYP, or DP Programme, each offers PD experiences by the three categories one-three, each increasing the specificity, understanding of the learning process, and the intensity of the experience. All participants in category two or three must have taken the preliminary category one workshops and have a minimum of one year of experience in the program.
While category one and two workshops address the fundamentals of the program and subject-specific material, level three workshops address the program's theoretical perspectives and help elevate the understanding of the learners concerning the intricacies of the educational process as it relates to the IB philosophy. Some of the titles of level three workshops include, approaches to learning that address metacognition skills; appropriate assessments; life-long learning practices, beyond the disciplines that focuses on interdisciplinary instruction, developing service-learning that reviews the steps that students will follow to engage in community service activities, investigating inquiry that provides educators with a thorough understanding of the power of student inquiry, learning diversity and inclusion that aims to increase access for all students, living and learning globally that addresses the global connectedness of society, social and emotional learning that reviews the practices associated with emotional well-being; perseverance; self-regulation; self-motivation; and resilience, and, finally, the learner profile (inquirers, knowledgeable, thinkers, communicators, principled, open-minded, caring, risk-takers, balanced, and reflective); which “is at the heart of the IB’s commitment to an international education” that summarizes the core concepts of the IBO (IBO, 2019, p. 6).

In addition to the support provided to the teachers implementing the program, the IBO offers a tremendous amount of training for leaders charged with managing the program. Administrators, coordinators, and what the IBO calls heads of schools are encouraged to take the core leadership workshops that include, leading for effective teaching and learning that looks at theories of learning; instructional design principles; authentic assessment practices; and the role of teachers in the learning process, leading through an understanding of culture and context that addresses organizational cultures;
beliefs; and behaviors in school that impact learning, leading with a clear vision and strategy that reviews the need for compelling vision setting practices, leadership that explores the leaders views of leadership by examining theory and current research on effective leadership practices, cultivating learning-focused IB world schools that looks at the challenges of leading an IB school, conducting an effective professional learning community that reviews the importance of encouraging collaborative practices among staff, building partnerships with parents that helps the leader to foster positive relationships with parents, leading through an understanding of finance and accounting that looks at the role of the leader to understand and communicate the financing associated with IB, and, finally, well-being and student leadership that assist districts in the creation of an inclusive school environment that celebrates restorative practice; the benefits of working as a community, and positive behaviors. The IBO's objective is to create a framework that considers the role of all participants of the program and provides the necessary levels of supports to ensure the program's success (s).

When implementing an IB program, it is paramount that the school leaders can articulate the program's tenets, its value to the system, and the plans that will be followed in the implementation phase of the process. As suggested by Hoffman and Storz (2018), “Principals are advised to understand the difficulties teachers may face when asked to implement change. It is important that they communicate to the teachers the reasons for the changes, create a plan of action, establish support systems, involve all teachers, and encourage risk-taking by allowing teachers to fail” (p. 218). Additionally, to ease some of the change's discomfort, school leaders must be flexible to those teachers/staff that will find the transition difficult (Hoffman and Storz, 2018).
Whether a school is implementing the PYP, MYP, or DP program, there is a significant shift in the prescriptive instructional programming associated with the program. The IBO provides teachers will develop a specific template that must be adhered to when implementing the plan. As noted by Hoffman and Storz (2018), “However, teachers are required to develop and teach instructional units using a prescribed MYP unit planner format and move toward interdisciplinary instruction and with carefully documented formative and summative assessments” (p. 220). These requirements are documents that must be submitted to the IBO before a school receiving its authorization.

The IBO prescribes the required changes in the instructional planning process through complex unit planning templates that guide the development of overarching questions, assessments, and learning tasks. Considering the IB program's global application, the resources that the IBO provides are philosophical and do not espouse a particular curriculum or material (Hoffman and Storz, 2018). The shift in instructional planning must be monitored and facilitated by a leader who can guide his/her staff to the understanding and processes involved in the implementation of an IB program. In discussion with teachers that were involved in the implementation of an IB program, Hoffman and Storz (2018) noted, “In general, teachers acknowledged the administrative support they received from their principal and the IB coordinator was key to the success of the implementation of this change” (p. 232).
Conclusion

The process of professional development is a multifaceted area of the field of education that is an integral part of school reform and student achievement. It involves effective planning, collaboration with staff, and continuous assessment protocol to ensure proper alignment to the learning activities' goals and intended outcomes (Desimone, 2011).

To effectively implement a PD initiative, the planner(s) should know how to appropriately incorporate adult learning principles, see how a school system works, and the interrelationships of its members and know-how change are executed and sustained within a school district. These principles are relevant to any instructional initiative that requires teachers and administrators to learn, work together for a unified goal, and bring about change to their pedagogical practices. This is what is being asked of the participants of this qualitative case study that seeks to examine teachers' and administrators' perspectives concerning the PD offered by the IB and its impact on teacher practices.
CHAPTER 3

Introduction

The purpose of this qualitative case study examined teacher and administrator perspectives regarding meaningful PD experiences, their experiences with PD offered by the IBO, and the impact, if any, on their approach to teaching. The researcher investigated staffs’ responses at a Long Island school district who are in the process of implementing IB across all grade levels, K-12.

The school district was previously led by a Superintendent of Schools who had prior experience with the IB Programme as a building level administrator, a high school principal in a district with the IB Diploma Programme. The previous superintendent worked directly with the IB Diploma Programme (DP) Coordinator to help run the IB DP Programme and increase the student participation rate. Although the program intends to involve as many students as possible, its philosophy, and the assessment pathways, the IB DP requirements are rigorous and traditionally involves a small portion of the student population.

Even though there is sufficient research on the successful components of professional development and positive adult learning practices, there is not a significant amount of research on teacher's perspectives concerning the IB Program's professional development and its impact on teacher practices. The researcher hopes that this study will add to the literature and broaden the field's understanding of the PD offered by the IBO and teacher's perspectives concerning this work's impact.
This chapter provides the background for the research, the rationale for the study, the approach followed, the research sample and data sources, the data collection and analysis methods, and the study's limitations and delimitations.

**Methods and Procedures**

**Research Questions**

In this study, the researcher has attempted to answer three research questions:

1. What is the impact of professional development offered by the International Baccalaureate (IB) Programme on teachers' pedagogical approach?
2. What are teachers' and administrators' perceptions concerning the International Baccalaureate (IB) Programme's professional development compared to traditional PD programs?
3. What are teachers' and administrators’ perceptions concerning the components of a successful professional development plan?

**Setting**

The study participants consisted of teachers and administrators in a district, grades K-12, on the East End of Long Island that participated in professional development offered by the IB Programme (See Appendix A). The district that the researcher examined consisted of three buildings that have implemented a different component of the IB program (PYP, MYP, or DP). The district consisted of 1,511 students, in grades K-12, with a 98% graduation rate and a 64% Advanced Regents Diploma rate. The student population was comprised of 74% Caucasian, 15% Hispanic, 4% African American, 2% Asian, and 5% Native American. The district employs 135 teachers that service its three buildings: an elementary school (grades K-5), a middle school (grades 6-8), and a high
school (grades 9-12). The district was in the process of implementing the International Baccalaureate Programme: Primary Years Programme (K-5), Middle Years Programme (6-10), and the Diploma Programme (11-12).

To gain insight into the various perspectives of the professionals implementing a different component of the IB Programme, the researcher conducted focus groups of approximately five teachers from each building and interviewed one administrator and the IB Coordinator from each building (See Appendix C). The district was unique because it was the first district on Long Island that implemented the IB program in every setting of the district. The researcher recruited teachers, coordinators, and administrators that have participated in the IB PD activities who participated in either a focus group or an in-depth interview consisting of approximately 60 minutes to determine their perspective concerning their experience (See Appendix E). The sample size was limited to those within the district who have participated in the IB Programme's professional development.

Participants

The study participants were selected based on their participation in the PD offered by the IB program; five teachers from each building were assigned to participate in the focus groups, and the coordinator and an administrator from each building participated in the interviews. The sample included individuals from each building that was in the process of implementing a different IB program (PYP, MYP, DP), which consisted of 21 participants in the study. All participants were tenured employees with more than ten years of teaching experience. The researcher had an equal distribution of males and females participants in the study (See Appendix B).
The sample breakdown for the one on one interviews and focus groups included the following:

N=3 teacher/coordinators (individuals that participated in professional development offered by IB):

- Participant D: Female Elementary (PYP) Coordinator
- Participant E: Female MS (MYP) Coordinator
- Participant F: Female HS (DP) Coordinator

N=3 administrators (individuals that participated in professional development offered by IB and observed teachers implementing lessons designed through the lens of IB):

- Participant A: Male administrator from the Elementary School Building
- Participant B: Female administrator from the Middle School Building
- Participant C: Male administrator from the High School Building

N=14 teachers (individuals that participated in professional development offered by IB):

Group 1 = 5 teachers (elementary educators)

- Participant G: Female Elementary Teacher
- Participant H: Female Elementary Special Education Teacher
- Participant I: Female Elementary Remediation Specialist
- Participant J: Female Elementary Teacher
- Participant K: Female Elementary Teacher

Group 2 = 4 teachers (middle school educators)

- Participant L: Male MS Special Education Teacher
- Participant M: Female MS English Teacher
- Participant N: Female MS Math Teacher
• Participant O: Male MS Science Teacher

Group 3 = 5 teachers (high school educators)
• Participant P: Female HS Science Teacher
• Participant Q: Male HS Art Teacher
• Participant R: Female HS Language Teacher
• Participant S: Male HS PE Teacher
• Participant T: Male HS English Teacher

Data Collection Procedures

This study employed the qualitative research method and the case study design to determine the perspective of teachers concerning the PD offered by the IBO and whether it impacted their pedagogical approach. Various perspectives were gathered by teachers and administrators experiencing different aspects of the program (PYP, MYP, or DP). The researcher conducted focus groups, as well as interviews with teachers, administrators, and IB Coordinators who have participated in the PD offered by the IB Programme to determine their perspective of the initiative and if any shifts occurred in the pedagogical approach. This situation was unique because the district was implementing the IB Programme in all of its grades, and all staff was required to participate in the PD associated with the program.

As Butin (2010) suggested, the qualitative research method is about "words and stories." This method aims to answer the "how and why" questions associated with the study, which aligns with the purpose and research questions identified by the researcher (p. 74). A qualitative research study is needed to determine the phenomenon based on the participants' perspectives (Creswell, 2018). Although there has been some debate
regarding the validity of conducting a qualitative versus a quantitative study, Butin (2010) asserted both methods have a purpose and that “one is not inherently better than another” (p. 76). There is little doubt that it may be preferred to conduct a quantitative study if the researcher is interested in collecting numbers and statistical information. Still, the qualitative method is a preferred study when the researcher is interested in collecting perspectives. As noted by Butin (2010), “Qualitative research methods, by their very nature to attention to nuance and detail, allow for data gathering that can be extremely deep and take into consideration opinions and perspectives that may not initially be visible or obvious” (p. 76).

The methodology chosen for this study was a case study. As suggested by Creswell (2018), “A qualitative case study can be composed to illustrate a unique case, a case that has an unusual interest in and of itself and needs to be described and detailed” (p. 98). The case study method provided the researcher with the framework to adequately investigate teachers' and administrators' perspectives that have participated in the PD offered by the IB program.

According to Creswell (2018), there are three types of case studies that can be explored by a researcher, which is an instrumental case study, collective case study, and intrinsic case study. An instrumental case study is one that “focuses on an issue or concerns and then selects one bounded case to illustrate this issue” (Creswell, 2018, p. 98). In a collective case study, "the inquirer selects multiple case studies to illustrate the issue” (Creswell, 2018, p. 99). An intrinsic case study is one that “presents an unusual or unique situation” (Creswell, 2018, p. 99). As the researcher sought to determine the perspective of teachers and administrators that participated in PD offered by the IB
Programme, the intrinsic case study model was a valid method for this study (Creswell, 2018).

As a result of this qualitative case study, the researcher hoped that suggestions would arise concerning the implementation process associated with the IB Program's PD program and its impact on the pedagogical approach of teachers leading to continuous improvements of the initiative. Consequently, the qualitative research method and the intrinsic case study design was an appropriate methodology for this study.

The researcher used a qualitative method to collect the data gathered through focus groups, direct observations, in-depth one on one interviews of teachers and administrators that have participated in the PD offered by the IB Programme, and documentation related to the implementation of the PD associated with the IB Programme, such as emails and other informational records. According to Creswell (2012), “Based on the general characteristics of qualitative research, qualitative data collection consists of collecting data using forms with general, emerging questions to permit the participants to generate responses; gathering word or image data; and collecting information from a small number of individuals or sites” (p. 205). The methods that the researcher utilized adhered to Creswell’s data collection protocols.

The researcher established interview and focus group protocols that followed Creswell’s model to ensure a uniform structure was applied to every interview conducted in the study. The protocols identified the qualifying information of the interview and/or focus group, such as date, location, participants, provide a brief overview of the study’s intent, and the interview/focus group questions. The interview questions were designed to “invite the interviewee to open up and talk” during the discussion (Creswell, 2018, p.
As Butin (2010) suggested, the interviewer should structure questions that "elicit meaningful and "deep" responses" (p. 97), which was the intent of the researcher.

Due to COVID-19 and the need to maintain appropriate social distancing and personal protective equipment, the interviews and focus groups were conducted using Zoom conference, which were recorded and transcribed using the Zoom software. The one on one interviews consisted of nine questions that addressed the research questions identified by the researcher (See Appendix D). The interviews occurred in the school district that is the study's subject after or before the typical workday. Purposeful sampling was used in this qualitative case study as the “inquirer selects individuals and sites for study because they can purposefully inform an understanding of the research problem and central phenomenon in the study” (Creswell, 2018, p. 158).

The researcher used a qualitative method to collect the data gathered through in-depth one-on-one interviews of coordinators and administrators, focus groups with approximately five teachers from each building, and documents, such as emails, to identify recurring themes and patterns. The study participants included individuals who have participated in the professional development offered by the IB Programme. One-on-one interviews were recorded using the Zoom conferencing software that was uploaded review and transcription. The researcher utilized the data collection and analysis software NVivo to collect and analyze the material contained from interviews, observations, and documents collected throughout the study.

The following data collection steps were followed:
1. The researcher sent out an informed consent form to all prospective participants of the study. Once the consent was received, the researcher sent out the preliminary inquiry to those chosen to participate in the study.

2. A preliminary inquiry was sent, via email, to all participants by the researcher to gather necessary demographic information, such as years of experience, last professional learning activities that they engaged in, and certification areas.

3. Once the preliminary information was gathered, the researcher scheduled the interviews and focus groups based on the staff’s available times to participate in the study. All interviews and/or focus groups were conducted after the typical school day via the Zoom conference software. The researcher was responsible for arranging the times, sending out the electronic invitations, and recording the Zoom conferences.

4. The researcher collected documents, such as emails and informative information, which outlined the PD associated with implementing the IB Programme. The documents were uploaded to the NVivo software for data analysis purposes.

5. All data collected from the focus groups, interviews, and documents were coded in the NVivo software, saved, safeguarded on a flash drive, and access was limited to the individual conducting the study. After three years from the conclusion of the study, all data will be destroyed.

Trustworthiness of the Design

To ensure credibility and reliability in the study, the researcher triangulated the data by reviewing multiple sources, such as the one-on-one interviews, observations, and
other artifacts collected throughout the study. The triangulation of data occurs when a researcher “test one source of data against another, looking for patterns of thought and behavior” (Creswell, 2018, p. 205). The triangulation of data ensures that the researchers' themes and patterns are not isolated but are accurate and representative of the participants in the study. As Creswell (2018) noted, “When qualitative researchers locate evidence to document a code or theme in different sources of data, they are triangulating information and providing validity to their findings” (p. 260). The triangulation of data ensured the trustworthiness of the findings identified by the researcher.

There were some natural limitations to this study. The setting, which was on the East End of Long Island, employed individuals who reside on Long Island, which provided a segregated perspective based on their geographic location. There were also questions regarding the subjectivity of the participants. The PD offered to the staff was voluntary and required the participants' commitment and time, which suggested that there was an intrinsic investment in the program's success, evidenced by changes in their pedagogical practices. Additionally, the researcher was a district-level administrator in the district and was the one conducting the interviews. The researcher's role in the study might have impacted the responses provided as the participants could have felt obligated to give answers that are positive to the PD offered by the IB Programme and the relationship to alter pedagogical practices. An external limitation of the study was that it was conducted in one district. Thus, the study's conditions did not indicate that it would reach the same level of success in a different setting.

**Research Ethics**

During the research, ethical protocols were established to maintain all the
participants' civil rights and privacy. The researcher used a private email to communicate with the participants. The study's purpose was fully communicated to the participants, and participation in the study was entirely voluntary. An informed consent form that outlined the purpose and process followed in the study was distributed and obtained by the participants prior to the study. Fortunately, as the researcher was a district employee, the researcher had access to the site.

The electronic recordings of the interviews and focus groups was password protected, ensuring the participants' privacy. Data was coded, saved, and safeguarded on a flash drive, and access was limited to the individual conducting the study. All precautions were taken to ensure that practices abided by the district's ethical expectations, the Institutional Review Board (IRB), and the privacy of all participants involved in the study were valued, as well as permissions required to conduct the study were obtained.

**Data Analysis Approach**

When the interviews and focus groups were completed, the recordings were transcribed using the Zoom software, which has a transcribing feature built into the program at an additional cost. The data was analyzed according to the methods identified by Creswell (2018), which included a logical organization of the data, a preliminary review of the data to gather a general sense, coding to determine themes and the categorization of data, the interpretation component that reviewed the information for meaning and relationship to the central phenomenon that was being studied in the case study, the identification of patterns and themes, and the findings that resulted from the data analysis.
Once all the data was collected, the information was uploaded to the NVivo software. The researcher established the rules that identified the coding of the data. The coding of data is a process that is used to segment and label text to form descriptions and identify broad themes found in the data (Creswell, 2018). According to Creswell (2018), “The object of the coding process is to make sense out of text data, divide it into text or image segments, label the segments with codes, examine codes for overlap and redundancy, and collapse these codes into broad themes. Thus, this is the inductive process of narrowing data into a few themes” (p. 243). The researcher reviewed the themes identified through the coding process to determine correlation with the conceptual framework designed by the researcher.

Once all the data was collected and appropriately coded, the researcher triangulated the data based on the various data sources. Triangulation of data was conducted based on the one on one interviews, emails, meeting presentations, and notes collected by the researcher regarding observations of the implementation process. Creswell (2018) identified triangulation as “the process of corroborating evidence from different methods of data collection” (p. 259). The researcher's role in the triangulation of data was to examine each information source to find supporting evidence of a reoccurring theme, which will ensure that the findings of the study are accurate as it relies upon multiple sources of information to draw its conclusions (Creswell, 2018). Once the data was triangulated, recurring themes should emerge to help the researcher make appropriate conclusions regarding teachers' and administrators' perspectives concerning the PD offered by the IB Programme and their pedagogical approaches.
The researcher determined the perspective of teachers and administrators as it related to the PD offered by the IB Programme and its impact on their pedagogical practices. The final step in the data analysis process included synthesizing the information and drawing appropriate conclusions.

**Researcher Role**

The researcher attempted to understand teachers' perceptions concerning effective PD practices compared to their experience with PD offered by the IB Programme at a suburban school district that was in the process of implementing IB at all levels. The researcher examined the themes that emerged from interviews, focus groups, and documents that outlined the district-wide implementation of the IB Programme. This study's findings might help guide PD planners to develop purposeful learning activities, have the proper application to classroom practices, and align with district goals.

The researcher presumed that all participants in the study provided honest responses. Additionally, the researcher acknowledged that there were various levels of acceptance and comfort toward the PD offered by IB and its impact on changing educators’ pedagogical approach. Thus, the researcher took a constructivist view concerning teachers' perspectives that participated in the study and considered the individual attitudes and biases that might have existed in the participants.

Lastly, as the researcher was a district-level administrator in the district that was being studied, special attention had to be given to establishing procedures that ensured the participants were comfortable, felt safe to express their opinions honestly, were aware of the level of confidentiality that would be observed during the study, and the processes that would be followed safeguarding the recordings of the interviews and the plan to
destroy the materials following the study. The explanation of the processes that would be followed, the anonymity of the participants within the study, and the researcher's unbiased role should have alleviated the participants' concerns.

**Conclusion**

This qualitative case study was designed to determine teacher and administrator perspectives concerning the IB Program's PD and its impact on their pedagogical practices. As the researcher was studying the implementation of a PD initiative in one setting, a case study was the most appropriate design. This design attempts to understand a central phenomenon that is unique to a particular setting or group of people (Creswell, 2018). The researcher collected data from one-on-one interviews with teachers and administrators, observations, focus groups, and collected documents to determine the impact of the PD offered by the IB Programme on teacher pedagogical practices. The researcher identified potential limitations and delimitations of the study and utilized different data sources to account for these concerns.

The findings of this qualitative case study will help to inform the field on the benefits of providing PD offered by the IB Programme and how this initiative can result in systemic pedagogical changes throughout a system leading to student achievement.
CHAPTER 4

Introduction

The purpose of this qualitative case study was to examine teacher and administrator perspectives regarding meaningful PD experiences, their experiences with PD offered by the IBO, and the impact, if any, on their approach to teaching. This study utilized three focus groups of teacher-participants, three individual interviews with the IB coordinator of each program, three individual interviews with an administrator from each building that was in the process of implementing the IB Programme, as well as a content analysis of the material that was distributed to the staff regarding the IB Programme and its professional development offerings. This chapter provides an analysis of the material collected according to the themes that emerged based on the context of the research questions selected for the study.

Three overarching themes emerged from the analysis of the data collected from the study. The first major theme to emerge was the professional development and teacher practices related to the professional development offered by the International Baccalaureate Programme. Within the first overarching theme, two sub-themes emerged that included new approaches and student learning. The second overarching theme to emerge was PD offered by the IBO versus traditional PD. Within the second overarching theme, three sub-themes emerged: methodology versus content, student-directed learning practices, and teacher validation. The third overarching theme that emerged was ideal professional development. Within the third overarching theme, two sub-themes emerged that included purpose and sustainability and staff involvement (Table 1). This chapter
concludes with a discussion regarding the findings according to the research questions of the study.

**Table 1**

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<tr>
<th>Overarching Theme and Sub-themes</th>
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<tr>
<td><strong>Overarching Theme</strong></td>
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<tr>
<td>Professional Development and Teacher Practices</td>
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<tr>
<td>PD offered by the IBO versus Traditional PD</td>
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<tr>
<td>Ideal Professional Development</td>
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**Findings**

**Theme 1: Professional Development and Teacher Practices**

The first overarching theme that emerged from the qualitative data analysis was professional development and teacher practices. Each of the participants shared their views concerning the impact of the International Baccalaureate Programme's professional development on their teaching practices. Within the theme of professional development and teacher practices, two sub-themes emerged from the collected data. The first sub-theme was the introduction of new instructional approaches. The second sub-theme was student learning. The two sub-themes represented teachers' and administrators' perspectives concerning the impact of the International Baccalaureate Programme's professional development on the pedagogical approach of teachers.
New Approaches

The first sub-theme to emerge regarding professional development and teacher practices from the study's collected data was the introduction to new instructional approaches. Participants from the focus groups and individual interviews were asked whether they found the professional development offered by the International Baccalaureate Organization helpful and changed their pedagogical approach. Most of the participants found that the IBO's PD was useful and that it allowed them to review their instructional practices differently, from the lens of the IB approach.

There was a consensus from the coordinators, administrators, and teachers that the IBO's PD introduced the participants to different pedagogical approaches. Participant A (Administrator), who has served as a coordinator and now as an administrator, confirmed that the PD offered by the IBO has been extremely helpful to staff as it introduced them to new formats to connect with students by illustrating the following:

As a coordinator, I had one professional development session that focused on connecting students from different areas of the world through blogs and various social media platforms to reach your students on a different level. And some of the teachers I was working with really took to this new way of communication, which broadened the students' language skills while introducing them to different, global perspectives. To this day, I know that the teachers still utilize this communication technique, especially during the age of COVID, which has limited in-person interactions and experiences.

Participant B, an administrator that has led the inception and implementation of the IB Programme in her building, recalled a time that one of her teachers incorporated the use of a group project to demonstrate learning in her students, which was a direct result of the material that the teacher learned from an IB workshop on authentic assessments. The participant stated the "teacher was able to design an actual authentic assessment of the students' application of the math that they learned beyond just the paper
and pencil test." Additionally, this participant stated one of the most significant changes in her colleagues during the process that they follow when constructing a unit is now based on a "provocation and statement of inquiry," which is at the core of the IB pedagogical philosophy.

According to Participant E (Coordinator), "I have watched my colleagues change their perspectives and approaches to teaching, especially in content areas that traditionally conform to accepted teaching styles." The example that the participant recounted involved a geometry lesson. This lesson, concerning maps, is usually done independently and has now evolved into a collaborative lesson. The participant stated:

"This is a geometry project that the teacher would have the kids do on their own. His response now is that it's a group project. The teacher makes them collaborate and learn the benefits of collaboration and working together towards a collective goal. Now I'm making them work with one another and learn from one another. Although the participant stated that the teacher expressed some initial resistance to the idea, the teacher eventually came around and began to include this approach as part of the process. She went on to say that “we see teachers incorporating teaching techniques once they see the benefits in their students.”

Participant D (Coordinator) discussed a change in the approach of her colleagues immediately following their professional development experience with the IB Programme stating, "The week after their professional development, the whole grade got together to review how they can incorporate speakers and elements of the IB unit planning model to enrich their planning process." Simultaneously, other grades began to discuss ways to plan out methods that visually incorporated the learner profile attributes in their classrooms. Most of the participants expressed the intention to make the IB
approach a staple in their environments' visual representation by adding artwork around
the room that illustrated the IB learner traits.

A teacher, Participant L (Group 2), commented that he was not familiar with the
concept of project-based learning, but because of the PD offered by the IB Programme,
he was more comfortable with the process. The participant recounted the following
concerning the implementation of project-based instruction into his practices:

Before going to the PD, I was aware of project-based learning benefits, but after I
returned from the IB training, I was excited to give it a try. I got together with a
colleague in my building who was already doing it and worked with him to design
my first project-based unit. Together we created the overarching question,
authentic assignments, and the process that students will use to answer the
question. It was a rewarding experience for my students and me and is now part of
my process.

The concept of adjusting practice was echoed by most participants who felt that the PD
training enticed them to review their approach to incorporate more significant student
responses. Another participant, Participant M (Group 2), reiterated the importance of this
concept by stating, "As a result of the PD offered by IB, I spend more time with the
design of my assessments to ensure that students have sufficient time to reflect on their
product, make modifications, and understand the significance of the assignment."

Despite the positive response of most of the participants of the study, Participant
N (Group 2), a well-respected teacher with 13 years of experience, expressed frustration
regarding the professional development, stating "it had little application to what I do in
the classroom." She said that she appreciated the IB program's time and tenets but failed
to see "the direct connection to what she does in the classroom."

The content analysis of the material used and distributed to staff by the district,
showed that there was an emphasis by the administrators and coordinators to demonstrate
the importance of the introduction and incorporation of new instructional approaches to the teaching practices, which is a sentiment that the International Baccalaureate Programme vigorously enforces.

**Student Learning**

The second sub-theme to emerge regarding professional development and teacher practices was its impact on student learning. Participants across the individual interviews and the focus groups were asked to respond to the question concerning the impact of the professional development offered on their colleagues' pedagogical practices. Most participants expressed that they saw a slight difference in practice but a significant difference in the thinking applied to their practice.

Participant F (Coordinator), a well-respected educator with over 30 years of experience in teaching, expressed the change in teachers concerning their view of the process applied to the lesson's construct. The participant stated that "the teachers are looking at dissecting the micro parts of a lesson to engage the students on the significance of each component of the process." The focus is on every component of the lesson and applying it to their own lives. Additionally, the Participant expressed that teachers who have experienced the IB training are focusing on providing learning options for students, stating:

So, the International Baccalaureate Programme endorses educators providing options for kids, but I was so impressed with how our teachers have embraced this principle. I see it applied to lessons, units, and even assessments. Our teachers who have participated in the training are also introducing it to their colleagues in departmental meetings, which is exciting to see.

Participant B (Coordinator) reinforced the idea of choice in the program by applying this idea in assessments, asserting "students are celebrated for their strengths; whether it is art,
music, or writing each child is provided options to demonstrate their learning by choosing an assessment vehicle that may align with his or her strengths." This is the significant difference that is incorporated into the IB PD and is impactful to student learning as "students are in control of their learning" (Participant B).

Concerning assessments, Participant B (Administrator) commented on the shift that teachers in the building are beginning to explore regarding the design of rubrics that are utilized and encouraged by the International Baccalaureate Organization. The Participant summarized the exploration and conversation that teachers are having in the building by stating:

Currently, we are looking at the IBO rubrics. This is a considerable conversation and goal for our building. We want to incorporate the rubrics' language into our classrooms as it emphasizes the need for feedback, reflection, and process. It reduces the emphasis on the numeric grade that our students are used to and makes the feedback, reflection, and growth the assessment's goal.

Participant M (Group 2), a well-respected educator with 14 years of experience, agreed with the administration and commented “I believe that everyone is looking closely at the way we assess our students and the vehicles used for the assessment.”

Additionally, in regards to student learning and the role the PD offered by IB plays, Participant F (Coordinator) commented that she feels that the change in assessment practices are positively impacting the way students view their performance and importance of the evaluative process, she stated it “Is beneficial for them because they might not say, oh, look at me I've achieved this much, but they can articulate what they've done.” Participant E (Coordinator) expanded on this idea of assessment and student achievement by stating:

True learning occurs when you can articulate where you are and what you've done to get through the layers that lead to authentic learning. It's not the product that is
important, but the process. If students are engaged in the process, and they're reflecting, taking the feedback, and they're doing what they need to do, then I think you're going to see achievement and growth over time.

Participant D (Coordinator) echoed this sentiment, saying "our task as coordinators is to encourage the process of awareness; awareness from the teachers of their role as facilitators and awareness of students concerning the role in their learning."

As a result of the IBO's professional development, Participant G (Group 1), a well-respected 17-year veteran, began to realize a change in her approach to planning and delivering new material. The educator started to see the process differently, and the teacher's role transformed into "a facilitator that provided students with experiences that lead to choices." The professional development experience has changed "my way of thinking about myself as a teacher." Although Participant H (Group 1) agreed with this sentiment, she commented that the change was more of a "shift in practice instead of recreating my teaching philosophy, but this change can be fundamental to how students learn."

Although the response was very positive, some educators who attended the IB's professional development did not feel that their role was equally represented or considered during the learning activities. Participant I (Group 1), a well-respected educator who has served many roles in the district and acted as a remediation specialist, expressed that she felt that the training did not account for her role in the program. The Participant discussed her impressions of the PD:

During the professional development, I asked if the presenter could identify the role of support personnel in the building. The response was support, which left me and others with a sense of discomfort and discontent. So, support? When we wanted to go back and implement things that we learned, I felt that it was not our role. Additionally, I asked the question again, and the response was that we are there to support the teachers.
This sentiment was echoed by another support teacher, Participant L (Group 2), a well-respected educator with 12 years of experience that stated that he too felt that he had to "identify his role in the process" as he was dissatisfied with the lack of direction that the facilitator provided.

During the content analysis of the material that was shared with the staff concerning the professional development offerings of the IB Programme, the documents demonstrated that the IBO encourages staff to adopt a different approach to student learning as it emphasized "the goal of IB is to help students learn how to learn" (IBO, MYP Presentation, 2015). The emphasis is on student learning as the critical factor when developing lessons, units, and instructional activities.

**Theme 2: PD offered by the IBO versus Traditional PD**

The second overarching theme that emerged from the qualitative data analysis was the professional development offered by the International Baccalaureate Programme versus traditional professional development. Each of the participants shared their views concerning the PD provided by the IBO compared to traditional PD experiences. Within the theme of the International Baccalaureate Programme's professional development versus traditional professional development, three sub-themes emerged from the collected data. The first sub-theme was the focus on methodology versus content. The second sub-theme was student-directed learning practices. The final sub-theme was teacher validation. The three sub-themes represent teachers' and administrators' perspectives concerning the International Baccalaureate Programme's professional development versus traditional professional development.
**Methodology versus Content**

The first sub-theme to emerge regarding the professional development offered by the International Baccalaureate Programme versus traditional professional development, from the collected data, was the conversation concerning methodology versus content. Participants from the focus groups and individual interviews were asked their perspectives concerning the PD offered by the IBO compared to traditional PD experiences and its role in the school district. All the participants identified a significant difference in the IB professional development experiences versus regular PD activities.

Most notably, the participants focused much of their attention on the difference in the focus of the PD sessions, which seems to be less on content and more on philosophy and methodological practices. Participant E (Coordinator) commented “the professional development sessions offered by the IBO have a different view of assessments.” She goes on to say:

> Typically, students have a nonchalant view of assessments because they don't see their value. Students usually say, oh, well, here's the end. I'm done; I'm moving on. And that's not the purpose of assessments. It's something that you should be learning from through feedback and the revision process. It is not about the content so much about the process and growth that comes from that process.

Participant Q (Group 3), a well-respected educator with 12 years of experience, echoed this sentiment by commenting that “assessments should go beyond the walls of the classroom and focus on how students are learning and internalizing that learning.” Additionally, Participant Q (Group 3) expressed that he felt that the PD offered by IB was “geared towards teaching their philosophy of education. The difference is the use of IB terms and approaches as it requires more analysis on why students are learning a concept versus what they produce.”
Additionally, Participant A (Administrator) reiterated this idea from the perspective of the student, commenting, “I love how the IB program takes what a student has already learned and gives them the ability to dive deeper into what their teachers are presenting to them versus the teacher saying this is what you're learning.” Participant H (Group 1) agreed and provided the following observation:

This process gives students the ability to focus on their learning. Overall, the IBO's PD reminds us as educators that there is always that voice that reminds us that we can make this better. There's a better way to do this! Education needs to change in our country and our society. It's different than just teaching students to memorize something (content); we are coming up with plans that lead our students to their own solutions.

Participant A (Administrator) went on to say “the program emphasizes the need to focus on the methods that are going to be beneficial to students and taking the necessary time to understand the best approach instead of just checking the box that you covered that subject or assignment.”

Participant C (Administrator), a well-liked and respected administrator with more than 10 years of teaching experience, commented:

The instructional shift that we are asking teachers to take is difficult. We ask staff to be open-minded, take risks, challenge their thinking, and let go of some control to the teaching process, but kids learn differently today than they did in the past. We use inquiry to develop our practice better, so seeing it from the very beginning stages. It is a learning curve for all involved, and I'd instead take our time to develop methods that support student learning.

Participant G (Group 1) agreed with this sentiment and commented “I think it makes them more effective learners.” She went on to say that “It gives a name to the thing that they need to do to be successful. We are guiding them to inquiry about the steps they need to take to ensure their own success.”

Concerning the concept of methodology versus content, Participant F (Coordinator) reiterated the points made by her colleagues and expressed that the
"expectations of the IB Programme are different from what teachers are used to, especially when it comes to methodology." The coordinator went on to say:

IB encourages teachers to focus on the nuts and bolts of what kids should be learning and creating, which is more of a skills-based learning approach than a content-based. So, what's happening is, instead of covering a tremendous amount of breadth, the depth of the study is emphasized. I believe that it is a shift in the way we're teaching and honestly in conversations with my colleagues throughout the years.

Participant A (Coordinator) added to this conceptual shift when she stated “our teachers are learning the skills and tools to transfer them to students so that students can be equipped to go out and become independent thinkers.”

Participant F (Coordinator) believes that the change in professional development activities' focus will lead to positive student achievement. The Participant equates the professional learning process to "the act of improving standards and the delivery methods that teachers follow to meet those standards." Participant B (Administrator) believes that the focus on instruction delivery is "building excitement around high standards, which is allowing our teachers to have real conversations around curriculum, methodology, and best practices that improve student performance."

Additionally, Participant R (Group 3), a well-respected teacher with 14 years of experience, compared the PD offered by the IB Programme as a "process that forces the teacher out of his or her comfort zone and requires us to revisit the instructional process from the perspective of students, which makes us look at the validity of every aspect of a lesson, unit, and assessments." Participant A (Coordinator) explains the process as a "constant progression of learning; it is a constant evolution to reach greater heights for the betterment of our students." The Participant elaborates further by stating:

Educators are continually learning. You're regularly doing, you're continually evolving, you're continuously building your craft, and you're often trying to bring
these practices to the students. One person in the IB world articulated it this way, Do you want to get Laser Eye Surgery from the guy that, you know, learned 20 years ago and hasn't been to any training since, or do you want to go to the guy that frequently is going and learning new techniques and learning new skills and how to bring these back to his patients to make it better for them.

Most of the participants agreed that effective educators continuously work to implement a proven methodology to be effective with students.

Despite the positive response from most participants, some of the teachers expressed concern about the focus on methodology and not on content. Participant H (Group 1) communicated that "The challenge for me was that I did not think that the PD offered by the IB Programme lined up with the New York State Standards as it did not focus on the content." Although she conveyed that she appreciated the discussion and focused on methodology, she expressed a struggle "with trying to figure out how she would fit the principles of IB into her need to focus on the New York State Standards."

Participant P (Group 3) reiterated this point with the following comments:

Although I liked the experience, I had a difficult time finding real meaning in the sessions. As someone who has taught Advanced Placement courses and experienced multiple professional developments from the College Board, I did not see a massive difference in how IB reviewed the material versus the way I have learned it in the past. On the contrary, I thought that the College Board provided more support regarding resources for the content.

Although the analysis of the collected data demonstrated that most of the participants felt that there was great value in the PD offered by the IB Programme, some missed the emphasis on content and its application to what they do in the classroom.

The individual interviews with administrators/coordinators and the review of the content material shared with the participants emphasized the shift from content to methodology during the IB Program PD program. According to the IBO (2017), the IB intends to look "beyond the disciplines" and focuses on the "approaches to learning,"

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which concentrates on the methodology behind the content. The analysis of the collected data from the focus groups demonstrated that some participants did not welcome the shift from content to methodology as it failed to address their needs to meet state prescribed learning standards.

**Student-Directed Learning Practices**

The second sub-theme to emerge regarding professional development offered by the IBO versus traditional professional development was student-directed learning practices. Participants from all three focus groups and individual interviews were asked their perspectives concerning the International Baccalaureate Program’s role in the district. Most of the participants expressed that the program helped establish student-directed learning environments in their classrooms and buildings.

There was consensus amongst the participants that the IB Programme helped foster a student-centered learning environment among students and teachers by focusing on the student as the integral component of the instructional planning process. Participant A (Coordinator) recalled a time when her building was in their investigation phase of the program and did a school visit of an established program stating:

> We were so impressed by the kids, and we were so impressed by the teacher who did almost nothing the entire period. We couldn’t believe the level of conversation that the students could have without being directed and questioned. The teacher’s role was to facilitate the discussion. The teacher threw out a couple of things. The kids ran with it, and you could see that this was something they were accustomed to. They were comfortable with the process that the teacher generated.

Participant K (Group 1) that accompanied the team on this school visit, commented that she was very impressed with the "ownership that the students took in their learning and the success or failure of the conversation." Additionally, Participant I (Group 1), another educator that attended the school visit, commented:
I was impressed that the teacher did other things with the students; she would call kids out and talk to them about different writing assignments and things. The teacher then continued the rest of the class conducting mini conferences with the students about their learning, individual growth, and personal learning objectives. It was one of the most formative classroom periods that I have witnessed as an educator. It was inspiring and intimidating at the same time.

This practice that the teacher referred to as "conference time" was defined by most participants who witnessed it as a time for the student, absent of clearly delineated objectives yet meaningful.

According to Participant M (Group 2), "the PD offered by the IB program reinforces the 10 IB learner profiles (inquirers, knowledgeable, thinkers, communicators, principled, open-minded, caring, risk-takers, balanced, and reflective) into their sessions." This idea was reiterated by most of the participants that attended the PD offered by the IB program. Participant D (Coordinator) continued this thought by stating that "the program encouraged the participants to emulate the learner profiles into their instructional plans, which helps students to add purpose to their learning." Most of the participants' sentiment was that the PD offered by the IB program encouraged teachers to develop a learning environment that made students become more independent learners. Participant S (Group 3) added that "IB asked students to take more ownership in their learning and to approach their learning with an inquiry mindset and to be more globally aware."

Participant G (Group 1) reflected on the PD offered by the IB and commented that "the sessions were administered in the same fashion that they want us to run our classes." She elaborated by explaining the facilitators did not answer the questions asked by participants. Still, the response was "what do you think" as the facilitator responded to questions with an inquiry response. Participant H (Group 1), who attended the same PD sessions, agreed and commented:
Teachers were forced to figure out the responses on their own. They were encouraged to communicate with one another, but the reward came from discovering and realizing that we can figure out the response. Although this process may take more time, it is more rewarding than just being told the answer. This was what the facilitators wanted us to realize for our students.

The focus group participants agreed that this was one of the most critical aspects of the PD sessions, which can be one of the most challenging pieces that teachers may try to hold onto as it requires them to release control. Participant L (Group 2) commented that this was a complicated process for him as he felt that "as the teacher, we are supposed to have the answers, ultimately, in the end, for kids that go through this process we are just guiding them, which will take some time to get used to."

In regards to the student's awareness and ownership of their learning, Participant H (Group 1) elaborated on this concept by introducing the problem-solving skill as an integral aspect of the learning process, stating, "It is the role of educators to introduce procedures that help students to guide their own learning and find answers without us constantly giving them everything that they need." Participant M (Group 3) agreed with this position and stated that "we must feel comfortable allowing students the time to struggle through the discovery process to encourage independent thought and growth that will last." Most of the participants agreed that students must learn to "think for themselves."

Participant A (Administrator) expounded on the concept of independent learners by stating that “the goal for teachers is to get students to do more for themselves.” Most of the participants agreed that this should be the focus of their planning sessions. The coordinator of one of the programs, Participant D, commented:

I believe that the program is successful because it pushes teachers to rethink their planning and delivery methods by making it all about the students. It strives to
make this process an integral component of everything they do, especially when it comes to developing and designing their professional development sessions and long-term planning.

The three coordinators and administrators agreed that implementing this change is one of the program's most critical components. Participant B (Administrator) commented that the PD offered by the IB Programme is the "glue that keeps the program together and helps to keep the ship steered forward." The coordinator in the same building, Participant E, agreed with the administrator and elaborated on the idea by stating:

My role is to meet the teachers where they are and give them what they need to succeed with this process. Whatever it is, if you need help learning how to implement the learner profile, we're going to provide that assistance. And even if you're like, I'm nervous about this; I'm going to want to try one thing. To be successful, we have to embrace risk-takers and continue to be there for the support that they need.

The administrators' and coordinators' consensus were that teachers were being asked to recreate their approach, and some may have difficulties with this endeavor. Participant E expressed that "we intend to support all the efforts of our teachers, even when they try something and it is not successful as we need to continue to water the green grass to ensure continued growth and vibrancy."

The other aspect mentioned concerning encouraging students to direct their learning was the students' response to this new process. The overall response from the teachers that participated in the focus group was positive. Participant M (Group 2) expressed that the students were "having fun with the new focus of our lessons." She continued by stating that "it is our job to make learning fun, meaningful, and help prepare students for what they will experience throughout their education." Most of the teacher participants expressed that the PD sessions offered by the IB program was "invigorating, uplifting, energizing, and helped to recharge their teaching batteries."
Considering the change to a student-driven learning environment, most participants expressed that they began to challenge their own thinking and practices around their instructional practices. Some of the participants suggested that through lessons and the struggling with this process. Participant R (Group 3) commented that the process "is a lot more open-ended, and the students and myself struggled with this change." The participant went on to say, "The PD reminded me of all the many practices that I need to bring into my own classroom to make sure that I encourage my students to become independent learners."

The individual interviews with administrators/coordinators, the focus groups, and the review of the content material shared with the participants reinforced the notion that the IB program's PD urges participants to alter their thinking and instructional practices to emphasize student-directed learning practices. Whether in the planning, delivery, and expectations that are part of the instructional programming, most of the participants reiterated the importance of placing the student as the focus of their process. The IBO, in its 2017 presentation concerning the history of IB, reinforces the idea of student choice, child-centered education, and the introduction of multiple perspectives as the foundation of its framework (IBO, 2017, History of IB Presentation). Despite some discomfort concerning this shift, expressed by some of the teachers who participated in the focus group, most of the participants agreed that this change in process is essential to students' growth.

**Teacher Validation**

The third sub-theme to emerge regarding professional development offered by the IBO versus traditional professional development was teacher professional validation from the collected data. Participants from all three focus groups and individual interviews were
asked their perspectives concerning the role of the PD offered by the International Baccalaureate Program. Most of the participants focused on the differences in the IB Program's PD, its benefits versus traditional PD experiences.

One recurring comment from the participants was that the IB Program's PD was very rigorous, which was reinforced by the format of the PD sessions. Traditionally, participants travel to a different state and city to participate in the training, which seems adventurous but are surprised to realize that the sessions' format is all day and may include evening activities associated with the sessions. Participant F (Coordinator) reminisced about some of the conversations that she had with her colleagues immediately coming back from the training and provided the following insight:

Initially, I believe that teachers were excited to go to the IB Program PD program as it allowed them to travel to different cities, such as Houston, Tampa Bay, Atlanta, and one participant was even scheduled to go to Ireland before it was canceled. Still, upon their return, they had a slightly different perception of the activity. The sessions are long, challenging, and usually last all day with evening outings with participants. IB makes sure to utilize every minute of your three-day training to provide meaningful growth opportunities.

This sentiment was echoed by Participant R (Group 3), who stated he "felt overwhelmed at the end of the first night." He shared he was in bed asleep immediately following the evening event. He went on to say, "I was physically and mentally exhausted as the IB provides packed days for us, and it is filled with concepts that I was not familiar with that required me to think."

The other difference expressed by most of the participants was that the PD offered by the IB Programme is very different from traditional learning activities that they had experienced in the past. Because the IB is a global Programme, the IBO chooses locations central to a particular region of the United States to be held anywhere for three
consecutive days. Additionally, the PD workshops run in cycles and are in high demand, which invites participants from all over the country and even the world. According to most of the participants, this is one of the significant reasons the IB does not focus on the content. Still, methodology as the content and standards can be very different from state to state or from country to country, but as Participant B (Administrator) articulated this idea:

The focus of the IB PD sessions is that they focus on learning philosophy, adult learning practices, and best instructional practices. The sessions intend to build teachers’ capacity concerning how students learn and leverage the practices to get to the educational goals that we set for our students.

The Participant went on to say that “we are taught through specific modeling techniques concerning learning theories and best practices to present in the classroom.” Participant N (Group 2) elaborated on this concept by stating that “IB had us go through every step that the students would do and present our projects at the end as we would expect from our students.” Most of the participants expressed that this was one of the most beneficial aspects of the sessions as they were expected to learn and immediately apply their learning.

Additionally, Participants expressed that IB stressed the importance of the continuous growth of teachers. Participants B (Administrator) commented that this was one of the best things that she liked about the IB Programme, commenting:

Unlike some PD sessions that introduce a technique of a revision to a curriculum that applies to a summative assessment, IB stressed the need for teachers to continuously look at their practice, the way students learn, and the benefits of systematic classroom modifications that can have a significant, positive impact on the way students interact with their learning.

Participant C (Administrator) expressed a similar sentiment, stating that "IB requires districts to continue the investment in teachers through ongoing professional
development, whether internal; through the use of professional learning communities, and external opportunities." The Participants stressed this is one of the basic tenets of the IB Programme, which is student growth starts with building teachers' capacity. Participant C (Administrator) continued this thought by stating "the IB Programme is not just about students, but the teachers as well. Our teachers feel that they are a part of something different and important that can greatly impact students and our whole school."

Participant F (Coordinator) related this process to the development of a "true collaborative approach. It's turning teachers into real colleagues that are now talking about instruction and different practices." Most of the participants expressed that the conversations in the schools, within departments, at faculty meetings are slowly building a team approach to implementing the IB Programme. Participant D (Coordinator) commented:

The IB Programme is built to function as a team approach. Everyone must have a role, from the Coordinator, Head of Schools (Building Administrator), Superintendent of Schools, Board of Education members, to each professional in the building; everyone must understand IB and its purpose. The unified team approach is what makes the IB Programme work.

The concept of the team approach was reiterated by most of the study participants as they stressed the importance of everyone in the system understanding the purpose, philosophy, and expectations of the IB Programme as it relates to the instructional program and the overall culture of a building. Additionally, Participant K (Group 1) expressed that she felt that the PD offered by IB helps to "align the curriculum for the students as it introduces common vocabulary, concepts, and the approach used by teachers across the entire district, which will, eventually, lead to student growth."

The idea of collaboration is at the foundation of the IB approach. Participant A (Administrator) commented, “The role of administrators and coordinators of the program
is to establish internal procedures that encourage collaboration between our teachers. We have to find out what is needed, what is available, and provide the means to make that connection.” Participant E (Coordinator) took this concept even further, stating,

We have to encourage our teachers to step outside of their comfort zone to talk with one another about instructional strategies, materials, and successful approaches. Also, we ask our teachers to continue their communications with the greater IB community outside of our district to gain insights on what others are doing and their perspectives that have helped us expand our understanding and appreciation for the program.

Most of the participants expressed that it is nice to have that outside connection.

Participant J (Group 1) commented “it is nice to be able to bounce ideas off of people outside of your immediate circle as you can learn from their unique perspectives.”

Participant O (Group 2) remarked “I have made connections with colleagues across the country that I still communicate with today, which has helped me tremendously with the implementation process and making myself a better educator.”

The idea of collaborating with educators from other districts across the country was a benefit identified by most of the participants. Participant C (Administrator) shared,

The ability to collaborate with like-minded individuals on the IB spectrum and reach out to international IB schools to gain insights is outstanding. We are limited to collaboration with schools and educators around our vicinity, Long Island, but we are now connected to the IB world.

Participant E (Coordinator) expounded on this idea by stating, "The difference between the IBO PD and other training is the collaboration across districts, states, and even countries. Is it great to collaborate with a teacher or principal from another state or another country and have the common thread be IB." Most of the participants expressed the idea that the IBO establishes a community of learners encouraged to work with one another to grow and help students reach their most significant potential.
(Group 3) commented that she keeps in touch with the facilitator of one of her sessions to bounce ideas off and provide insights into units that encourage independent thought.

Most of the participants agreed with the idea that the IBO helps those that participate in their PD and program establish a network of resources and support that reach outside of their internal system. Through the IB infrastructure, teachers, administrators, and coordinators stay connected and have a space to collaborate.

Participant E (Coordinator) commented that IB develops "a network of people that are encouraged to communicate, share resources, and provide assistance throughout the implementation process." Participant S (Group 3) expressed that "we never felt alone in this process as there is always someone out there that can provide us with suggestions."

Another essential concept expressed by most of the participants was the notion that the PD offered by the IB helped teachers to feel validated. Participant M (Group 2) commented that sending teachers to the PD provided by the IB Programme "makes you feel validated, as a teacher, like my district is investing in me and not every district would make that investment in their staff." Another teacher, Participant I (Group 1), echoed this sentiment with the following statement:

We felt validated as professionals being asked to go and get this intense training. The district spent money on us for a plane ticket and a hotel and trusted that we would learn something outstanding to bring back. We just felt valued as professionals, being able to go and have this experience. It was uplifting to us and our entire building.

Another participant, Participant S (Group 3), commented that the IB PD experience made teachers feel that we "are worthy and an investment in the future of the children, in the future growth of the district, and we are the individuals that will bring about positive change in our kids." Overall, the participants' perception was one of gratitude and
validation to the importance of their work as educators and their contribution to the success of the program and the growth of students. As expressed by Participant L (Group 2), "Being a part of the IB training gave me the impression that I was an integral part of the team and that the district valued my professional development and me as a person."

Participant I (Group 1) commented that I believe summarized the intent of the PD offered by the IB Programme by stating, "It was nice to see that the district was willing to put the time and support into its teachers, because if we don't, how will we expect our students to grow if we're not growing ourselves?" Participant L (Group 2) also commented that being with other teachers from around the country, exploring the same concepts, provides him with the incentive and the impression that "you can do it."

Most of the participants agreed that another impact of the district's "investment" in the staff to attend the IB Program PD program was that it had a positive effect on each building’s culture. Teachers expressed that those that participated in, and even those that did not have the opportunity to join in yet, felt that the district helped to establish a collegial and supportive environment by providing staff with the options for training, encouraging follow-up activities, and continuing to support the personal development of its staff. Participant P (Group 3) commented:

As a result of introducing the IB PD program, I have seen a positive change in the building. Teachers are more engaged in a discussion regarding lessons, units, and even assessments, unlike high school teachers. We are all positive about the changes in our curriculum, our approach, and the school's future. It is exhilarating as we are a part of something bigger than what happens in our classrooms.

Additionally, Participant C (Administrator) commented that "IB forces districts to take a close look at their practices, what they believe in, and their allocation stream to ensure that it is focused on every component that leads to student progress."
Despite all the participants' positive perceptions concerning the PD offered by the IB Programme and its impact on the building and staff, some of the participants identified concerns that were communicated to them throughout the process. Participant B (Administrator) stated "one major obstacle that we faced was people's natural resistance to change." She went on to say that "some of my colleagues are reluctant to give up what they know and invest the time and energy it will take to introduce material in a different fashion." Another individual, Participant E (Coordinator), identified traveling as an obstacle to the PD offered by the IB Programme, stating, "Some participants have been reluctant to attend the PD sessions as it will require them to travel and leave their family for three to four days, which may be defined as an undue burden on their family."

Although not for our district, which has been generous to provide the necessary resources for the implementation of IB, one participant mentioned that "it can be a problem for districts that cannot afford the PD and the annual renewal fees associated with the program."

The individual interviews with administrators/coordinators, the focus groups, and the review of the content material shared with the participants reinforced the impression that the IB Programme’s PD has a significant impact on teacher professional validation and positive culture. This was communicated by the participants of the study that identified significant differences in the PD offered by the IB Programme versus traditional PD experiences that resulted in positive responses. Despite some minor obstacles in providing the PD to all willing participants, most of the participants expressed that the IB Programme's overall impact has been positive.
Theme 3: Ideal Professional Development

The third overarching theme that emerged from the analysis of the qualitative data was ideal professional development. Each of the participants shared their views concerning what constitutes perfect professional development experiences. Within the theme of ideal professional development, two sub-themes emerged from the collected data. The first sub-theme was purpose and sustainability. The second sub-theme was staff involvement. The two sub-themes represent the perspectives of teachers and administrators concerning ideal professional development practices.

Purpose and Sustainability

The first sub-theme to emerge regarding ideal professional development from the collected data was the discussion concerning purpose and sustainability. Participants from the focus groups and individual interviews were asked their perspectives concerning what constitutes successful professional development. The participants identified that the purpose and sustainability of professional development has a lot to do with its success.

Initially, most of the participants identified that successful PD defines its purpose by understanding and addressing the need(s) in a district. Participant F (Coordinator) discussed this topic in detail by commenting:

To develop successful PD plans, a district must canvas their staff to determine their needs and interest to define the PD opportunities introduced to them. Additionally, these needs should be supported by the assessments of students as PD should be a response to the performance of students and the interest of staff. I think that PD should be used to enhance the teaching of staff that led to student success.

As one participant (Participant C-Administrator) indicated, "It is not just what teachers want, but it is what the data supports that they need. This makes for valuable PD." This participant said that developing PD around needs helps everyone get on the "same page"
as everyone understands the needs and the intent of the PD sessions. Participant B (Administrator) commented that "using data to inform and plan PD is the best method as it adds purpose to the activities."

According to most of the participants, successful professional development activities have a clear purpose and are sustainable in the classroom. Participant E (Coordinator) commented, "Professional development is successful when I can take something from the activity and implement it into my classroom. It has to be useful, purposeful, and respectful of my time." Participant N (Group 2) echoed this sentiment by stating that "The PD has to provide me with strategies and/or techniques that I am going to use over and over again. Not something that can only be applied to one lesson, but strategies and/or techniques that will be used on multiple occasions." Participant G (Group 1) agreed that the PD must "introduce strategies and/or techniques that I am going to implement in my teaching. I just feel like I learned something meaningful." The concept of meaningful learning activities was discussed in the third focus group as well as Participant S (Group 3) mentioned that "PD must have a clear application to what we are doing in the classroom, must include strategies that will engage our kids, and must be well planned."

The notion of planning as an essential element to successful professional development activities was a concept that was repeated throughout the study by the participants. Participant F (Coordinator) stressed the importance of planning when she commented:

Teachers do not appreciate PD that is not thoughtful and is not well planned. Activities that do not demonstrate thorough planning and appear just to be thrown together fail to get the interest of those participating. Those are the PD that not
talk about, no one remembers, and nothing is brought back to the classroom. These professional development activities are a waste of our time.

On the contrary, Participant A (Administrator) identified successful PD as an event that "requires you to take a lot of notes, recall all the important parts of the PD, and be ready to bring the learning back into your classroom immediately." This speaks to the meaningfulness of the activities, which was reiterated by Participant E (Coordinator) when she commented, "Teachers must see the value in PD as beneficial and useful to their practice. It cannot be something repetitive or something that has been done before, but introduce a new technique and/or perspective." She went on to say that "PD must have a purpose and teach something important."

The idea of meaningful use of time as an indicator for successful PD was mentioned by many participants. Participant Q (Group 3) expressed frustration concerning wasteful PD activities, spend too much time on meaningless activities, and are not sensitive to the participants' time. She expressed this sentiment in the following statement:

I value PD sessions that are respectful of the time of teachers and get us working immediately. I want time to learn the new strategy and/or technique, plan, model, and correct our product. I hate wasting time with PD that is insensitive to teachers' time, and don't plan with this in mind.

The Participant went on to say that it is about "meaningful use of our time" as an indicator of successful professional development practices. Participant I (Group 1) mentioned that "teachers must buy into the PD activities, which is done when they see the value in the PD. If the facilitator cannot bring value and relate it to student learning, then the PD tends to be a lost opportunity."
All participants expressed that PD activities must have a connection to the classroom and impact students. When discussing the idea of meaning professional development activities, most participants related it to "how would the PD affect their students." Also, Participant B (Administrator) took this idea further by stating:

When evaluating PD experiences, I believe that teachers want to know whether they can apply it to my classroom, how can it improve my teaching, and how will my students benefit from my participation in this PD? Ultimately, all PD should be assessed from the perspective of how it will impact student growth, which can refer to academic, emotional, or social growth.

Another participant, Participant Q (Group 3), reiterated this idea by stating that the role of PD "is to help us become better teachers so that that students can grow." Most participants expressed that useful PD must introduce the participants to something new, include different perspectives, and invite many voices into the conversation.

The notion of innovation and successful PD experiences was a common theme introduced by most of the participants. Participant N (Group 2) made the following observation:

The successful professional development sessions that I have attended have made me aware of a different idea or approach, something that I didn't think about or apply in the past, which prompts me to try it in my classroom. It can even be a slight variation of an old approach with a new twist to it, making it meaningful and new.

Participant M (Group 2) commented “PD is a way for teachers to learn and stay informed about new and creative ways to introduce content, whether it is using technology or new practices, valuable PD introduces teachers to new approaches.” Participant Q (Group 3) agreed with this statement and added, “The purpose of PD is to stimulate thought and innovation. Teachers should be able to get together around a particular topic, share ideas,
and learn from one another.” “It is about the sharing of ideas and resources,” commented Participant I (Group 1).

Another idea to spring from purposeful PD experiences is the sustainability factor, which was expressed by most of the participants. Participant F (Coordinator) communicated the following concerning the sustainability of PD:

Effective PD can be measured by how long it lasts. Meaning do you see it in multiple classrooms throughout an extended period? Are teachers applying it consistently in their practice? Do you see it described in lessons and unit plans? And, finally, is it impactful to students?

Most of the participants expressed that it is the responsibility of teachers and administrators to sustain the efforts made in PD sessions. Participant J (Group 1) stated, "It is the role of teachers and our administrators to keep the lessons learned in the PD session alive by finding ways to reintroduce it and make sure that it is part of the planning process." Another participant echoed this sentiment by stating, "If we don't keep the lessons learned in PD alive and current, it will be shelved, never seen again, and will be a waste of time and funds" (Participant R).

Continuing the conversation concerning sustainability, Participant N (Group 2) commented that the worst thing that educators do immediately following a PD session is that "they place the material in a drawer and it is gone forever." Instead, she recommends that educators must "keep the material on their desk as a reminder to review it and find ways to introduce items from the PD into their practice." A colleague that participated in the same workshop (Participant L) commented that "you have just to keep doing it and keep using it because if you don't use it, you're going to lose it." As indicated by Participant M (Group 2), "We must keep the lessons learned from the PD sessions visible, try it right away, and make it useful." "It is about consistency and follow-
through," commented Participant Q (Group 3). Most of the participants agreed that the best way to sustain PD's efforts is to put it into practice.

The individual interviews with administrators/coordinators and the review of the content material shared with the participants demonstrated that PD must be purposeful for it to lead to sustainability on the part of teachers. According to the IBO Resource Guide (2016), the goal of PD offered by the IB Programme is to "develop independent and collaborative learners, holistic teaching and learning practice, and planning, teaching, and assessment practices that promote active student learning."

**Staff Involvement**

The second sub-theme to emerge regarding ideal professional development, from the collected data, was the discussion concerning staff involvement related to ideal professional development experiences. Participants from the focus groups and individual interviews were asked their perspectives concerning what constitutes successful professional development. The participants identified that one component of ideal PD is the level of involvement of teachers and staff in the planning and delivering of the activities.

Most of the participants agreed that PD should be designed to fill a need identified in the building. Still, that need should be filled by those that are knowledgeable of the building, staff, and equipped to provide meaningful learning activities. Participant F (Coordinator) agreed with the idea that effective PD should be managed by those familiar with the environment and made the following comments:

The planning and delivery of PD should be made by those familiar with the teachers, what they do in the classroom and the district's agreed needs. There are too many times that districts hire outside professional development gurus to lead
our discussions. Although I appreciate their level of expertise, they don't know us, and these conversations should be guided by those in the school.

Additionally, Participant J (Group 1) stressed the importance of staff involvement in the planning process that is associated with the development of professional learning activities by stating, "Districts have to spend the time to ask teachers what they want to learn and how they want to learn it. When you don't involve staff in the planning process, you don't get staff involvement when you run the PD."

In relation to staff involved in the planning process associated with running effective PD sessions, Participant D (Coordinator) stressed the importance of knowing staff, their strengths and weaknesses when planning for meaningful learning opportunity; she stated the following:

Those that are planning PD should consider the preferences and interests of the staff that will be involved in the training sessions. Every teacher is different, are at different places in the process, have different responses to change, and are more comfortable with the discussion. If you want the PD to be meaningful, these things must be considered when planning, delivering, and the follow-up that is part of the PD planning process.

To bring about real change, most of the participants agreed that teacher involvement in the process is essential. Participant Q (Group 3) reiterated this fact and stated that “teachers that are not involved in the planning are not invested in its success or failure.”

Most of the participants extended the conversation beyond the planning and into the delivery of PD as an integral part of its success. Participant F (Coordinator) made the following observations:

Considering the fact that most PD experiences are a one-shot event, districts should invest their energy and resources in internal supports that can continue the conversation with teachers after the PD session. There should be internal professional developers in each building and/or department, individuals that are skilled and knowledgeable enough to continue the training by providing support and resources to staff.
This idea was echoed by Participant E (Coordinator) who shared, "It is our job to identify and celebrate our teacher leaders, which are individuals that can offer professional development and they have a strength that they want to share. Let's allow them to share it before we reach beyond our walls." The Participant went on to recount an event last year that involved a teacher that led a PD on the use of classroom-based software, which had a great response from those that participated. Another participant at the high school level, Participant Q, commented it "is great to have passionate teachers share their experiences with one another and build each other up."

The consensus of the participants was that all stakeholders should be involved in the planning and implementation process, especially teachers who are responsible for delivering the instructional program. According to Participant B (Administrator), "the professional development plan should be the responsibility of teachers, administrators, and include input from multiple sources." Participant I (Group 1) agreed with this sentiment and took the idea further by stating:

The development of a PD plan should not be done with input from the teachers. Getting the teachers involved in the discussion is crucial. Teachers need to feel included; they need to believe that their voices are heard and that their interests are considered before decisions regarding their learning are made for them. If you give teachers a seat at the decision-making table, they will make sure that the training is successful.

It was agreed by most of the participants that an important component of successful PD is the involvement of teachers, because as indicated by Participant M (Group 2), "teachers are the ones that will have to implement what is covered in the PD sessions, so it behooves administration not to include us in the conversation." Participant D (Coordinator) commented, "It is our role as coordinators to ensure that teachers are excited by PD, have a genuine desire to attend, and will want to implement the technique
and/or strategies covered during the PD. We also need to invite conversation amongst our colleagues."

Most of the participants discussed the importance of common meetings or preparation times for teachers to discuss their experiences with PD, new approaches, and changes in methodology. Participants E (Coordinator) discussed the advantages of having a common professional period as it relates to PD by stating the following:

It is great to have our professional period in the morning. We see it as a sacred PD time, a time that we can exchange ideas, talk about what is happening in the classroom, and help one another grow. We are constantly sharing ideas, resources and reviewing some of the difficulties that we are facing as we go through the IB implementation process.

Most of the participants agreed that the common professional period has helped to advance the PD conversations and the implementation of the IB Programme. Participant G (Group 1) commented "our professional period brings us closer as a staff, it invokes the conversations that make us rely on one another, gives us the opportunity to discuss lessons and units, and builds trust in the staff." Another participant (Participant O-Group 2) observed "having a common meeting time allows us to work through some of the logistics concerning practice and curriculum alignment. It is really one of the best parts of my day as it gives us an opportunity to share."

The other point that came up in the discussion in relation to teacher involvement was the importance of feedback as part of the PD planning and implementation process. Participant A (Administrator) shared, "A key element to the PD that is introduced to staff is the feedback system that we put in place as part of the process. In order for us to determine if the PD was valuable, we need to ask our teachers to provide us with their assessment." Additionally, Participant F (Coordinator) commented "one of the most important parts of my job is communicating with our teachers about their PD experiences
Participant C (Administrator) continued this thought and commented:

Getting that post PD feedback is the most beneficial aspect of the process. Answering the questions of what the participants learned, how they plan to implement it into the classroom, and how it is going to affect your students is what is going to improve the experience moving forward. The answers also provide a district with insights as to how to change the PD experience to make it more meaningful to teachers.

Participant P (Group 3) remarked “districts must listen to the feedback of teachers to ensure that they are responding to PD that may not be serving the needs of its teachers and, ultimately, the kids.” It was the consensus of all the participants that feedback is an essential element in the planning and implementation of PD that should be used to guide, modify, and respond accordingly to the needs of staff, students, and the community that a district serves.

The analysis of the collected data, including individual interviews with administrators/coordinators and the review of the content material shared with the participants, demonstrated that meaningful PD should include teacher input during the planning and implementation process.

Conclusion

The first research question in this study investigated the impact of professional development offered by the International Baccalaureate (IB) Programme on the pedagogical approach of teachers. The analysis of the data from the individual interviews, focus groups, and content material shared with the participants found that the PD offered by the IB Programme resulted in some changes to the instructional approach of teachers and an increased emphasis on student learning techniques. Teachers and administrators identified that there were clear correlations between the approaches utilized in the
classroom to materials covered during their IB training. Some of the participants used their own classroom experiences to cite examples of the shift in their approach, but others identified disconnection in the approach to the alignment of curriculum expectations. Concerning the conversation regarding learning techniques, many of the participants found that the PD offered by the IB Programme helped teachers think differently about their instructional practice, but others found that the PD sessions did not consider the role of support personnel in the delivery of the IB Programme. Those that felt that the PD sessions offered by the IB Programme did not consider their role effectively left the sessions with a sense of discontent and the responsibility to define their own role in the district and their relationship to the IB Programme.

The second research question in this study investigated the perceptions of teachers and administrators concerning the professional development offered by the International Baccalaureate (IB) Programme compared to traditional PD programs. The analysis of the data from the individual interviews, focus groups, and content material shared with the participants found that the focus of the PD sessions offered by the IB Programme concentrated more on methodology than content, identified the student as the focal point in the instructional planning process, and provided staff with professional validation. Most of the participants expressed that they appreciated the shift from content to methodology as it applied significance to the science of teaching, but some of the teachers communicated that they missed the emphasis on content and available resources. The majority of the participants communicated that the move to place the student as the focal point in the instructional process was helpful, but a few of the participants expressed that some of the teachers and students found the change challenging as it
provided freedoms and choice to students that were previously absent in the classroom. Many of the participants found that the professional learning opportunities that were provided by the district to teachers were a rewarding experience that helped to validate their value and worth to the community, but some of the participants in the study cited individuals' resistance to change as a challenging element.

The third research question in this study investigated the perceptions of teachers and administrators concerning the components of successful professional development. The analysis of the data from the individual interviews, focus groups, and content material shared with the participants found that ideal professional development includes purpose and sustainability and staff in its planning and delivery. The participants identified that effective professional development addresses the needs of students, has a clear purpose, is well planned, utilizes time appropriately, has an impact on student performance, and is sustainable. Additionally, the participants identified that successful professional development involves staff in its planning and delivery. The participants identified that staff should be involved in identifying the needs of a district, as well as planning the activities associated with the PD, delivering the PD. Additionally, participants noted staff should have ample time to meet to discuss pedagogical shifts and have a platform to provide feedback.
CHAPTER 5

Introduction

This study was a qualitative case study that examined teacher and administrator perspectives regarding meaningful professional development (PD) experiences, their experiences with PD offered by the International Baccalaureate Organization (IBO), and the impact, if any, on their approach to teaching. This study addressed three research questions. The first research question inquired about the impact of professional development offered by the International Baccalaureate Programme on teachers' pedagogical approach. The second research question investigated teachers' and administrators' perceptions concerning the International Baccalaureate (IB) Programme's professional development compared to traditional PD programs. The third research question examined teachers' and administrators' perceptions concerning the components of a successful professional development plan.

The data analyzed in this study consisted of three focus groups, individual one-on-one interviews with administrators and building-level IB coordinators, and a content analysis of shared documents with the teacher and administrator participants concerning the IB Programme and its professional development offerings. The analysis of the data collected in the study revealed three significant findings that emerged from the interviews, focus groups, and content material. The first finding was the impact of the PD offered by the IB Programme introduced new instructional practices and emphasized student learning. The second finding was the IB Program's PD shifted the focus from content to methodology, encouraged the use of student-centered learning practices, and helped to validate teachers engaged in the process. The third finding that emerged was
that professional development practices should be purposeful and sustainable while involving staff in planning and implementation. This chapter discusses the three major findings from the analyzed data to address each of the three research questions in the study while connecting the findings to the existing literature, which was reviewed in chapter two.

**Implications of Findings**

**Research Question #1**

The first research question in this study investigated the impact of professional development offered by the International Baccalaureate Programme on teachers' pedagogical approach. The collected data analysis found that the PD provided by the IB program created minor shifts in the instructional approach of teachers that were reinforced by the administrators, coordinators, and the content material. Most of the participants expressed that the PD sessions focused on methodological approaches that were part of the IB structure that were linked to clear evidence in sound educational theory concerning student learning practices. This approach reinforced the implementation of practices that the teachers were unfamiliar with as it added validity to the International Baccalaureate Programme's espoused practices. Students learn when teachers' instructional approaches are grounded in sound educational research that supports its use and effectiveness (Darling-Hammond et al., 2017). Teachers' perception concerning the validity of educational approaches will significantly influence their comfort and implementation of these practices, which was a sentiment that emerged from the analysis of the data. Additionally, when teachers see value in the approach, they will
likely risk trying the process when systemic change can occur within a sustainable system (Fullan, 2015).

Some participants expressed that the implementation of new instructional approaches was not a comfortable transition for them. It failed to make a direct connection to what the teachers are doing in the classroom. Although most of the participants identified the value in the IB Program's professional development that focused on different instructional approaches, it left some of the teachers with a sense of discontent as they did not see the relationship to their practices and needs as classroom teachers. Those who did not find the IB Program's PD as significantly impactful expressed that they would have found it more helpful if it related more to their daily practices and standardized instruction. Unless PD opportunities directly connect to a teacher's daily routine, teachers and administrators identify the PD activities as wasteful and will not implement its teachings in their classrooms (Guskey and Yoon, 2009). It is the role of those who plan PD activities to build relevance and meaning to ensure that teachers are engaged and will utilize what is taught in PD in their classrooms.

Teacher participants identified that the IB Program's PD altered their approach to the development of lessons, units, and assessments by placing the student at the focal point of their planning process. The teachers discussed their former thinking in relation to lesson planning compared to the approach endorsed by the International Baccalaureate Programme. They defined a significant difference in the delivery methods they were now attempting to include in their practice. Before their experience with the International Baccalaureate Programme's professional development, the focus of their role as educators was following a script defined by the scope and sequence of their curriculum. Still, many
participants identified that IB provided them with a new direction that placed the student as its focus. The overall sentiment expressed by most of the participants was that the professional development offered by the IB Programme helped to reinstate the student back into the design of the instructional day. Ideally, educators' role is to present material in a way that is conducive to the learning styles of students and their instructional preferences, which leads to positive student engagement and growth (Killon & Hirsch, 2012).

Despite the overwhelmingly positive response to the IB Program's professional development, there was tension expressed by some of the support teachers concerning the lack of representation and focus at the professional development sessions. The support teachers suggested that the professional development sessions failed to mention or identify how the approach and focus of the International Baccalaureate Programme will be related to what they do as remediation specialists. Even though this was said to the sessions' facilitators, the response provided was insufficient to assuage the concerns of the remediation specialists in the district. As a result of this disconnection with the sessions' focus on what the teachers do in their role, the remediation specialists did not feel valued and a part of the initiative moving forward in the district. For professional development to be effective and influence teacher practices, it must be related to what educators do in the classroom and with students (Wei et al., 2009). As echoed by the administrators and coordinators that participated in the study, for change to occur, it must be inclusive of all those within a system, cognizant of their mental models, and work collectively to bring about the desired outcomes (Senge, 2006).
The research literature supports that professional development has a direct impact on the implementation of new approaches and the focus of student learning (Akiba & Liang, 2016; Darling-Hammond et al., 2017; Gaines et al., 2019; Gupta & Lee, 2020; Guskey, 2014; Kennedy, 2016; Matherson & Windle, 2017; Wei et al., 2009). When implemented with fidelity, professional development that considers preferred adult learning styles designed to address methodological practices will lead to sustainable educational change in a system (Fullan, 2015; Knowles et al., 2012).

Research Question #2

The second research question in this study investigated teachers' and administrators' perceptions concerning the International Baccalaureate Programme's professional development compared to traditional PD programs. The analysis of the collected data found that the IB Program's professional development differed in its focus on methodology over content, emphasized the use of student-directed learning practices, and validated the professional worth of teachers that participated in the professional learning sessions. However, some of the participants shared their displeasure with the lack of content and standard-directed learning that seems to be absent in the IB Program's professional development. There appeared to be a conflict in the principles espoused by the IB Programme versus the instructional framework delineated by the New York State Department of Education as it pertains to standards and curriculum outlines. When a significant change is initiated in a school district or school, it is necessary to evaluate the ideologies, practices, and policies to ensure that they are aligned to the initiative's purpose; otherwise, issues may develop regarding its implementation (Fullan, 2015).
Teachers and administrators who participated in the study shared an overt shift that was highlighted in the PD offered by the IB Programme concerning the importance of pedagogical practices versus content. Teachers recounted that the sessions reviewed learning practices, educational theory, and the science behind how students learn, a primary focus of the PD sessions. Teachers and administrators also felt that the professional development sessions reviewed the science of lesson construction from the perspective of practices that increase student engagement and meaningful student learning. Many teachers expressed that the PD sessions offered by the IB Programme spent most of their time helping teachers understand the way students learn, not necessarily what they learned. This is an important distinction when incorporating professional development plans in a district. Some learning activities are heavily focused on content and fail to realize the importance of how that material is delivered and the best methods to use when introducing new concepts to students (Killon & Hirsch, 2012).

Participants also stressed the importance of student-directed learning practices as the IB Program's professional development introduced new concepts to the teachers in the district, which provided for choice and autonomy on the part of the student in his or her learning. Most of the teachers expressed that this concept was relatively new to them as they were accustomed to identifying their role as the orchestrators of students' learning process. Still, this approach changed their perspective as it asked them to release some of the "control" over the instructional process to give students a sense of ownership over their learning and the experiences that lead to their growth. Some of the teachers also commented that the IB professional development sessions helped to foster a student-centered learning environment in their buildings as students were encouraged to take a
more active role in the planning, delivery methods that will be employed to investigate a concept, and the assessment vehicles used to evaluate performance. Implementing the IB Programme incorporates an inquiry method to their instructional program that provides students with a framework to utilize self-discovery strategies to fully understand concepts and the methods used to reach this discovery. Additionally, the participants emphasized that the IB model of lesson and unit construction is used to encourage and develop independent thinking as students take on more responsibility in their learning (Hill & Saxton, 2014).

The other component that participants commented on was the feeling of validation resulting from their participation in the IB program's professional development. Most of the teachers and administrators expressed that teachers felt valued because the district was making a monetary investment in their growth by sending them to the PD offered by the IB Programme, which included registration fees, airfare, hotel accommodations, and travel expenses. The participants also perceived that their involvement in the IB Program's PD gave them a sense of purpose, included them in the district-wide initiative, and motivated them to implement the program with fidelity. Most of the teachers expressed that they felt that the IB Program's PD experience was not forced on them and controlled by the district as it was off-site and followed a standardized model that is created and facilitated by the IB Programme. The IB Programme also provided the teachers and administrators with a framework that encourages and establishes collaboration amongst all those in the IB world. Teachers are encouraged to share material, collaborate on methods, and guide each other through the implementation process. The teachers also mentioned that they felt that the IB
Programme provided much autonomy to the teachers regarding how they incorporated resources to teach their material, which is synonymous with what is expected of teachers in their approach to students. The process of active involvement, autonomy in methods, and meaningful growth opportunities drive teachers' change, leading to student achievement (Steeg & Lambson, 2015).

Compared to traditional professional development, the overwhelming response to the PD offered by the IB Programme was positive. Still, some of the participants expressed frustration concerning the shift to methodology and identified difficulties with transitioning to a student-directed learning environment. They stated that some of the teachers struggled with the amount of change associated with implementing the IB Programme. Teachers accustomed to content-driven instruction expressed that they failed to see the IB Program's advantages and missed professional growth opportunities that provided them with more content related resources and delivery strategies around content. Teachers whose process is firmly rooted in routine and organization found the flexibility of the student-centered approach endorsed by the IB Programme hard to accept. It provides the students with too much autonomy in the classroom. Some of the more experienced teachers found it very hard to change their methods and instructional practices to conform to the IB Program methods. This resistance to change is why the administrators and coordinators in the district continue to work to understand the staff to determine the mental models, obstacles to change, preferred learning conditions, the process of developing a team approach to learning, and build a shared vision concerning the purpose and desired outcomes for the professional development plan developed by the district (Fullan, 2015; Knowles et al., 2012; Senge, 2006).
Research Question #3

The third research question in this study investigated teachers' and administrators' perceptions concerning the components of successful professional development to obtain a broader perspective. The collected data analysis found that successful professional development must include purpose and sustainability while ensuring active staff involvement in its planning, implementation, and evaluation. Most participants agreed that the goal identifies ideal professional development, whether it is sustainable, and the level of teacher involvement. Effective professional development planning should be defined by teachers' needs, have adequate follow-up activities as part of its design, and include the voice of teachers (Avalos, 2011).

Concerning the planning mechanism that should be included in the professional development process, most of the participants expressed that this is one of the essential components they look for when evaluating the success of a planned PD session or program. Teachers' impressions were unanimous in their condescension of professional learning activities that lack a clearly defined purpose, viewing the learning activities without purpose as a waste of their time. The appropriate use of time demonstrates that the professional developer is respectful of teachers and the sacrifice involved in taking educators out of the classroom. All participants clearly expressed that if educators are to spend time out of their classrooms, they want it to be meaningful. Increasing the time allocated to teachers to improve their instructional practices through the utilization of purposeful PD is a necessary step that is proven to enhance every student's learning in a system (Killion, 2013). As time is a valued concept in the field of education, educational systems must establish the time for professional development and make sure that it is
used appropriately to enhance the capacity of teachers in a way that will lead to student improvements (Hirsh, 2019).

Additionally, the participants commented that there must be sufficient follow-up and resources to make the PD sustainable and make sure that there is a clear purpose aligned with teachers' needs. The concept of sustainability suggests that the topics, strategies, and methods covered during a professional development plan are realized in the classroom over time and become an integral part of the instructional program and expectations. To sustain the efforts of professional development, administrators must make sure that the concepts reviewed in the PD plan are infused into their conversations with staff, is part of the observation process, supports are in place, and that the concepts are visible in the classroom and teacher practices (Killion, 2013).

The other aspect of ideal PD that emerged from the study was the level of teacher involvement in relation to the success level of a professional development program and/or session. The participants indicated that they felt that adequate teacher involvement in the planning, implementation, and evaluation process is essential for the development of effective professional development plans. Most of the participants expressed that professional development must be designed and implemented by professionals who are knowledgeable of the building, the strengths, and weaknesses of staff, preferred learning methods that should be employed with the staff, and the expertise to provide meaningful learning experiences. Teachers should have an emotional connection to the content, design, and implementation of the professional development presented to them. This connection with PD will drive teachers to put what is taught into practice, which is attainable when the facilitator has a prior relationship and connection with those
participating in the PD (Gaines et al., 2019). Professional development opportunities that are designed and managed by internal teachers have an added benefit to a system as it creates teacher leaders in the building that, inadvertently, take on the responsibility of ensuring the success and sustainability of the PD program. The participants also stressed that those that are responsible for the implementation of the PD should be the ones that are in control of coordinating the process, but it is the role of administrators and coordinators to establish the protocols and the collegial environment to ensure that this process is facilitated appropriately. Participants also stressed the importance of common meeting times to discuss, troubleshoot, and review the approaches suggested from the PD sessions, which makes teacher involvement at the local level a more substantial aspect of quality, effective professional development (Hirsh, 2019). This collaborative process is an essential component to the development and sustainability of a professional development plan intended to alter teacher practices, impact a system of learners, and change the outcomes for all students (Fullan, 2015; Knowles et al., 2012; Senge, 2006).

**Relationship to Prior Research**

*Professional Development and Teacher Practices*

The first major finding from this study was that the International Baccalaureate Programme's professional development led teachers to adopt new instructional approaches in their classrooms and an increase in the emphasis on student learning practices. Participants linked current instructional practices to material covered during the professional learning activities covered during their PD session with the IB Programme. This discovery affirmed existing research that correlates teacher practices changes to professional development and efforts to increase teacher capacity by ensuring that
research-proven pedagogical methods are understood and followed by educators in the classroom (Desimone, 2011). The prior research regarding professional learning opportunities stresses the importance of shifting teachers' attitudes, increasing their knowledge and skills, and introducing new approaches that will be used to instructional changes that will elevate student learning (Pharis et al., 2019; Yoon et al., 2007).

Many of the participants identified the success of the PD offered by the IB Programme, as evidenced by their students' positive response to the changes that occurred in teacher practices that were witnessed in the classroom. Teachers across all three focus groups expressed that the IB Program's PD helped them place more emphasis on practices that increase students' understanding of the material and internalize their learning. A few of the participants suggested a disconnect in the IB Program's PD to what they do in their classrooms, while others identified that their role was minimized during the PD sessions. The level of positive emotion attached to a teacher's experience with professional development can have a significant impact on the level of success concerning its implementation and the teacher's perception of the experience (Gaines et al., 2019). Past research suggests that effective professional development is identified by practices that provide teachers with the tools needed to incorporate valuable instructional practices, considers the emotional response of teachers, introduces methods that lead to comprehensive learning on the part of students, and provides educators with a thorough understanding of how students learn (Killon & Hirsh, 2012). This study supports the existing research literature that suggests that effective professional development can lead to instructional shifts in teacher practices that emphasize student learning, resulting in students' meaningful growth (Knowles, 2012; Painta, 2011).
PD offered by the IBO versus Traditional PD

The second major finding from this study was that teachers and administrators perceived major differences between the professional developments offered by the International Baccalaureate Organization versus traditional PD. Most of the participants expressed that the IBO's professional development differed from traditional PD in that it focuses on methodology over content, incorporates student-directed learning practices, and offers significant validation for teachers and staff that partake in the professional development. Most of the teachers expressed that the change to the methodology required them to suspend their thinking regarding content, standardized instruction, assessments and pushed their thought towards the processes that will help students understand the purpose of education and its application to their lives. As a result of the IBO's professional development opportunities, teachers reported that they began to engage in conversations regarding how students learn versus what they learn. Most of the participants reported that the IB Program's PD helped shape the conversations with colleagues that began to center on the learning process versus resources that support their content. Teacher engagement in PD and its implementation resulted in professional validation for teachers, especially considering the monetary investment that the district had made in their personal growth as teachers. This discovery affirmed existing literature that suggests that true, sustainable school reform occurs when teachers focus on methods over content, provide authentic learning experiences for students, and work together to build a respectful, collegial environment that encourages collaboration and common practices (Gaines et al., 2019; Klein and Riordan, 2009; Stacy, 2013; Steeg & Lambson, 2015). Teachers across the three focus groups expressed that this process required a shift
in their practice and thinking related to their role in the classroom. It is the administrators and coordinators' role in the district to ease the stress associated with the change process. Knowles et al. (2012) suggest that it is the PD planner's responsibility to recognize where the participant is in the learning process and adjust the learning activities to meet the needs of the learners, which is referred to as aptitude-by-treatment interaction.

While most of the teachers across the three focus groups found the instructional transition palpable, others expressed a level of discomfort regarding the change required in implementing this new way of thinking and teaching as it differed significantly from their previous practices. Additionally, the discomfort that was identified by some of the teachers in the focus groups was associated with the misalignment that they felt concerning the focus of the PD offered by the IBO and their role in the district as a remediation specialist. Despite the attempts to establish a collaborative environment, a few of the teachers suggested that the IB Program's PD failed to create a learning experience that was inclusive of all the participants. This discovery affirmed existing literature concerning teachers discomfort regarding educational shifts, applicable to professional development activities that do not apply to what they do in the classroom and do not factor their role with students (Avalos, 2011; Gaines et al., 2019; Guskey, 2014; Newberry et al., 2018).

This study supports the existing research literature that suggests that effective professional development that focuses on a research-based instructional methodology that prioritizes student-directed learning practices can empower teachers to bring about systemic changes (Darling-Hammond et al., 2017; Fullan, 2015; Yoon et al., 2007; Senge, 2006).
Ideal Professional Development

The third major finding from the study was that teachers and administrators perceive that ideal professional development has a clear purpose, is sustainable, and includes staff's active involvement in its planning, implementation, and evaluation process. Teachers across all three focus groups discussed the importance of professional development that is well organized, has well-identified learning objectives and includes staff involvement. Teachers and administrators expressed that professional development is an integral component of any improvement efforts made by a district. It provides teachers with the resources, support, and time to review and revise practice for their students' benefit. Teachers stressed the importance of sustainability and time as key factors to the success of a professional development plan, an integral component of their current day. They share mutual professional periods that are utilized for curriculum alignment and collaboration. The findings are supported by the existing research that suggests that teachers desire structure, clearly delineated learning objectives, and teacher involvement in the planning, implementation, and evaluation of professional development plans (Gaines et al., 2019; Guskey, 2014; Kennedy, 2016; Killion, 2013; Mizell, 2010; Pharis et al., 2019; Senge, 2006; Steeg & Lambson; 2015). Knowles et al. (2012) conclude that it is the professional development planner's role to orchestrate the design of learning opportunities for staff that will be purposeful, sustainable, and involve staff to ensure that they achieve the intended goals of the instructional initiatives. Fullan (2015) supported the notion that professional development must be meaningful, have clearly defined learning objectives, provide the necessary time for teachers to explore the
approach identified in the PD, align the methods to their content, and collaborate implementation of the instructional initiative.

This study supports the existing research literature that suggests that effective professional development has delineated learning objectives, has internal systems in place to ensure sustainability, and makes every effort to involve staff in the planning, delivery, and evaluation of the professional development plan of a district and/or building (Darling-Hammond et al., 2017; Gaines et al., 2019; Guskey, 2014; Kennedy, 2016; Killion, 2013; Mizell, 2010; Steeg & Lambson; 2015).

**Limitations of the Study**

As this qualitative study's focus involves the analysis of a single case, the small sample size may limit the external validity of the findings. According to Yin (2018), it is impossible to generalize a case study's results as the goal of the research is to investigate a particular group or unique circumstance, which limits the external validity of its findings. Despite this position, Yin (2018) suggests that single case studies can be generalized when associated with theory, not the population identified in the study.

The second limitation to this study is that the sample was chosen through purposeful and deliberate sampling. The sample selected for this study was purposeful and deliberate as all the participants were employed as teachers, coordinators, and administrators in the district where the researcher served as a district-wide administrator. Considering the fact that the researcher facilitated the three focus groups and the six individual interviews, it may be perceived that the responses may have been influenced by the researcher's role in the district as an administrator and the participants' relationship with the researcher. Nonetheless, despite this limitation, the participants were fully aware
that their responses and participation in the study would be confidential. They would not be penalized or disciplined for the candor used in their responses.

Another limitation to the study was that the site’s collective bargaining agreements included language that made it conducive to facilitating professional development activities and collaborative practice, which may not be the case in another setting. This can be problematic in other districts that may desire to explore the implementation of the IB Programme as it can necessitate costly and contentious negotiations.

The study's final limitation is that the collection of data was during the COVID-19 pandemic that limited the methods utilized to conduct the focus groups and individual interviews. Since face-to-face interactions for an extended period were discouraged by the Centers for Disease Control and Prevention and the New York State Department of Health, the researcher was required to utilize a digital platform, Zoom, to focus groups and individual interviews. This is defined as a limitation as it may have slightly limited the researcher's ability to read and respond to body language when constructing valid follow-up questions and conversational prompts.

**Recommendations for Future Practice**

For the past five decades, educational leaders and policymakers within the United States have attempted to implement sweeping reform efforts to standardize the curriculum, apply more rigor to assessments, and make professional development an integral part of a district's day to day operations (Behind, 2002; Act, 2009). The efforts have intended to close the global achievement gap and increase student performance. In response to their need to reform the educational system, policymakers have developed
and implemented the No Child Left Behind Act in 2002, the Race to the Top Competitive Grant in 2009, and the Common Core Learning Standards in 2010. As a result of the implementation of these reform initiatives, the educational system has experienced a tremendous amount of stress and instability as it has been pulled in different directions by reform efforts that have opposing viewpoints and emphasizes assessments over the development of teacher methodological practices that will ultimately lead to sustainable student achievement (O'Brien & Roberson, 2012). This present study revealed three themes regarding teachers' and administrators' perceptions concerning the International Baccalaureate Programme, the IB Program's professional development, and their views concerning the components of an ideal professional development program. Table two (2) outlines the suggestions that systems can put into place from the perspective of stakeholder positions that will assist in implementing professional development programs and their exploration of the International Baccalaureate Programme.
<table>
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<tr>
<th>Stakeholder</th>
<th>Suggestions</th>
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| Board of Education | • Provide appropriate budgetary support to acquire necessary resources to implement an on-going professional development plan that is consistent with the instructional initiatives in the district, i.e., the International Baccalaureate Programme  
• Provide flexibility to administration to allocation funds within acceptable budgetary parameters to acquire resources to support its professional development plan  
• Embrace the cultivation of a district that works to enhance teacher capacity around research-based, effective instructional practices  
• Require periodic status reports concerning professional development efforts with anecdotal and quantitative data to support efforts |
| Administration | • Work with building coordinators to bring meaning and purpose to all professional development opportunities that consider learning preferences of staff and practical classroom applications  
• Build professional learning communities that collaborate on the planning, delivery, and assessment of all professional development opportunities available to staff  
• Ensure that all staff are part of the conversation around professional development, development of building level goals, and the methods used to attain the desired outcomes  
• Develop procedures and staff schedules that facilitate collaboration, time, and identifies the agendas that are aligned with the professional development calendar that outlines the PD and the link to the instructional initiative identified by the district  
• Be a practitioner of the process by engaging in professional development, inviting risk-takers in the classroom, and working directly with staff to enhance practice and problem-solving protocols |
| Teachers | • Volunteer to attend professional development opportunities with the intention of turn keying the training to colleagues  
• Maintain collaborative practices in your building and/or department to enhance the instructional capacity of your colleagues and ensure alignment of content, methodology, and assessments  
• Foster an instructional environment in your classroom that encourages a student-centered approach that utilizes inquiry as to its vehicle |
The findings of this study exposed the first major theme of professional development offered by the International Baccalaureate Programme, led teachers to adopt new instructional approaches in their classrooms, and place more emphasis on student learning practices. Most of the participants of the study were able to transform their thinking and pedagogical practices to meet the approaches espoused by the IB Programme. Still, some of the more experienced staff had a difficult time with the transition. When a district develops a professional development plan, it needs to be mindful of the curriculum changes that will be asked of the teachers, the mental models that permeate the staff, and the necessary political capital that must be utilized to ensure the successful implementation of the initiative. All stakeholders must be included in the conversation, are cognizant of the rationale for the professional development, aware of their role in its success, and identify their part in its implementation (Fullan, 2015; Senge, 2006). This could be accomplished by forming a building-specific professional development committee that reviews data, engages in conversations with staff, and makes recommendations regarding the staff's needs and interest that aligns with district and building level goals. The committee's representation should include teachers, coordinators, support staff, administrators, and other members of the system that will be responsible for either participating in the PD opportunities or facilitating its outcomes. It is also essential to ensure that the PD committee has a prominent voice in the building, which can be accomplished through faculty meeting presentations, sharing of agendas with all staff, and a public, professional development calendar that includes activities and timelines that are linked to the district and/or building professional learning goals. The
sharing of the committee's agenda that is tied to accepted goals with realistic timelines will invoke trust, transparency, and mutually accepted expectations (Martin et al., 2019). Additionally, it is essential that the building and instructional practices are representative of the instructional initiatives that the building is working toward. Additionally, the physical environment should contain visuals that emulate the model of the program, and instructional routines should follow the model that the professional development committee espouses. Lastly, I would recommend the development of a professional development announcement/tracking chart that all staff can see, possibly posted in the building's faculty room, or sent to the staff electronically on a periodic basis, at the end of each quarter, that provides a status report on the identified goals of the building, which includes the goals, action steps, timeline, those responsible for completing the goal and resources, evaluation component, and current status (emerging, developing, completed) of the professional development plan.

This study's findings exposed a second major theme of professional development that the International Baccalaureate Programme offers. Teachers expressed that the IB Program's PD differed in its focus on methodology over content, emphasized the use of student-directed learning practices, and validated the professional worth of teachers that participated in the PD and the implementation process in their building. To effectively implement school reform efforts that emphasize building teacher capacity through the introduction of research-based methodology, schools must invest time to reinforce the significance of the methods with teachers by proving its effectiveness through research, classroom demonstrations, and student engagement (Darling-Hammond et al., 2017). This can be accomplished by using administrators, coordinators, and teacher leaders in
each building to act as instructional coaches to all teachers implementing the program to ensure that they have the support necessary during the implementation process.

Involvement in the reform efforts is pivotal as all stakeholders must be students and practitioners of the process. Another way to ease the minds of teachers that are uncomfortable with the PD offered by the IB because of its lack of focus on content is to provide staff with ways to infuse the content into their instruction by using PD activities and modeling that identifies procedures that can be used to incorporate content specific material into the methods that apply to the IB Programme. This can be accomplished at faculty meetings, department or grade level meetings, the use of video recording of lessons that have successfully employed this strategy, and feedback from the coordinators and administrators to teachers that guide them through the process. Similar methods can be employed to provide staff with the comfort level regarding converting their instructional practices to emulate a student-directed learning environment, which embraces choice, inquiry, and student engagement. The one additional item that should be included in this recommendation to future practice is designing and implementing professional development opportunities for staff that focuses on constructing lesson plans, units, and assessments that are student-driven in their design and implementation. Teachers already have a great resource through IB that provides them access to the unit planner, which includes a template that can be followed that shows all the components of the IB lesson design (key concepts, related concepts, global concepts, statement of inquiry, inquiry questions, objectives, summative assessment, approaches to learning, content, learning process, differentiation, resources, a reflective component that looks at prior, during, and after the unit). This will necessitate the time and dedication of all staff
members, and it requires a lot of trial and error and constant reinforcement. Still, to bring about systemic change in the instructional program's preparation and delivery methods, all stakeholders must be resilient and work together to support this shift in practice. This shift must also be backed by district-level administration, the Board of Education, and the community that will need to provide the structure and financial support that will make the shift possible and sustainable.

This study's findings exposed a third major theme of teachers' and administrators' perspectives concerning ideal professional development. Teachers expressed that the district has provided ample resources and support concerning the implementation of the IB Programme. Concerning ideal professional development in general, which was the intent of this component of the study, teachers expressed that the measure of success of a professional development program is whether it is purposeful. Procedures are in place to sustain it and staff participation in its planning, implementation, and evaluation. Educational leaders must work closely with all stakeholder groups to develop a professional development plan that is based on the needs of staff, which should be extrapolated based on all available data points (quantitative and qualitative), the preferred adult learning styles applicable to the participants, has clearly delineated goals that are aligned with district and building initiatives, ample follow-up procedures are in place to ensure that the learning is transferred to the classrooms and that every voice is heard during the process (Martin et al., 2019). This can be accomplished by utilizing a lesson, unit, and assessment plan template that is shared with the entire staff for general use. It is also essential to plan for PD sessions, faculty meetings, and correspondence to staff and the community to explain the rationale for implementing the templates, the desired
outcomes, and how it will impact the students and their instructional environment. The other component that should be implemented concerning future practice is establishing a professional development progress monitoring system that routinely evaluates the PD plan's effectiveness. Teachers, administrators, and staff responsible for implementing the initiatives covered during the PD sessions will be responsible for completing the progress tracking system, which will be collected and shared with staff by the coordinators of the program or administrators leading the initiative. This process will ensure that the PD is sufficient, the staff is made aware of its timeline and progress, and adjustments can be made immediately if issues arise. Teachers want to have the ability to discuss classroom practices based on PD efforts, evaluate the effectiveness of PD, and make appropriate adjustments based on their needs and the dynamics of students in their classrooms. Educational leaders must work with staff to create a culture where collaboration, mutual accountability, and continuous communication are the ingredients needed to develop and sustain a comprehensive professional development plan that celebrates choice, inquiry as to its vehicle, and is grounded in high-quality methodological practices (Pharis et al., 2019).

The recommendations mentioned above for future practice present multiple challenges for educational leaders that intend to bring about systemic change that lead to student achievement through the vehicle of professional development, which includes, but are not limited to, the following: budgetary implications that are attached to the acquisition of high-quality PD opportunities for staff, investment from the Board of Education and the community concerning the cost associated with supporting a comprehensive PD program, support from stakeholder groups regarding the importance
of the initiatives and the subsequent changes to practice that result from the PD, the development and management of procedural practices that reinforce PD efforts, and the shift from content to methodology, a student-centered approach, and instruction that follows an inquiry approach. These challenges can be seen as insurmountable obstacles. Still, educational leaders should view these challenges as opportunities to bring about true sustainable educational change in a system by looking within for the solutions. Administrators and coordinators should begin the conversation with their staff to determine how some of these needs can be managed internally by staff. It is crucial that school leaders strategically choose personnel to send professional development opportunities that support their initiatives to understand that the individual will come back to the district and turnkey the training to their colleagues. The other way to defray the cost associated with supporting a comprehensive PD plan is to develop a vibrant professional learning community that shares materials, resources, and expertise to help the district's growth. The final thing that school districts should consider is developing positive messaging around the need for teachers to look beyond the content and focus on authentic learning experiences for students, which can be replicated in every district's learning environment. This is accomplished through the conscious development of commonality in the messaging that comes from every administrator, coordinator, and teachers that work in the district. Impactful educational reform occurs when all stakeholders are familiar with the PD's intent, believe in the rationale, and are empowered to facilitate their own learning experiences (Kennedy, 2016).
Recommendations for Future Research

Future research studies into the perceptions of teachers and administrators concerning professional development, the International Baccalaureate Programme, and the PD offered by the IB Programme could replicate the methods used by the researcher in a different district that is in the process of implementing a component of the IB Programme to produce a larger body of research on the topic. A comparative case study would determine whether teachers' and administrators' perceptions concerning professional development, the IB Programme, and the IB Program's PD would enhance the external validity of the findings in this study. Even though the study will still be limited to schools implementing the IB Programme, the study can focus on the methodological changes associated with the PD offered by the IB Programme and its impact on student performance. Additionally, suppose the research was compared to other programs designed to alter teachers' pedagogical practices. In that case, it can result in valuable data that confirms or denies the IB Program's validity as a system changing program that leads to deeper student learning.

The second suggestion for future research would be to incorporate a quantitative survey to this study that can measure the perceptions of teachers and administrators concerning the impact of the PD offered by the IB Programme in other districts that have implemented different aspects of the program. This mixed-method study would increase the sample of participants and provide the researcher with more data to determine whether the findings from this study are transferable and valid.

Because the case study site is implementing the IB Programme at each level, another suggestion for future research would be to conduct a longitudinal case study to
determine the impact of the PD offered by the IBO on student performance. The study would follow students as they enter the elementary school, are exposed to each level of the program (PYP, MYP, & DP), and determine the correlation between the IB program's PD Programme to the level of success experienced throughout the system. This study would provide the field with a thorough understanding of the influence of the PD offered by the IB Programme on teachers' pedagogical approach and its impact on student performance.

A final suggestion for future research would be to conduct a quantitative study that utilizes a pre and post-assessment to measure the program's tenets, such as the delivery methodology, student engagement in the classroom, and student choice as it applies to lesson participation. This will incorporate the qualitative methods used in this study, a quantitative survey to assess teacher perspectives, and an assessment tool that measures student performance applicable to the IB Program's teaching methods. The study will be over a more extended period, such as two to three years. The researcher will need sufficient time to administer the pre-assessment, provide professional learning opportunities for staff, conduct adequate classroom observations, and administer the post-assessment.

**Conclusion**

This study's findings reveal teachers' and administrators' perceptions concerning the International Baccalaureate Programme, the professional development offered by the IB Programme, and ideal professional development programs. As the recommendations for future practice suggests, these findings emphasized the need for educational leaders to foster a culture that embraces collaboration, ongoing communication with all
stakeholders, staff involvement in the development and delivery of high quality learning activities, the utilization of internal staff to build the capacity of teachers, and the continuous analysis of a professional development plan that serves the needs of staff that is aligned with the instructional initiatives of the district. As a result of the educational reform efforts that have occurred over the past fifty years, the field of education has experienced some frustration as it has been mandated to implement processes that are driven by assessment scores, procedures that are not in the best interest of students, and systems that have forced teachers to work in a vacuum toward efficacy on one summative assessment that ‘determines’ their value as teachers. Consequently, teachers and administrators expressed that they see a shift in the focus of the professional development offered by the International Baccalaureate Programme back to the fundamentals of the educational process, which involves the science behind student learning principles, pedagogical practices that are research-based and proven to be effective in the classroom, and the development of an educational culture that encourages collaboration and mutually accepted accountability measurements for the success of the program and the growth of all students in the system. The research literature on teachers' and administrators' perspectives concerning the impact of the professional development offered by high-quality International Baccalaureate Programme on student achievement is limited. The existing gaps between teachers' and administrators' perspectives concerning the impact of the IB Program's professional development on student performance must continue to be addressed. Although more work needs to be done in this area, this study addresses the existing research literature gap.
Epilogue

The dissertation process has been a discovery, a test of resiliency, an appreciation for the research process. It has provided the researcher with the opportunity to question his assertions and perceptions concerning quality instruction and the process that must be in place to ensure that it is replicated in every educational setting in a school district. Additionally, the theoretical framework utilized in the study provided the researcher with insights concerning the preferred environment and conditions that should be met to facilitate adult learning, the interconnectedness of all stakeholders in a learning environment, and the elements that should be present when initiating systemic changes in a system.

Although the researcher believed that the topic chosen would result in findings that would be impactful and help either validate or refute the investment that the district has made in the implementation process associated with the International Baccalaureate Programme, the researcher did not account for the strong push that emerged in the findings concerning the importance of methodology over content, teacher validation, and the development of student-driven learning environments. Furthermore, despite previous knowledge regarding the importance of the professional development process, the researcher did not fully grasp the significance assigned to its design, implementation, and evaluation, which was supported by the research conducted for the study. As a result of these findings, the researcher plans to focus more on professional development plans that are aligned with district-wide goals that result from the analysis of multiple data points, the preferred learning modality of educators, infuse research-based instructional
methodologies, utilize a periodic progress monitoring tool, and, most importantly, involve staff in all the components of its planning and implementation cycles.

The research experience has been enriching for the researcher as an educator, student, and educational leader. The researcher has been reacquainted with being a student again, accompanied by the review of new material, discovering the insights of others, assignments, deadlines, understanding the various nuances of a topic, and working with like-minded professionals are pursuing personal growth. As an educational leader, the researcher strengthened his vernacular regarding educational theory, research-proven methods, the way that school systems work, the perspective of others from diverse settings, the importance of the learning process, and the procedures that should be followed when trying to effectuate sustainable change in a school district. As a student and professional, this has been the most challenging, gratifying, and informative experience of the researcher’s entire life.

Lastly, from the first semester in the educational leadership program to the defense, the dissertation process has been a growing experience for the researcher. It has instilled the importance of research, data, and the implementation of processes that yield results that are trustworthy and free of bias. Additionally, I have learned that it takes time, perseverance, and the affinity for a topic to dedicate the necessary personal, spiritual, and psychological energy involved in completing a dissertation. Once completed, it can be defined as the highest accomplishment that the researcher has faced as a professional.
APPENDIX A

Permission Letter

7/15/2020

Dr. Ronald M. Masera
Superintendent of Schools
Center Moriches School District
529 Main Street
Center Moriches, NY 11934

Dear Dr. Masera:

As a doctoral candidate at St. John’s University I am writing to request permission to interview and observe staff at the Center Moriches School District for the purpose of a case study on the impact of professional development offered by the International Baccalaureate (IB) Programme on the pedagogical approach of teachers. I plan to include three teachers and three administrators, one from each building of the district, that have participated in professional development offered by IB to participate in the study.

If approved, the research will begin in the fall of 2020. My dissertation chairperson is Dr. Anthony Annunziato and my tentative proposal date is the week of August 24th, 2020 with a possible defense date of March 2021.

Thank you for your attention to this matter and assistance in my process. I appreciate your time and consideration of my request.

Regards,
Ricardo Soto
APPENDIX B

Informed Consent Letter

You have been invited to take part in a research study to learn more about the perceptions teachers and administrators have concerning the professional development offered by the International Baccalaureate (IB) Programme and its impact on pedagogical practices. This study will be conducted by Ricardo Soto for the Doctoral Department of Administrative and Instructional Leadership at St. John’s University as part of his doctoral dissertation. His faculty sponsor is Dr. Anthony Annunziato, Clinical Associate Professor of the Department of Administrative and Instructional Leadership.

If you agree to be in this study, you will be asked to take part in an interview concerning your perceptions of the professional development offered by the International Baccalaureate (IB) Programme. Your interview will be both audio and visually recorded. You may review these recordings and request that all or any portion of them may be destroyed.

Participation in this study will involve approximately one hour of your time and should include approximately six participants. There are no known risks associated with your participation in this research beyond those of everyday life. Although you will receive no direct benefits, this research may help the researcher understand the impact of the professional development offered by the International Baccalaureate Programme has on teacher, classroom practices.

Confidentiality of your research records will be strictly maintained by the researcher and you will be referred to as Participant 1A (and so on) from this point forward. All information gathered from the study will only be viewed by the researcher. Participation in this study is voluntary. You may refuse to participate or withdraw at any time without penalty. You have the right to skip or not answer any questions you prefer not to answer.

If you have any questions about your rights as a research participant, you may contact the University’s Human Subjects Review Board, St. John’s University, 718-990-1440.

Agreement to Participate:

______________________________  ______________________________
Subject’s Signature                     Date
August 31, 2020

[Teacher or Administrator]

NY

Dear Educator:

I am writing to let you know about an opportunity to participate in a dissertation research study on the impact of professional development (PD) offered by the International Baccalaureate (IB) Programme on the pedagogical approach of teachers. I plan to include three teachers and three administrators, one from each building of the district, that have participated in professional development offered by IB to participate in the study. I am a doctoral student at St. John’s University.

The purpose of this qualitative case study will be to describe the perspective of teachers and administrators as it related to the PD offered by the IB programme and teacher, classroom practices. Agreement to be contacted for more information does not obligate you to participate in this study. Your participation in the study is voluntary. If you do not wish to participate, you may withdraw at any time. If you agree to participate in this study, please sign the attached consent form and email the signed consent form back to me for verification. If you are not comfortable emailing it back to me, you may request a consent form in a stamped envelope and include all signature forms to be mailed back together.

I may publish the results of this study; however, I will not use your name or share any information you provided. Your information will remain confidential. If you would like additional information about the study, please respond to [email] or [phone number]. Thank you again for considering this dissertation research opportunity.

Respectfully,

Ricardo Soto
APPENDIX D
One-to-One Interview Protocol

School Building: ________________________________

Interviewee (Title and Name): ____________________

Interviewer: _____________________________________

Preliminary Interview Questions (collected via email):

_____ A: What grade(s)/subject area do you teach?

_____ B: How many years have you been teaching?

_____ C: Please identify your certifications.

_____ D: Are you tenured in the district?

_____ E: How many years have you taught in the district?

_____ F: When did you attend professional development offered by the International Baccalaureate Programme?

_____ G: Outside of the PD offered by the IBO, what is the most recent PD activity that you participated in?

Introductory Protocol

Interviewer: To facilitate our note-taking process, I would like to record our conversation today. For your information, I will be the only one that will be privy to the audio recordings which will be eventually destroyed after they are transcribed. As identified in the informed consent letter that you signed, all the information gathered during the interview process will be held confidential and your participation is voluntary and you may stop at any time if you feel uncomfortable. Thank you for agreeing to participate.

I have planned this interview to last no longer than one hour. During this time, I have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning.
Introduction

You have been selected to speak with me today because you have participated in the professional development offered by the International Baccalaureate (IB) Programme. The purpose of this qualitative case study will be to describe the perspective of teachers and administrators as it related to the PD offered by the IB programme and teacher, classroom practices. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about the perspectives of teachers and administrators as it pertains to the PD offered by the IB programme and its impact on pedagogical practices.

Interview Questions (one on one):

1. Has the professional development offered by the IBO been helpful to your teaching?

   Probes: Can you site some examples that will validate your response?

2. As a result of the PD offered by the IBO, have you changed your pedagogical practices? If so, please identify the specific ways that you have altered your teaching approach.

   Probes: How impactful has these changes been on student performance?

3. What is the role of IB in the school district?

   Probes: Has your perception of the role of IB changed throughout the implementation process?

4. What is the role of the professional development offered by the International Baccalaureate (IB) Programme?

   Probes: Were the learning objectives of your PD sessions accomplished?

5. Does the PD offered by the IBO differ from traditional PD?

   Probes: What would you change?

6. Would you recommend the implementation of the IB program to educators in another district?
Probes: Please provide a rationale for your response.

7. How do you define successful professional development?

Probes: What is the evidence that you use?

8. What is the purpose of professional development in a school district?

Probes: Does duration of time have anything to do with the success of PD?

9. How are successful professional development plans created and implemented?

Probes: How often should a school district review their PD plan?

Closing

That was the final question. Before we conclude, do you have any questions for me?

Thank you for your time and as I mentioned at the beginning of our interview, all the information is confidential, your identity will not be exposed at any time during the research study, and the goal of the qualitative case study will be to look at the impact of PD offered by the International Baccalaureate Programme on pedagogical practices.
APPENDIX E

Focus Group Protocol

Meeting Information

Date: _________________
State Time: _________________
Location: ___________________
Meeting Facilitator: _________________
Elapsed Time: _________________

Participant Information

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Introductory Protocol

Facilitator: To better understand your responses, I would like to record our conversation today. For your information, I will be the only one that will be privy to the recordings which will be eventually destroyed after they are transcribed. As identified in the informed consent letter that you signed, all the information gathered during the focus group will be held confidential and your participation is voluntary, and you may stop at any time if your feel uncomfortable. Thank you for agreeing to participate.

I have planned this focus group to last no longer than one hour. During this time, I have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning.
Introduction

You have been selected to participate in the focus group because you have participated in the professional development offered by the International Baccalaureate (IB) Programme. You are joined by colleagues from your building to specifically look at the PD implementation that is relevant to your program. The purpose of this qualitative case study will be to describe the perspective of teachers and administrators as it related to the PD offered by the IB programme and teacher, classroom practices. My study does not aim to evaluate your techniques or experiences. Rather, I am trying to learn more about the perspectives of teachers and administrators as it pertains to the PD offered by the IB programme and its impact on pedagogical practices. Please understand that there are no wrong or right answers, only differing points of view and nothing that you share today will be shared with your administrators or anyone else outside of this focus group.

Focus Group Discussion Topics:

1. What do you think about the Internal Baccalaureate Programme?
   
   **Probes:** How is it different from other programs?

   Is the program helpful to children?

2. What are your impressions of the professional development offered by the International Baccalaureate (IB) Programme?

   **Probes:** Are there any differences between the PD offered by IB and traditional PD?

   Are there elements that you incorporated into your classroom?

   Is there any impact on your students?

3. What is the role of IB in your building?

   **Probes:** What are the signs that IB is taking hold in your building?

4. What is quality professional development?

   **Probes:** How do you know when it is effective?

5. How have you incorporated professional development as part of your growth plan?

   **Probes:** What has been your most impactful PD experience?
**Probes:** Does duration of time have anything to do with the success of PD?

**Closing**

That was the final question. Before we conclude, do you have any questions for me?

Thank you for your time and as I mentioned at the beginning of our focus group, all the information is confidential, your identity will not be exposed at any time during the research study, and the goal of the qualitative case study will be to look at the impact of PD offered by the International Baccalaureate Programme on pedagogical practices. I thank you again for your participation and contribution to my study.
APPENDIX F

IRB Approval

Federal Wide Assurance: FWA00009066

Nov 2, 2020 2:36:02 PM EST

PI: Ricardo Soto
CO-PI: Anthony Annunziato
Ed Admin & Instruc Leadership


Dear Ricardo Soto:

The St John's University Institutional Review Board has rendered the decision below for Professional Development and the International Baccalaureate Programme: A Case Study on the Impact of Professional Development Offered by the International Baccalaureate Programme on Teacher Pedagogical Practices. The approval is effective from November 2, 2020 through November 1, 2021.

Decision: Approved

PLEASE NOTE: If you have collected any data prior to this approval date, the data must be discarded.

Selected Category: 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.

Sincerely,

Raymond DiGiuseppe, PhD, ABPP
Chair, Institutional Review Board
Professor of Psychology
Marie Nitopi, Ed.D.
IRB Coordinator
APPENDIX G

Superintendent’s Approval

July 23, 2020

Dear Mr. Soto:

I am in receipt of your letter, dated July 17, 2020, seeking approval to interview and work with staff in the district for your qualitative case study, regarding the impact of professional development offered by the International Baccaulaureate (IB) Programme on the pedagogical approach of teachers.

You are hereby authorized to conduct this study.

I wish you much success in this endeavor and your pursuit of higher education. I look forward to reading the results of your research.

Most sincerely,

[Signature]

Superintendent of Schools
REFERENCES


http://edglossary.org/professional-development/


“The effectiveness of any professional learning activity, regardless of its content, structure, or format, depends mainly on how well it is planned” (p. 12).


achievement. Issues & Answers. REL 2007-No. 033. Regional Educational Laboratory Southwest.
# VITA

<table>
<thead>
<tr>
<th>Name</th>
<th>Ricardo Soto</th>
</tr>
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<tbody>
<tr>
<td><strong>Baccalaureate Degree</strong></td>
<td>Bachelor of Science, State University of New York: Hunter College, New York Major: English Language Arts</td>
</tr>
<tr>
<td><strong>Date Graduated</strong></td>
<td>June 1999</td>
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<tr>
<td><strong>Master’s Degree</strong></td>
<td>Master of Science, State University of New York: Brooklyn College, Brooklyn, New York Major: Secondary Education, English Language Arts, 7-12</td>
</tr>
<tr>
<td><strong>Date Graduated</strong></td>
<td>June 2003</td>
</tr>
<tr>
<td><strong>Other Degrees and Certificates</strong></td>
<td>Certificate of Advanced Studies in Educational Leadership, State University of New York: Stony Brook University, Stony Brook, New York</td>
</tr>
<tr>
<td><strong>Date Completed</strong></td>
<td>May 2014</td>
</tr>
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