

RACE AND GENDER DISPARITIES IN INTERNATIONAL BACCALAUREATE
PROGRAM PARTICIPATION IN NORTHWEST PUBLIC IB SCHOOLS
AND PRACTICES TO INCREASE PARTICIPATION EQUITY

by

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DISSERTATION ABSTRACT

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Title: Race and Gender Disparities in International Baccalaureate Program Participation in Northwest Public IB Schools and Policies and Practices to Increase Participation Equity

This study examined disparities in participation based on race and gender in the International Baccalaureate Diploma Program (IBDP) in Oregon and Washington and policies and practices that may lead to representation among underrepresented groups. Previous research has demonstrated a relationship between IBDP participation and academic outcomes including graduation and college success. This study synthesized past research on the IBDP as an equity-lever for underserved students, barriers to accessing the IBDP for underrepresented groups, and keys to successful implementation with diverse student populations. A two-phase mixed-methods explanatory design guided this exploration. Phase 1 involved collection and analysis of IB registration and demographic data from across the region. In Phase 2, case studies were conducted in contexts of interest based on the Phase 1 results. Results of Phase 1 suggest a lack of diversity within Oregon and Washington schools offering the IBDP, higher rates of participation among IB students as Course rather than Diploma candidates, and a significant main effect for race and gender, respectively, upon the rates of disparity, but no significant interaction effect between race and gender. Findings in Phase 2 suggest that attitudes and beliefs of staff, flexibility that allows for culturally relevant adaptation of the IB curriculum, and full funding of IB fees may be associated with higher representation for Hispanic/Latinx students. Implications include a need for research on IB access considering race and gender among a

larger, more diverse sample. Implications for practice include the potential value of heritage language programs, leveraging affinity groups, and eliminating fees.

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CHAPTER I

INTRODUCTION

The International Baccalaureate Organization (IBO) is a not-for-profit, global foundation formed in 1968 that provides a framework for internationally focused educational programs for students ages 3-19. The International Baccalaureate (IB) supports four distinct programs: a Primary Years Program for students in Grades Pre-K through five, a Middle Years Program for students in grades six through ten, and the Diploma and Career-related Programs, for students in the final years of secondary school. Secondary IB offerings, and in particular the Diploma Program, have come to be recognized globally as some of the most rigorous preparation for university study available to secondary school students worldwide (Burriss, Welner, Wiley, & Murphy, 2007; Dickinson, Perry, & Ledger, 2017; Garrity, 2004; Kyburg, Hertberg-Davis, & Callahan, 2007). Additionally, student enrollment in the IB Diploma Program (IBDP) has been strongly associated with probability of on-time graduation, college enrollment, college persistence, and other measurements of academic achievement.

The IB offers studies in six academic areas: Language and Literature; Language Acquisition; Individuals and Societies; the Sciences; Mathematics; and the Arts. Additionally, students pursuing the IB Diploma take a Theory of Knowledge course, complete a 4,000-word extended research essay, and participate in 18 months of self-directed engagement in the areas of creativity, physical activity, and community service.

A cornerstone of an IB education is the IB Learner Profile, a set of 10 characteristics, (knowledgeable, caring, principled, reflective, open-minded, balanced, thinkers, risk-takers, communicators, inquirers), that the organization aims to develop within students across all programs. The mission statement of the IB includes language such as “to develop inquiring,

knowledgeable and caring young people who help to create a better and more peaceful world” and “encourage students across the world to become active, compassionate and lifelong learners” (*About the IB*, 2018). In addition to these more holistic outcomes articulated in IB curriculum guides and program handbooks, most colleges and universities worldwide award transfer credit to matriculating high school graduates for the successful completion of IB coursework and its accompanying internationally normed, criterion-referenced exams. This possibility of advanced credit earned in secondary school, combined with an articulated curriculum aimed not only at academic achievement but also at fostering inquiry, problem solving, personal growth and community engagement, has led to a swift proliferation of schools across the globe offering IB programs (Bunnell, 2008).

In the United States specifically, IB Programs have spread rapidly in the last fifteen years, and not only in more well-resourced schools and communities that had been the typical hosts of IB programs in the first three decades of the organization (Bunnell, 2008; Perna et al., 2013; Saavedra, 2014). Researchers have documented the rapid emergence and growth of IB programs in the United States, specifically in the states of Florida, Texas, California, and the cities of Chicago, New York, and Philadelphia, which are all populated by economically diverse students and students from a multitude of racial and ethnic backgrounds (Mayer, 2008; Saavedra, 2014).

In data collected over the last two decades, the previously mentioned benefits of increased likelihood of graduation and college enrollment and persistence have been noted particularly for historically underrepresented racial groups and for male students who are at greater risk for not graduating or not attending college (Saavedra, 2014). IB Diploma Programs have been initiated, in many cases, as potential equity levers, in response to a lack of rigorous

college preparatory programs in some public-school systems. Schools, districts, and even entire states have embraced IB curricula, and “IB for all” or open access IB programs as potential solutions to long-standing opportunity and achievement gaps (Mayer & Tucker, 2008; Perna et al., 2015; Saavedra, 2014).

Despite the prolific adoption of IB programs in the US and the good intentions of increased access, it is not a foregone conclusion that the presence of an IB program in an American public school and the option for students to participate in IB courses will lead to equitable participation in IB programs within diverse school communities (Perna et al., 2015; Southworth & Mickelson, 2007). Access does not always lead to opportunity and participation, particularly in diverse schools that serve students from a wide range of economic, racial, cultural, and linguistic backgrounds. Although some studies have indicated that the IB Diploma Program has potential to create more equitable outcomes for historically underrepresented racial groups, on a broad scale, wide opportunity and participation gaps have persisted (Kyburg et al., 2007; Perna et al., 2015; Siskin, 2016).

The socio-cultural power relationships, implicit biases, and social capital differentials that exist in the world at large are at play in the microcosms of public schools. How do school and district policies and practices, and the underlying attitudes and beliefs of educational leaders who enact them, potentially influence racial and gender equity of participation in public school IB programs? This study aims to address that question.

A Transformative Conceptual Framework

This study has utilized what Creswell and Creswell (2017) describe as a “transformative” conceptual framework (p. 68) based on Nieto’s (2016) concept of Social Justice Educational Leadership. In implementing an overarching transformative conceptual framework in guiding

this mixed-methods study, I have identified and defined a problem of practice which has arisen from spending time within a community of interest (namely a racially and economically diverse public IB school) used an appropriately equity focused theoretical framework, and developed questions which have transformative potential, such as those “focused on authority and relations of power in institutions and communities” (Creswell & Creswell, p. 70). The research design was, therefore, crafted with inclusivity in mind. I aimed to select participants who accurately represent the group or groups of interest and to recognize diversity within the group. The data collection and analysis will hopefully benefit the group being studied and should open “avenues for participation in the social change process” (p. 70). Lastly, through the use of a transformative framework, it is my hope that the findings of this study “elucidate power relationships” and “facilitate social change” (p.70). Utilizing Nieto’s (2016) theory of Social Justice Educational Leadership, discussed below, it is my aspiration that this study lives up to the criteria associated with transformative work and hopefully provide meaningful findings for those involved in the work of developing equity of participation among historically underrepresented student populations in IB programs.

Theoretical Framework

Theoharis (2016) noted that social justice is a social construct that varies by context, and that in educational settings, social justice centers on addressing marginalization and exclusion based on race, class, gender, sexual orientation, economic status, ability, and other factors. In education, social justice work focuses on advancing equity of educational, and therefore social, political, and economic opportunity and access (Bogotch, 2002; Gewirtz, 1998; Goldfarb & Grinberg, 2002; Theoharis, 2016).

Nieto's (2016) concept of Social Justice Educational Leadership, although informed by other theories which address issues of marginalization when applied in an educational context, such as Critical Race Theory (Ladson Billings & Tate, 1995), Implicit Bias Theory (Brown, 2018; Warikoo, Sinclair, Fei, & Jacoby-Senghor, 2016) and Social Capital Theory (Coleman, 1990, 1994; Linn, 2011), provides a more specific framework focused on four key action goals that educators wishing to lead for social justice will undertake. Recognizing that institutional marginalization is rooted in deeply seated biases based on race, culture, language, gender, economics, and other factors, Nieto (2016) first posited that educational leaders must challenge, confront, and disrupt misconceptions, untruths, and stereotypes that lead to structural inequality and discrimination. Additionally, acknowledging that a great deal of educational inequity is related to resource distribution and access, Nieto argued that Social Justice Educational Leaders must work to provide all students with the resources needed to learn to their full potential. A third claim of Nieto's is that to truly work for social justice, educational leaders must draw on the talents and strengths that students bring to their education and reject deficit perspectives about students from under-privileged backgrounds. Lastly, social justice educational leaders must create learning environments that promote critical thinking and agency for change among both staff and students.

The identification of ways in which school-level policies and practices may influence participation rates in IB programs for historically underrepresented and overlooked students is an undertaking aimed at promoting social justice leadership within the context of IB schools. This type of work that can create more equitable systems of access, participation, and ultimately achievement is directly tied to Nieto's theory. A transformative framework of social justice educational leadership has therefore informed the literature review process, the development of

the research questions for this study, and its two-phase mixed methodology. The mixed-methods research design implemented a lens of social justice leadership theory. The quantitative analysis revealed contexts in which historically underrepresented racial groups of students have been represented, and the qualitative case studies allowed for the examination of school-level policies and practices in those contexts, to consider the impact they may be having on increasing equity of access to and participation in IB programs.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter frames the study in the greater context of the research already undertaken in the areas of IB access and participation equity. This review identifies and elucidates four key findings from the literature focused on IB, and in a few cases AP, participation and retention among historically underrepresented student groups in United States public schools. Beginning with a description of findings related to opportunity and access gaps, this section includes evidence that IB programs can be successfully implemented in diverse communities and can lead to academic success for historically underserved students. Additionally, this section presents findings related to factors which may be barriers to IB participation for Black, Hispanic/Latinx, and other historically underrepresented student racial groups in the IB, as well as factors which may contribute to increased equity of participation. Further, this review leads to an argument for the necessity of this study based on gaps in the current research.

Gaps in Opportunity and Access in IB Programs

IB programs in the United States have historically been present in private institutions and more well-resourced public-school environments. In the early 2000s, the IB experienced rapid growth and expansion within American public schools and even saw entire urban districts like Chicago and entire states like Florida attempt to provide an IB education for a multitude of diverse students (Bunnell, 2008). With the expansion of IB programs in larger, more diverse public-school systems, there was hope that the IB's rigorous, interdisciplinary curricular offerings, which lead to sound college preparation and the potential of earning university credit in high school, would help to close gaps in achievement, graduation rates, and college access. Perna et al. (2015), however, found that "although the IB increased its representation in schools

across the nation that serve greater proportions of Hispanic and low-income students, the characteristics of students participating in IBDPs are much less diverse” (p. 419). Often, participation among White students would increase as the opportunities for IB participation expanded. However, this was not the case for African American/Black, Hispanic/Latinx, and/or Native American students. Describing this occurrence as “opportunity hoarding”, and an example of when redistributive policies are taken advantage of by a more privileged group, Perna et al (2015) further noted that schools hoping to increase access within their IB programs will not do so among historically underrepresented student groups simply by making the program available. Furthermore, schools and the IB as an organization, have been “failing to provide the opportunity to improve the academic readiness of populations in the United States that have traditionally averaged lower levels of college readiness” (p. 419). The opportunity for the IB Diploma Program, a highly structured, academically rigorous curricular program, to improve academic preparation for college continues to vary based on students’ race/ethnicity even within individual schools.

It is worth noting that much of the research focused on disparities in IBDP participation by race focuses on underrepresentation among Black/African American, Hispanic/Latinx, and Native American groups of students. Past research has indicated that Asian students as a group have not been historically underrepresented within the IBDP (Hertberg-Davis, & Callahan, 2007; Mayer, 2008). Although, certainly, the racial grouping label of *Asian* is broad and obscures the diversity of cultures included with the one label, as a whole Asian students are not considered historically underrepresented group within the existing body of research on IBDP access.

Fidelity and Success of IB Programs in Diverse Settings

Researchers have questioned whether IB programs, once housed only in schools attended by children of more affluent, well-educated, socially resourced parents can be successful academic environments on a larger scale for a more diverse range of student groups. These groups include students from historically underrepresented racial, cultural, economic, and linguistic backgrounds, who might lack the resources and prior academic preparation of their White and more affluent peers.

Two studies (Corbett-Burriss et al., 2007; Garrity, 2004) focused on the Rockville Centre, NY school district, a suburban district of 3500 students, in which approximately 25% of the population were non-White and approximately 20% identified as African American/Black or Hispanic/Latin. These studies produced similar findings related to program fidelity and outcomes. Both studies found that a school's adoption of the IB for all students was associated with academic benefits across the board. Garrity (2007) demonstrated correlations between students' IB participation and high scores on statewide exams as well as enrollment in advanced mathematics courses (a common indicator of post-secondary persistence). Corbett-Burriss et. al. (2007) found that participation in IB English and Math courses, for all students, was strongly associated with completing college in four years.

Studies have also indicated that these successes have not come at the expense of fidelity to the IB curriculum or other rigorous, prescribed curricular programs (Flores & Gomez., 2011; Kyburg, et al., 2007; Mayer, 2008). Schools serving students from diverse backgrounds have implemented adaptations to the program which meet the needs of students and families, while still adhering to the requirements dictated by the IB. Burriss et. al. (2007) found that increased inclusion of historically underrepresented groups of students in IB courses and IB exam

participation had no effect on the district's overall mean IB exam scores, which historically had been close to international averages and remained that way. Furthermore, the study concluded that the inclusion into the IB of students who had not previously taken upper track or higher-level courses did not have a negative impact on the performance among historically higher achieving students, a common concern of parents and educators when access to advanced programs is expanded. Instead, the increased access was associated with an increase in mean IB exam scores among students who had been tracked in the top 20% of both Math and English courses. The heterogeneous grouping had positive results for all students.

Barriers to IB Participation among Historically Underrepresented Student Groups

Past studies have indicated that there are often environmental or contextual barriers to historically underrepresented student groups accessing, persisting, and achieving success in IB programs and similar rigorous dual credit programs (Barber & Torney-Purta, 2008; Corbett-Burris et al., 2007; Flores & Gomez, 2011; Kyburg et al., 2007; Mayer & Tucker, 2008; Southworth & Mickelson, 2007). The bulk of the research on this topic points to four main roadblocks to IB participation: tracking, teacher biases, lack of a peer group within the program, and curricula and/or instruction which are not culturally responsive or culturally sustaining.

Tracking as a Barrier to IB Participation

Placement of students into academic tracks has long been a fixture of American secondary schools. Tracking often begins in the middle school years, placing students in a position of pre-determination of their academic potential. Past examinations of IB access for historically underrepresented groups of students have suggested that tracking in the years leading up to the availability of IB programs is a leading factor in disproportionality of participation

based on race and gender (Garrity, 2004; Mayer & Tucker, 2010; Perna et al., 2015; Southworth & Mickelson, 2007).

A lack of academic preparation, including appropriately rigorous coursework, is one of the main factors that limits college access and success for low income and non-White students, and in particular males (Perna et al., 2015). Often, students of color, in particular young men of color, do not enroll in college preparatory classes in high school, including IB courses, because their schools have failed to academically prepare them. They are not as academically prepared for college prep coursework as their White peers because students from historically underrepresented racial groups, earlier in their academic lives, are more frequently placed in lower academic track courses than their White classmates, even in situations in which they have test scores similar to their White peers (Mayer & Tucker, 2010; Perna, 2015; Ochoa, 2013). A study focused on access to and preparation for the IB Diploma Program in the state of Florida found that “low-levels of academic preparation for college, especially among these groups of students, are attributable to both the absence of academically rigorous course offerings in the high school attended and under-participation in the rigorous courses that are available” (Perna et al., 2015, p. 403).

In a study focused on nearly 2,000 students across 11 high schools in the Charlotte Mecklenburg School District of North Carolina, a district which at the time was comprised of 39% non-White students and had suffered from *de facto* segregation until the late 1990s, Southworth and Mickelson (2007) found that tracking undermined the effectiveness of desegregation by re-segregating students” and that “racially correlated tracking undermined desegregation's capacity to improve black students' performance” (p. 500).

Garrity (2007) noted that students of color and students living in poverty are overrepresented in lower academic tracks across the country in public schools and that “achievement gaps based on external assessments” (p. 24) tend to hold up throughout students’ formal education. Furthermore, well-meaning counselors and parents often select lower tracks as a means of protecting potentially vulnerable students, especially boys of color, from failure, inadvertently denying these students rigorous curriculum and preparation for later academic opportunities. Thus, middle school and early high school, according to Garrity (2007) are “critical points at which academic doors begin to close” (p. 24). Tracking, whether based on demonstrated ability, perceived ability, or even student or parent choice, serves as a clear barrier to students’ potential to access challenging, college preparatory coursework in high schools.

Teacher Biases as a Barrier to IB Participation

The attitudes and beliefs which teachers, administrators, and other school staff hold about students have powerful implications for the academic trajectories upon which students find themselves (Foust et al., 2009; Ochoa, 2013; Perna et al., 2015; Warikoo et al., 2016). Often, teachers’ perceptions of students are weighed as heavily, if not more heavily, than other factors like test scores, past performance, or students’ willingness for challenge in decisions about students’ academic tracking and therefore the type of coursework to which students have access.

Perna et al. (2015) noted that in Florida, where most schools have an application process to enter into an IB program, 73% of applicants across the state were admitted into IB programs at their respective schools. This high rate of acceptance indicates that participation in the program is accessible to many; however, the study also indicated that application processes and admissions criteria can vary widely across the state and in some cases may involve components

which are culturally biased, contributing to a lack of racial and gender representation in any context despite the high acceptance rate.

Foust, Hertberg-Davis, and Callahan (2009) found that students who were participating in IB programs and particularly those who were working in pursuit of the IB Diploma reported better treatment, namely more respect and higher expectations, from their teachers. However, even in school settings where upper-level coursework, like IB courses, are open-access and are not guarded by systems of tracking, studies have indicated that the biases of those who conduct recruitment, coordination, and instruction for advanced programs, like the IB, can lead to inequities of access and participation along racial and economic lines.

Ochoa (2013) described, in a case study of one California school offering an IB program to a diverse range of students, how invitation into and placement within IB courses were based on factors which were deeply rooted in staff members' perceptions of students' capabilities. These beliefs and perceptions, and their impact on students' access, contributed to disproportionate levels of racial and gender representation within the school's IB program. Furthermore, these perceptions, often rooted in systemic and institutionalized racism and class inequality, "fundamentally influence students' opportunities, access to resources, and their relationships" (p. 62) with peers and with school staff.

Lack of Cultural Capital and Peers as a Barrier to IB Participation

Racial and gender underrepresentation in IB programs seem to be self-fulfilling. A student's ability to identify themselves with other students and feel a sense of social belonging in a common context has been identified as an influence upon the likelihood that a student will enroll and persist in an academic course (Barber & Torney-Purta, 2008; Hertberg-Davis & Callahan, 2008; Ochoa, 2013). Feeling culturally or socially alone and potentially feeling as if one is

serving as a representative of one's racial, gender, or cultural group have been identified as reasons why students do not access or continue in upper-level high school classes.

Kyburg et al. (2007) linked cultural capital and access to IB programs. Students who have family members who have navigated the educational system or students who have peer social networks with access to advanced classes have already learned many of the lessons needed to be successful in more rigorous coursework. In reference to skills like accessing a library and navigating the college admissions process, Kyburg et al. (2007) noted that "school personnel assume these lessons are already known thus make no provisions to teach them" (p. 186).

Relatedly, Southworth and Mickelson (2007) found that "the greater the proportion of peers with college aspirations and parents with greater educational and occupational attainment the more likely students were to be placed into higher level courses independent of academic ability" (p. 42). Barber and Torney-Purta (2008) found that in certain instances students who experienced environments with more academically supportive peers were more likely to have their high achievement recognized by teachers. In particular, high-achieving male students were more likely to be nominated by teachers as high-achieving if their friends valued academics.

When students from historically underrepresented groups have been placed into or have opted into IB courses, however, a sense of cultural isolation is often a barrier to persistence. Hertberg-Davis and Callahan (2008) found that many Black students do not feel a sense of belonging in IB programs and even that the presence of a "the tight-knit community of like peers" that many White students experience in IB programs can be a barrier to students of color who "did not see themselves reflected in this community" (p. 206) and felt isolated.

Unresponsive Curricula and Instruction as a Barrier to IB Participation

In qualitative or mixed methods studies (Hertberg-Davis & Callahan, 2008; Kyburg et al., 2007; Mayer, 2008) which utilized interviews with students, either currently participating in IB programs or who had exited IB programs, participants noted that curricula and/or instructional practices employed by teachers in IB courses were not well matched to students' identities and experiences. Although Nugent and Karnes (2002) reported that "supporting the maintenance and development of its students' cultural identities" and "exposure to a variety of viewpoints fostering tolerance and inter-cultural understanding among youth of the world" (p. 33) was a hallmark of the IB as an organization, students of color in American public IB World Schools, seem to disagree.

In examining the experiences of students in 23 IB schools across 7 states, Hertberg-Davis and Callahan (2008) found that many students reported a "one size fits all" approach to curriculum and instruction in IB courses. While there were some instances of all students reporting excessive rigidity in the instruction and assessment practices of IB teachers, a lack-of-fit and poor matching to cultural background and personal learning styles was most notable in the experiences of students from historically underrepresented groups. Despite the best efforts of schools to recruit and attract students from "a broad range of educational experiences, preferred learning styles, cultural backgrounds, interests, and readiness levels" (p. 212) to IB programs, students of color continue to feel isolated and disconnected from the content and the methodology present in IB classrooms.

Kyburg et al. (2008) similarly found in urban IB schools which served low income historically underrepresented groups of students that "some students believed that it was their responsibility to meet the needs of the program, not the other way around" (p. 203). Student

focus groups indicated that teachers expected students to fit an IB mold and were fearful to adapt the curriculum to meet the backgrounds and needs of students. This rigidity was commonly identified as a factor which drove students to exit IB classes or programs.

Keys to IB Success for Historically Underrepresented Student Groups

In many ways the factors which can contribute to a school's success in fostering equitable and representative participation in IB programs are the opposites of the barriers discussed above. The literature on this subject identifies six key factors, all or many of which are present in diverse public high school environments where schools are increasing representation of historically underrepresented student groups in IB and AP programs. Four of these factors can be seen as actions taken in response to or prevention of the factors discussed above which are associated with lack of participation by historically underrepresented student groups.

Because students from historically underrepresented groups have been traditionally passed over and even discriminated against in the process of selection for advanced coursework (Barber & Torney-Porta, 2008; Garrity, 2004), tracking as an intentional or *de facto* method of gate keeping for IB programs should be eliminated where schools wish to create greater equity of access and success. IB programs, in fact, have no formally articulated admission processes (Mayer, 2008), and all decisions about how to invite and welcome students into programs and classes lie with local schools, districts, or states. Heterogenous grouping, challenging advanced curriculum, and high expectations for all students have been found to be likely to benefit students from historically underrepresented groups participating in IB courses (Corbett-Burris et al., 2007; Garrity, 2004; Perna et al., 2015). Therefore, it seems that the elimination of tracking schoolwide, or at least an open access policy once students reach the possible entry point for IB

courses, is a factor which can contribute to increased access and success within the IB for historically underrepresented student groups.

Expressed Belief in Student Potential

Considering that teacher and administrator biases, both overt and implicit, can have lasting negative impacts on the academic trajectories of students of color (Brown, 2018; Ochoa, 2013), a key factor in working toward equity of IB participation is that schools develop, manifest, and clearly articulate attitudes and beliefs that every student has the potential to succeed in IB courses and exams.

Mayer (2008) noted that successful AP and IB programs were characterized by teachers' beliefs in their students' abilities to meet the high expectations of the curricula as well as support mechanisms designed to foster positive peer support groups and college-oriented activities" (p. 11). In school settings in which teacher and other staff member beliefs were not explicitly stated and infused into the pedagogy of the program, students from historically underrepresented groups did not persist. Kyburg et al. (2007) found that schools that specifically emphasized in their hiring processes attitudes and beliefs among teachers and administrators that all students could be successful in IB programs allowed for a vision associated with inclusion and access to flourish. These programs were more likely to have a unified vision around equity, inclusion, and the potential of all students, which translated into greater participation among historically underserved students.

Individual Counseling

Although many studies have focused on school leadership, public messaging, or structural considerations, it has also been duly noted that one-on-one contact between individual students and a knowledgeable, culturally competent, and caring adult in the school can have a

measurable impact on access and persistence rates in IB programs for students from historically underrepresented groups (Kyburg et al., 2007; Mayer & Tucker, 2010) In many school communities where students of color participate in the IB at rates closer to representation, researchers witnessed qualified, trained, dedicated teachers, who exhibited genuine care and concern serving as mentors to students in IB programs (Kyburg et al. 2007).

Mayer and Tucker (2010) reported in their case study that the IB Coordinator met with every 10th grade student in the year before he/she would have the opportunity to enter IB courses to plan the students' subsequent academic pathway. Within this practice, care and attention were given to specific demographic characteristics of students. Although this was only one conference between a student and the Coordinator, it at least ensured that every student had some contact with a staff member to discuss the IB, something that many schools do not provide. Siskin and colleagues (2010) found that guidance counselors play a crucial role in bringing students into the IBDP and determining which students participate. School counselors' levels of knowledge and understanding about the program, willingness to participate in active outreach, and attitudes and beliefs about the abilities of all students to succeed in IB courses were cited as important factors in establishing equity in public school IB programs.

Regardless of the specific role or official title of the adult, past studies (Kyburg et al., 2007, Mayer, 2008; Mayer & Tucker, 2010; Siskin 2010) repeatedly point to the intentional interactions between adults and potential or current IB students focused on accurate information, encouragement, and support as a program element which boosts participation among historically underserved students.

Culturally Responsive Pedagogy and Provision of Academic Support

Because not all students come to IB World Schools with the same academic preparation, a school that wishes to provide equitable opportunity to a rigorous, de-tracked educational program must provide academic support to students who need it. Many studies have pointed to the availability of academic support, in a variety of forms depending on the context, as a strategy for retaining historically students from historically underrepresented groups in IB programs. Summer programs at some IB schools have provided social-emotional support, academic support, and a welcoming feel to the program (Kyburg et al., 2007). Academic support throughout the school year, either through after-school tutoring or teacher access time, or built-in support classes during the school day for struggling learners were essential for the maintenance of heterogenous groups and the success of all students (Burris et al., 2007).

Mayer (2008) observed “significant variation among these groups regarding the appropriateness of the AP and IB curricula to meeting students’ needs” (p. 210), touching on both the need for support but also for schools and classroom teachers to adapt their practices to be more culturally responsive to a diverse range of students participating in IB courses. Kyburg (2007) found that many teachers were engaging in culturally responsive teaching particularly regarding the choices made about the literature selections or the topics that IB history teachers selected for their courses.

Regarding successful and equitable assessment, Kyburg also noted, “importantly, teachers seemed to also appreciate that their students’ intellectual grasp of material may differ substantially from their level of study skills, a phenomenon especially common among youths fluent in more than one language” (p. 200). Although historically underserved students needed extra help in recouping missing skills like paragraph writing, note-taking, or public speaking,

supportive and culturally responsive educators were able to recognize that students had the potential to interact with and succeed in rigorous curriculum; they simply needed some skill building and scaffolding.

Affinity Groups for Students

Helping historically students from historically underrepresented groups to not feel culturally isolated in IB programs has been documented as a key to improving enrollment and retention. Kyburg et al. (2007) found that schools that provided peer support groups for students of color and in particular males, had greater degrees of retention and success within their IB programs. Barber and Torney-Purta (2008) reported that thoughtfully and intentionally grouping students together in classes, ensuring that historically students from historically underrepresented groups are not alone, could contribute to success, noting that “students’ motivation in a subject often improves when presented with appropriately challenging coursework in the context of peers with academic interests” (p. 436). Additionally, when schools provided culturally specific support groups or affinity groups for students of color who might have felt alone in their classes or who might not have necessarily seen themselves as the types of students to participate in IB or other rigorous academic programs, students were more likely to persist (Mayer, 2008).

Parent/Family Engagement

Parent and family involvement were welcomed and actively solicited in the environments within which historically students from historically underrepresented groups enrolled, persisted, and were successful in IB or AP programs. (Burris et al., 2007; Flores & Gomez, 2011; Garrity, 2004; Kyburg et al., 2007). In the case of Rockville Center, NY, which eliminated tracking and sought to engage all students in rigorous college preparatory coursework, parents or caregivers, specifically those from historically underrepresented groups, were engaged from the inception of

the initiative (Burris et al., 2007; Garrity, 2004). Parents were invited into the process of reviewing test data, diploma rates, and levels of student participation in high-level classes via several forums. In addition to parental involvement in plans to increase access and participation within communities, other ongoing parental engagement, as students progressed through their IB education or other advanced course work in high school was related to student persistence and success (Mayer, 2008).

Gaps in the Research

This review of the literature surfaces some relevant gaps in the existing body of research on equity and access in public IB World Schools. While the IB Diploma Program has been studied in varying contexts over the last twenty-five years, few studies have focused on program implementation at the school level. Additionally, no prior mixed methods research has been conducted with a focus on the IB Diploma Program specifically in the Pacific Northwest region of the United States.

Studies Focused on Program Implementation

Studies have focused on analyses of quantitative data representing IB participation, achievement on IB exams, and correlations between IB participation and success on other achievement measures (Burris et al., 2007; Garrity, 2004; Saavedra, 2014; Southworth & Mickelson, 2007; Perna, et al., 2015). Fewer studies have focused on the experiences of students from historically underrepresented groups within the IB Diploma Program or the experiences of practitioners implementing the program for an economically and culturally diverse student group (Kyburg et al., 2008; Mayer, 2008).

Mixed-methods Studies

There have been extensive quantitative analyses conducted on participation and outcomes within IB Schools in the United States. There have also been qualitative studies, some including a broad range of school settings (Hertberg-Davis & Callahan, 2008; Kyburg et al., 2007), and two providing in-depth case studies on a single school (Mayer, 2008; Ochoa, 2013). However, sequential mixed methods studies which utilize a qualitative approach as a means of addressing the quantitative results have been largely absent from the body of research aimed at IB participation and equity of access and participation. Previous studies focused on equity within IB schools have suggested the completion of mixed methods studies among areas for future research in this dynamic conversation.

IB in the Pacific Northwest Region

The Pacific Northwest, and specifically the states of Oregon and Washington, have not been the focus of research related to IB Schools. As a region that is growing in its ability to provide IB programs to students and is becoming increasingly more diverse in the populations of students living within it, the Pacific Northwest warrants its own space in the research.

The Present Study and Research Questions

The purpose of this dissertation was to examine enrollment rates of students from different racial backgrounds at public schools in Oregon and Washington that offer the IB Diploma Program and whether historically underrepresented student groups, specifically African American/Black, American Indian/Alaskan Native, Asian, Hispanic/Latinx, and Multi-racial students, participate at lower rates than their White peers, and specifically whether male students from these racial groups participate at lower rates than their White male peers, and at lower rates than their race-alike female peers.

Additionally, this study examined IB program implementation in two specific cases, considering how local policies and practices might have contributed to higher rates of participation for historically underrepresented racial groups of students. The study aimed to highlight specific policies and practices which may have been associated with higher rates of participation. With those purposes in mind, I sought to examine the following research questions:

1. How diverse in terms of the intersection of race and gender are the public high schools that offer the International Baccalaureate Diploma Program (IBDP) in the states of Oregon and Washington?
2. At what rates of representation do Hispanic/Latinx students in public schools in Oregon and Washington participate in the IBDP in comparison to their White classmates? How do these rates vary by gender?
3. At what rates do students participate in the IB as Diploma candidates in comparison to Course candidates? How do these rates vary by gender and race?
4. In public International Baccalaureate Schools in Oregon and Washington that demonstrate higher rates of IB program representation among Hispanic/Latinx students, what types of recruitment, admissions, registration, and academic support policies and practices are in place?

CHAPTER III

METHOD

In this study, I employed a mixed methods sequential explanatory design. Through this approach, I hoped to test the hypothesis that in Oregon and Washington historically underrepresented student groups and specifically historically underrepresented males, participate in IB Diploma Programs at lower rates than White students and their race-alike female peers. I was interested in exploring not only any disparity that might exist between White students and historically underrepresented groups of students, but also whether any difference in disparity between White students and students from historically underrepresented groups was greater for male students than it was for female students. This hypothesis assumed that if a racial gap existed, gender would have exacerbated that gap, and the hypothesis predicted that Hispanic/Latinx female students would have greater representation in IB programs than their male peers.

Then based on the results of statistical analyses, I hoped to identify contexts in which historically underrepresented groups of students, and specifically historically underrepresented males within those groups, had higher rates of IB program participation. Once these contexts were identified, I planned to more deeply examine the specific school-level policies and practices in those contexts that might contribute to those higher rates of participation.

This inquiry developed from my own experience as an IBDP Coordinator in the years leading up to the study. Through my own work in coordinating an IBDP in a diverse school, I recognized a problem of practice, confirmed by prior research, namely a disparity in participation within the program among students of color in comparison to their White classmates, and specifically male students of color. I was interested in increasing participation in

the program and representation among students from groups that have been historically underrepresented. I was interested in examining the factors that might contribute to disparity in participation in the IBDP, even when the programs were designed to be open access for all students, like my own program. My experience, therefore, uniquely positioned me as a researcher of this topic. Through years of working in a Northwest IB school, I was familiar with the IB's policies, with the ways that the IBDP is typically implemented, and with many IBDP Coordinators across the Pacific Northwest.

In Phase 1, I collected and analyzed school enrollment and IB registration data over a three-year period from Oregon and Washington public IB schools to examine the rates at which students of different race/gender groups participated in IB programs. In Phase 2, I conducted case studies of two schools selected based on the results of the quantitative analysis. The specific methodology for each phase is explained in turn below.

Phase 1 Method

In Phase 1, I collected enrollment data, disaggregated by race and gender, for all 12th grade students at each public IB School in Oregon and Washington during the 2016-17, 2017-2018, and 2018-19 school years from the National Center for Educational Statistics. I also collected and analyzed IB registration data directly from public IB Schools in operation in Oregon and Washington during the time period of the study.

Sample

Within the states of Oregon and Washington, there were __ public high schools in operation during the 2016-17, 2017-2018, and 2018-19 school years. Demographic enrollment data, by race and gender for all public high schools in the two states over the three year period are displayed in Table 1 below.

Table 1

Enrollment %s of 12th Grade Students by Race and Gender in Oregon and Washington Public High Schools for 2016-17, 2017-18, and 2018-19 School Years

Race and Gender Student Group	2016-2017	2017-2018	2018-2019
American Indian / Alaskan Native Male	<1	<1	<1
American Indian / Alaskan Native Female	<1	<1	<1
Asian Male	3	3	3
Asian Female	3	3	3
Black/African American Male	2	2	2
Black/African American Female	2	2	2
Hispanic/Latinx Male	11	11	11
Hispanic/Latinx Female	10	10	11
White Male	32	31	30
White Female	29	29	28
Pacific Islander / Native Hawaiian Male	<1	<1	<1
Pacific Islander / Native Hawaiian Female	<1	<1	<1
Two or More Races Male	3	3	3
Two or More Races Female	3	3	3

At the time of the initiation of this study, there were 37 public high schools offering the IB Diploma Program in the states of Oregon and Washington, 18 in Oregon and 19 in Washington. These schools represent a range of geographic, economic, and cultural settings, including large schools in major metropolitan areas like Seattle and Portland as well as smaller schools in smaller communities like Kennewick, Washington and Newport, Oregon. My goal was to include as many of these schools as possible in the initial data collection and as many of these schools as fit the criteria for data analysis in Phase 1 based on student population size described below.

Initially, I contacted by email the IB Coordinator at each of the 37 IB World Schools in Oregon and Washington to explain the study and assess their levels of interest in and feasibility of participating. IB Coordinators are designated school-level positions required by the International Baccalaureate Organization, and are filled by a staff member who has received formal training from the IB. In each school this person oversees promotion and recruitment for

the program, conducts student registration, maintains records, and tracks school-level data. For this reason, the IB Coordinator in each school was selected as the point of contact for data collection in Phase 1. Out of 37 schools, 22 schools consented to participate in the study. Out of the 22 schools which consented to participate, 18 met the threshold for diversity of enrollment which will be described below. Of those 18 schools, 16 were able to provide complete data sets for participation.

Participants

Although consent to participate in Phase 1 and the collection of de-identified student level data were facilitated through the IB Coordinator at each school, the unit of analysis for this study was schools. IB registration data over a three-year period for 12th grade IB participants, shared by the IB Coordinator and disaggregated enrollment data over the same period, collected from the NES, have been used to represent each participating school. IB programs are available to students in both 11th and 12th grade; however, for this study, data for only 12th grade students was collected because all IB schools have the greatest number of registrants in grade 12.

Measures

Phase 1 measures of participation in Oregon and Washington IB programs included: IB registration category and demographic information including race and gender.

Student IB Registration Category

Although all IB schools have their own registration policies and practices, there is a uniform candidate registration protocol, which all schools must follow, using the International Baccalaureate Information System (IBIS). The IB Coordinator at each IB World School is responsible for the online registration of students in IBIS. Based on their individual plans for the IB program, or in some cases the prescribed curriculum for all students at a given school, 12th

grade students are classified in IBIS by one of two registration categories: “Diploma” (students in the second and final year of the DP, who have typically already completed at least one IB course and exam, and who are completing the requirements for the IB diploma, a more rigorous course of study), and “Course” (second year DP students who do not plan to complete the full IB diploma, but instead plan to take and test in one or more individual IB courses). Within an IB World School, all students participating in the IBDP are categorized into one of these registration designations.

Student Demographic Information

Two demographic grouping categories were used: gender and race/ethnicity. During the 2017 through 2019 registration sessions, the IB required candidates to self-identify during registration as male or female. For US schools, the IB collects data based on student race/ethnicity in the following categories: African American/Black, American Indian /Alaskan Native, Asian, Native Hawaiian / Pacific Islander, Hispanic/Latinx, White, or Multi-racial (two or more races) and requires students to identify within one of these categories during the registration process.

For the purposes of this study, students have been identified as a combination of one gender category and once racial/ethnic category (e.g., Hispanic/Latinx female or White male). These de-identified student level demographic data were then aggregated to the school level for each combination of gender and race/ethnicity categories separately for each registration type (e.g., Hispanic/Latinx Female Diploma or White Male Course).

School Disparity Indices

Darity et al. (2001) created the Disparity Index (DI) to examine Advanced Placement (AP) course enrollment data in North Carolina public schools. The DI was calculated by dividing the

percentage of students in a category or group participating in AP courses by the percentage of students in a category or group in the school. In this study the DI calculation was applied to IB program registration within each participating school. Thus, using the index, if 15% of a school's 12th grade population is made up of Hispanic/Latinx females but only 5% of 12th grade students registered as IB Diploma candidates are Hispanic/Latinx females, then that student group, Hispanic/Latinx Female Diploma Candidates has a DI of 0.33 (5/15), which suggests underrepresentation of this demographic group in the IB diploma registration category. Equal representation exists within any category for any group when the $DI = 1$. Underrepresentation for any groups exists with a $DI < 1$; overrepresentation occurs with a $DI > 1$. In the original study, Darity et al. (2001) grouped the DIs of participating student groups into intervals of 0.2. DIs of 0 through 0.2, indicated essentially no representation within AP courses. DIs of 0.81 or greater indicated representation within the program. Darity et al. (2001) posited that DIs < 0.81 represented a real disparity for a student group within a school's AP program.

In this study, school-level DIs were calculated by dividing the percentages of Diploma and Course registrants represented by each race/gender group by the total percentage of enrolled students for that demographic group. The DIs for each race/gender combination served as the dependent variable, which could then be observed in this study.

Procedure

Data Collection

For each participating school, I collected demographically disaggregated enrollment data for all twelfth-grade students from the NES enrollment database for the 2016-2017, 2017-2018, and 2018-2019 academic years. IB registration data were collected from IB Coordinators at each school for the same three-year period. IB Coordinators provided a registration report, gleaned

from the IBIS system, which reflected the school's registration data, providing de-identified data for each student including registration type (Diploma or Course), race, and gender for each of the three academic years.

Data Cleaning and Manipulation

Using the disaggregated enrollment counts for participating schools from the NES database, I examined each school for levels of diversity. The Oregon Department of Education's low-end threshold for reporting disaggregated student data is an n of 10. The Washington Department of Education's reporting threshold is an n of 20. Therefore, the analyses conducted to examine rates of IB participation only included schools that met the thresholds. I did, however, in an attempt to provide an overall picture of the demographic makeup of the larger pool of IB World Schools in Oregon and Washington, include enrollment data for each student group within each school, in response to my first research question, even those that did not meet the study threshold for inclusion in the analyses.

Due to school-wide low enrollment among racial groups of students, who are historically unrepresented and underrepresented in the IB Diploma Program, I was unable to conduct the analyses of any student groups other than Hispanic/Latinx students. The focus of the study, therefore, shifted to examine only whether Hispanic/Latinx students participate in IB Diploma Programs at lower rates than their White peers, and specifically whether Hispanic/Latinx, male students participate at lower rates than their White male peers, and at lower rates than their Hispanic/Latinx female peers.

For each school that met the threshold for data reporting and provided complete data for all three years, I completed the following process. Using the IBIS report from each school, I generated total counts of IB participating students within each race/gender/registration group. I

determined participation percentages among IB registered students for each race/gender/registration group by dividing the number of students in each group by the total number of IB registered students. This generated, for each race/gender/registration group, a representational proportion among all IB registrants within that school. For example, if a school had 100 IB registrants and of those registrants 42 were White female diploma candidates, the White, female, diploma group would make up 42% of all registrants. Using these proportions of IB registered students, I then calculated a DI for each group by dividing each proportion by the representative proportions of students from that race/gender group in the school at large. This calculation of a DI for each student group in each school captured the magnitude of within-school gaps in representation in IB program participation.

Data Analyses

To answer Research Question 1, *how diverse are public IB schools in the Oregon and Washington offering the IB Diploma Program*, I calculated the mean, standard deviation, minimum, and maximum of enrollment percentages disaggregated by race and gender for all 37 of the IB Schools that were operational within Oregon and Washington during the 2016-17, 2017-2018, and 2018-19 school years.

To answer Research Question 2, *at what rates of representation do African American/Black, American Indian/Alaskan Native, Asian, Hispanic/Latino, and Multi-racial students in public International Baccalaureate World Schools in Oregon and Washington participate in IB programs in comparison to their White classmates, and how do these rates vary by gender*, and Research Question 3, *at what rates do students participate in the IB as Diploma candidates in comparison to Course candidates, and how do these rates vary by gender and*

race, I calculated the means, medians, standards deviations, minimums, and maximums among DIs for each race/gender student group for each registration category in each of the three years.

To test the hypothesis that Hispanic/Latinx male students in Oregon and Washington participate in IB Diploma Programs at lower rates than White male students and Hispanic Latinx female students and also to identify contexts of interest in order to answer Research Question 4, I conducted a four-way repeated measures ANOVA to compare the observed DIs of the race/gender/registration category groups across all schools. The four within-subject factors were IB registration with two levels (i.e., Diploma, Course), year with three levels (i.e., 2016-2017, 2017-2018, 2018-2019), race with two levels (i.e., White, Hispanic/Latinx), and gender with two levels (i.e., male, female). In addition, I conducted *a priori* contrasts examining my hypothesis that the difference in DI based on gender will depend on race/ethnicity independent of year and participation category. In addition to examining the amount of variance across all groups, I specifically tested whether males in the Hispanic/Latinx groups have significantly different mean DIs compared to Hispanic/ Latinx females and compared to White males.

Following these analyses, I looked for outliers, those schools with the greatest DIs, indicating the highest rates of participation in IB programs among Hispanic/Latinx male students. The emergence of these outliers resulted in the identification of participants for the case studies represented in Phase 2 of this study.

Phase 2 Method

In Phase 2, I conducted case studies focused on two schools which emerged as contexts of interest based on the results of the analyses conducted in Phase 1. The intention of these case studies was to closely examine the policies and practices in place at two schools in which Hispanic/Latinx male students experienced less disparity of representation in the International

Baccalaureate in comparison to their White male and Hispanic/Latinx female classmates. Phase 1 results demonstrated the differences in IB participation in Northwest public high schools based on race and gender; in Phase 2, I focused my inquiry deeply on the policies and practices operating in two school contexts. In keeping with sequential explanatory design methods, I sought to draw connections between the policies and practices implemented by school leaders within these contexts and the Phase 1 results.

I used Sonia Nieto's theory of social justice educational leadership (2016) to approach the development of interview structures and the methodological approach to shape this case study methodology. I mapped the list of strategies associated with increasing IB participation among historically underrepresented groups, which were identified through my review of the literature, across Nieto's four tenets of social justice educational leadership. This process resulted in themes into which I could group the practices and policies that emerged through the interviews and review of materials. The themes that emerged from this process included: (a) confronting and disrupting misconceptions and stereotypes that lead to inequity, including de-tracking and belief in students; (b) combatting inequity through resource provision, including equitable support services; (c) rejecting deficit perspectives and drawing on the strengths of students, including culturally relevant pedagogy; and (d) creating environments that promote critical thinking and agency for change, including development of cultural capital and family/community engagement. Using those themes, but also remaining open to the emergence of additional unanticipated themes, I collected, categorized, and interpreted the qualitative data collected from the two case study schools.

Sample

Based on the results of the Phase 1 analysis, two contexts of interests were selected as participants in Phase 2 of this dissertation study. I considered the Phase 1 results related to the diversity of Oregon and Washington schools that offer IB programs, the differences of race and gender in IB participation, and the hypothesis that Hispanic/Latinx male students experience greater disparity in IB participation than White male students or female Hispanic/Latinx students. From the results of the Phase 1 analyses, two schools emerged as having the highest disparity indices (DIs) for Hispanic/Latinx male students over the three-year period studied, in comparison to other included schools.

I wanted to ensure that the schools selected for Phase 2 were not schools which had relatively high DIs for Hispanic/Latinx male students only because they had small populations of Hispanic/Latinx students. I endeavored to select schools in which Hispanic/Latinx students made up close to or above the group mean for Hispanic/Latinx students for included schools in each of the three years studied. Examination of the enrollment data for the two schools which had the highest DIs for Hispanic/Latinx male students over the three-year period revealed that both schools had enrollment for Hispanic/Latinx students in IB programs at or above the mean.

Participants

Phase 2 participants were two public IB schools located in geographically distinct areas of the Pacific Northwest region. Both high schools served diverse populations of students and had been offering the IB Diploma Program since the late 1990s. In Phase 1 of this study each school was given a de-identified unique identifier using a letter of the alphabet. The two schools which emerged as contexts of interest to be studied in Phase 2, Cottonwood High School and

Balsam High School (both pseudonyms that will be used for these case studies) are described in turn below.

Cottonwood High School

Cottonwood High School is located in a small city of approximately 84,000 residents on the edge of an agricultural zone in the eastern portion of the Pacific Northwest region. Its district serves more than 18,000 students and includes a neighboring small town as well as adjacent unincorporated rural areas. Cottonwood High School has an average annual enrollment of approximately 1,600 students. It is the largest of three high schools in its district and the only school in the district, or in any surrounding district, that offers the IB Diploma Program.

Cottonwood's city has seen consistent population growth with an increase of nearly 15% between 2010 and 2020, driven in large part by diversification of the agricultural industry and job growth. Much of this population increase has been among the Hispanic/Latinx population. Agricultural activity in the area includes growing wheat, wine grapes, fruit trees, and a variety of vegetables as well as ranching. In addition to the agricultural sector, many families of students attending Cottonwood are employed in the energy, education, or health care fields. Despite the steady job growth in the area, most students attending Cottonwood High School can be described as lower middle class to low income; approximately 60% of Cottonwood students are eligible for free or reduced-price meals according to federal guidelines.

The three-year average racial demographics of the school during the 2016-17, 2017-18, and 2018-19 school years were: American Indian Alaskan Native 1%, Asian 3%, Black/African American 2%, Hispanic/Latinx 47%, Pacific Islander/Native Hawaiian <1%, White 41%, and a combination of two or more races 3%.

Balsam High School

Balsam High School is located in a small city of approximately 80,000 residents in the western part of the Pacific Northwest region. The community is a part of the larger metro-area of a major city and borders a federally recognized Native American reservation. Balsam's district, which serves approximately 23,000 students, covers three additional small cities and some unincorporated rural areas. Balsam has an enrollment of approximately 1,700 students, is the largest of four high schools in its district, and is the only school in the district offering the IB Diploma Program.

Formerly a timber processing hub, the surrounding area experienced economic downturn in the slowdown of the Pacific Northwest logging economy. Today, families of most students in the catchment area work for a local manufacturing company, the local public schools, in healthcare, or in retail sales. Most residents are middle to low income; approximately 65% of students at Balsam are eligible for free or reduced-price meals according to federal guidelines.

Racially, the school district is diverse. The three-year average racial demographics of the school during the 2016-17, 2017-18, and 2018-19 school years were: American Indian Alaskan Native < 1%, Asian 22%, Black/African American/Black 12%, Hispanic/Latinx 24%, Pacific Islander/Native Hawaiian 2%, White 30%, and a combination of two or more races 9%.

Procedure

Data Collection

For the two schools selected as case studies for Phase 2, I emailed the IB Program Coordinator at each school, informing them of their selection as a participant for Phase 2, and requesting their participation. After receiving confirmation of consent to participate, I invited each Coordinator, through a follow-up email, to an interview focused on the policies and

practices in their schools and how they, the administration, and the IBDP staff at their school engage with students and families, and specifically Hispanic/Latinx male students and their families. Additionally, in this communication I asked Coordinators to share with me via email any documents, slide decks, videos, or other artifacts related to the implementation of their program that I would not be able to access publicly from their school or district's website. Finally, I asked the Coordinators to identify other staff members in their programs who may be able to provide deeper insight into or a unique perspective on the programs' success in attracting Hispanic/Latinx male students and who might be willing to participate in an interview. All documents, slide decks, videos, and other artifacts were then accessed from the schools' or districts' websites or sent to me by the Coordinators through email.

For Cottonwood High School, only the Coordinator was interviewed; no other staff members associated with the IB program were available or willing to be interviewed. For Balsam High School, the IB Coordinator as well as one teacher, who teaches the school's IB Spanish Language course, participated in interviews. Interviews lasted between 45 and 75 minutes. In interviewing these school leaders, I used a semi-structured interview protocol with open-ended questions. I asked interviewees about their experiences leading and teaching in the IBDP at their schools, about the structure of the program, about recruitment strategies, about student support within the program, about their perceptions of staff attitudes and beliefs about students, about parent/family engagement, and about funding and resource provision within their IBDP. I encouraged interviewees to discuss these subjects in the context of their school generally, as well as how they specifically related to Hispanic/Latinx male students accessing and persisting within the IBDP. All interviews were conducted, recorded, and transcribed via Zoom video-conferencing software.

Data Analyses

To triangulate the data and develop a more complete understanding of the IB programs at Cottonwood High School and Balsam High School, I first conducted a review of the documents and artifacts associated with each school's IB program. Creswell's (2014) recommendations for qualitative data analysis, which include reading the data, coding the data, identifying themes, interrelating themes, and then interpreting themes, guided my methods in this phase. However, in this case, I used the themes identified through my literature review and Nieto's (2016) theoretical framework as a lens for this initial thematic analysis. Using a combination of deductive and inductive coding strategies, I examined each of the documents by line. I identified and annotated words, phrases, and sentences that were representative of one or more of the four identified themes: (a) confronting and disrupting misconceptions and stereotypes; (b) equitable resource provision; (c) culturally relevant pedagogy; and (d) the development of cultural capital and family/community engagement. I also identified, with unique codes, additional themes that emerged from the analysis of the artifacts and that may be related to the increase of access and participation in IB for Hispanic/Latinx male students in these contexts.

Following methodological guidance for document analysis described by Bowen (2009), I paid careful attention to the intended audiences and stated purposes of the documents (i.e., to promote the program to eighth graders at a local middle school or to collect personal information to register students for the program), but I also looked for what O'Leary (2014) calls the "unwitting" information within the text. This term refers to the implicit messaging within a document based on its style, tone, or inclusion or exclusion of certain information. Looking for unwitting information in the texts was important in this process because evidence of previously identified strategies to increase access and participation among historically underrepresented

student groups or the attitudes, beliefs, and actions that make up the social justice leadership framework may be overtly stated in documents, but they may also appear in more nuanced and implicit ways, depending on the socio-political context of the case being studied.

After each of the interviews, I reviewed the interview transcript in the same manner as each of the schools' program documents, examining the transcripts line by line and coding the responses, as well as correcting the automatic transcription where it did not transcribe the text clearly or accurately. I employed codes for the four initially identified themes, for new themes identified through the examination of the documents and artifacts, and I also looked for the emergence of any additional themes specific to the interviews but not elucidated through my literature review, through Nieto's (2016) theoretical framework, or through my first pass with the school-based artifacts.

After completing this process with the transcript of each interview, I returned to the documents from that school for a second review, now with a greater understanding of the context for how the program is implemented. This second examination allowed me to review and reconsider the ideas and themes gleaned from the documents and artifacts, considering additional ideas, phrases, and key words identified within and categorized through the examination of the interview transcripts.

CHAPTER IV

RESULTS

Phase 1 Results

Research Question 1

In response to the first research question focused on the diversity of public high schools in Oregon and Washington that offer the International Baccalaureate Diploma Program, descriptive statistics for enrollment for 12th grade students, disaggregated by race and gender from 37 IB Schools which were operational in Oregon and Washington during the 2016-17, 2017-18, and 2018-19 school years are presented in Table 2. The data indicate that on average White students make up the largest racial group in Oregon and Washington public IB schools with a consistent mean enrollment of 50% over the three-year period. Hispanic/Latinx students are the second largest racial group with a consistent mean of 23% over the three-year period. Asian students make up on average 10-12% of students in these schools. African American/Black students represent 6-7% of total enrollment. Multi-racial students, who identify as a combination of two or more races also make up 6-7% of the student bodies. The mean enrollment for students identified as Pacific Islander was less than 1%, as it was for students identified as American Indian/Alaskan Native.

In comparison to the enrollment percentages by race and gender for all public high schools within Oregon and Washington, the rates for many student groups at schools offering the IBDP are comparatively higher. For example, Asian students across the region make up only on average 6% during the three-year period (3% male and 3% female); Black/African American students across the region make up on average 4% (2% male and 2% female); and Hispanic/Latinx students make up 21% (11% male and 10% female). White students, however,

are more well represented in schools that do not offer the IBDP, making up on average 60% of students (31% male and 29% female). During the three-year period, enrollment percentages for students identified as Pacific Islander and American Indian/Alaskan Native was consistent across schools offering the IBDP and those not offering the program.

Research Questions 2 and 3

For the second and third research questions, I explored the rates at which students participated in IB programs in Oregon and Washington and how factors like race, gender, and registration category were related to the rates at which different student groups were represented. Descriptive statistics for the disparity indices (DIs) of each student group, disaggregated by race (i.e., White vs. Hispanic/Latinx), gender (i.e., male vs. female), and registration type (i.e., course vs. diploma) among 12th grade students in the subset of 17 participating Oregon and Washington public IB schools for the 2016-2017, 2017-2018, and 2018-2019 school years are displayed in Table 2. Based on the DI calculation, values of 1.0 constituted proportional representation in IB participation, relative to the population of students within a specific group at a school. A $DI < 1.0$ denoted underrepresentation, and a $DI > 1.0$ denoted overrepresentation.

It is worth noting that one student cannot be registered as both a Diploma and a Course candidate, and that over-representation or under-representation in one part of the program need not be related to the other part. Moreover, within any given school, the smaller the student group is the more volatile the DI can be because a difference of one or two students has a larger impact on DIs in a smaller group as compared to a larger group.

Results for the 17 participating schools indicate that all studied student groups, designated by race, gender, and registration category, on average are underrepresented within the IB programs in their schools (i.e., all mean and median $DI < 1.0$). This pattern may be explained

by the fact that other racial groups (i.e., American Indian/Alaskan Native, African American/Black, Pacific Islander/Native Hawaiian, Multiracial) were excluded from the analyses in each school due to sample size. Although these groups were not included in the analysis due to the small number of students falling within them across schools, the pattern of underrepresentation for White and Hispanic/Latinx students suggests that one or more of the excluded groups may have been overrepresented which is most likely due to the volatility of DIs for small groups. For example, if a school only has two students identified as American Indian/Alaskan Native males within the senior class, and both of those students are registered as IB course candidates in a given year, this would result in an exceptionally large DI for that group. In addition, students identified as Asian were excluded because they have not been historically underrepresented in IB programs and were therefore not a focus of this research study. However, the results of the analysis of disparity indices for Hispanic/Latinx students and White students may also have been affected by an overrepresentation of Asian students within IBDPs in public IB schools in Oregon and Washington. Thus, the calculation of DIs for the largest racial groups (i.e., Hispanic/Latinx and White) in the current study yields $DIs < 1$. Nonetheless, DIs for these groups are interpretable relative to each other and even with all student groups experiencing disparity based on this analysis, the data seem to indicate that Hispanic/Latinx and White female students participating in the IBDP as Course candidates are the most represented groups, evidenced by mean DIs closest to 1.0 when compared to all other groups.

To ascertain whether these seeming differences were statistically significant a repeated measures ANOVA was conducted, where the within-subjects unit of analysis is schools, examining the differences by race, gender, and registration type on IB program participation

across the three different years. Based on Mauchly's Test of Sphericity, the assumption of sphericity was not met. As a result, a Greenhouse-Geisser correction has been used to allow for an accurate report of significant effects. The results are displayed in Table 3.

Table 2

Descriptive Statistics for Enrollment Percentages of 12th Grade Students by Race and Gender in OR and WA Public IB Schools

Race	AI	AI	As	As	B	B	H	H	PI	PI	W	W	T	T
Gender	M	F	M	F	M	F	M	F	M	F	M	F	M	F
SY 2016-2017														
<i>M</i>	<1	<1	5	5	3	4	12	11	<1	<1	26	25	4	3
<i>Mdn</i>	<1	<1	4	5	1	1	10	10	<1	<1	29	26	3	3
<i>SD</i>	<1	<1	5	5	6	5	9	9	1	1	11	11	3	2
Min	0	0	0	0	0	0	2	3	0	0	2	1	<1	0
Max	<1	2	17	20	29	21	45	42	3	2	43	45	16	7
SY 2017-2018														
<i>M</i>	<1	<1	6	6	3	3	12	11	<1	<1	25	25	4	3
<i>Mdn</i>	<1	<1	4	5	1	<1	9	10	<1	<1	29	27	4	3
<i>SD</i>	<1	<1	5	5	7	6	9	9	1	1	11	12	2	2
Min	<1	<1	0	0	0	0	3	3	0	0	2	2	0	1
Max	1	1	18	20	34	25	44	49	2	3	40	44	12	10
SY 2018-2019														
<i>M</i>	<1	<1	6	6	4	3	12	11	<1	<1	25	25	3	3
<i>Mdn</i>	<1	<1	4	4	1	1	10	9	<1	0	29	24	4	3
<i>SD</i>	<1	<1	5	5	6	4	9	9	1	1	11	12	2	2
Min	0	0	0	0	0	0	0	0	0	0	1	<1	0	0
Max	2	1	20	17	33	17	41	44	2	3	43	67	7	6

AI, American Indian/Alaskan Native; **As**, Asian; **B**, Black/African American; **H**, Hispanic/Latinx; **W**, White; **PI**, Pacific Islander/Native Hawaiian; **T**, two or more races; **M**, male, **F**, female.

Table 3

Descriptive Statistics for DIs for IB Participation among Grade 12 Students in OR & WA by Race, Gender, and Registration

	Hispanic/Latinx				White			
	Male		Female		Male		Female	
	Course	Diploma	Course	Diploma	Course	Diploma	Course	Diploma
SY 2016-17								
Mean	0.27	0.09	0.92	0.22	0.57	0.32	0.74	0.43
Median	0.21	0.02	0.46	0.12	0.55	0.29	0.77	0.37
<i>SD</i>	0.27	0.12	1.41	0.25	0.27	0.22	0.27	0.25
Min.	0.00	0.00	0.00	0.00	0.14	0.00	0.23	0.00
Max.	0.95	0.39	5.85	0.90	1.21	0.85	1.08	0.91
SY 2017-18								
Mean	0.46	0.17	0.71	0.26	0.57	0.30	0.79	0.43
Median	0.33	0.07	0.59	0.21	0.53	0.27	0.73	0.40
<i>SD</i>	0.39	0.25	0.46	0.26	0.27	0.18	0.26	0.25
Min.	0.00	0.00	0.00	0.00	0.24	0.00	0.33	0.09
Max.	1.33	0.89	1.71	0.86	1.05	0.55	1.30	0.92
SY 2018-19								
Mean	0.33	0.14	0.75	0.19	0.57	0.23	0.73	0.36
Median	0.23	0.15	0.80	0.19	0.55	0.16	0.67	0.27
<i>SD</i>	0.28	0.12	0.55	0.16	0.30	0.22	0.25	0.23
Min.	0.00	0.00	0.00	0.00	0.11	0.00	0.33	0.05
Max.	1.03	0.44	1.77	0.63	1.12	0.66	1.36	0.68

Table 4
Tests of Within Subject Effects

Factor	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>	Partial η^2	Power
Race	1.00	1.52	5.97	.03	0.29	.63
Gender	1.00	4.15	29.83	< .01	0.67	> .99
Registration	1.00	12.20	18.75	.01	0.56	.98
Year	1.23	0.08	0.63	.47	0.04	.12
Race x Gender	1.00	0.27	3.52	.08	0.19	.42
Race x Registration	1.00	0.15	1.20	.29	0.07	.18
Gender x Registration	1.00	0.98	4.21	.06	0.22	.48
Race x Gender x Registration	1.00	0.46	4.69	.05	0.24	.53
Race x Year	1.22	0.01	0.06	.86	0.00	.06
Gender x Year	1.39	0.12	0.63	.49	0.04	.13
Race x Gender x Year	1.30	0.21	0.67	.46	0.04	.12
Registration x Year	1.28	0.01	0.02	.93	0.00	.05
Race x Registration x Year	1.13	0.08	0.36	.58	0.02	.09
Gender x Registration x Year	1.22	0.09	0.41	.57	0.03	.10
Race x Gender x Registration x Year	1.33	0.11	0.66	.47	0.04	.13

In response to the specific question of rates of representation among Hispanic/Latinx students in public IB schools in Oregon and Washington in comparison to their White classmates, and how these rates vary by gender, a significant main effect was found for race, $F(1, 15) = 5.97, p = .03$. The difference in the estimated marginal mean DI between White students and Hispanic/Latinx students was 0.12, favoring White students. Given that Mean DIs were less than 1.0, indicating underrepresentation for both groups, this result indicates that across both gender and registration categories, White students experienced greater parity than Hispanic/Latinx students, with a mean DI closer to 1.0. A significant main effect was also found for gender, $F(1, 15) = 29.83, p < .001$. The difference in the estimated marginal mean DI between male and female students was 0.21, favoring female students. This indicates that across

both racial groups and both registration categories, female students experienced more parity in representation than male students.

In response to research question 3, *at what rates do students participate in the IB as Diploma candidates in comparison to Course candidates, and how do these rates vary by gender and race*, a significant main effect was found for registration type, $F(1, 15) = 18.75, p = .01$. The difference in the estimated marginal mean DI between students registered as IB Course candidates and those registered as IB Diploma candidates was 0.36, favoring Course students. Given that Mean DIs were less than 1.0, this result indicates that regardless of race or gender, there was less disparity in Course candidacy than Diploma candidacy.

None of the interaction terms were significant at $p < .05$ (See Table 4). However, the significance of the main effects indicates that representation in IB programs overall was better for White students than Hispanic/Latinx students, for female students than male students, and for students in the Course category than the Diploma category. Furthermore, the significance of each of these effects did not depend on the other demographic variables in the model.

Additional contrasts were also conducted based on the *a priori* hypothesis, supported by the review of the literature, that Hispanic/Latinx male students would experience greater disparity in IB program participation than Hispanic/Latinx female students and White male students in both the Diploma and Course categories and across all three years. The results of these contrasts are displayed in Table 5.

Table 5
Custom Hypotheses Tests for A Priori Contrasts

Contrast	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>	Partial η^2	Power
Hispanic/Latinx males vs. Hispanic/Latinx females	1.00	1.09	19.11	< .01	0.58	.98
Hispanic/Latinx males vs. White males	1.00	0.50	16.89	< .01	0.55	.97

A significant difference was found in the comparison between Hispanic/Latinx male students and Hispanic/Latinx female students, $F(1, 14) = 19.11, p < .01$. The difference in the estimated marginal mean DI between Hispanic/Latinx male students and Hispanic/Latinx female students was 0.27, favoring female students. Given that Mean DIs were less than 1.0, this result indicates that Hispanic/Latinx female students are significantly better represented in IB program participation, taking into account both the course and diploma category, than Hispanic/Latinx male students. A significant difference was also found in the comparison between Hispanic/Latinx male students and White male students, $F(1, 14) = 16.89, p = .01$. The difference in the estimated marginal mean DI between Hispanic/Latinx male students and White male students was 0.18, favoring White male students. This indicates that White male students were significantly better represented in IB program participation, taking into account both the course and diploma category, than Hispanic/Latinx male students. These data, the results of the *a priori* contrasts, support the hypothesis that Hispanic/Latinx male students in Oregon and Washington participate in IB programs at lower rates of representation than their White male classmates and their female Hispanic/Latinx peers.

Phase 2 Results

Research Question 4

To answer the fourth research question, I conducted case studies at two Pacific Northwest public schools which, based on the Phase 1 analyses, were identified as having some of the highest rates of participation among Hispanic/Latinx male students. Through an in-depth study of the policies and practices in place at these two schools, I identified ways that each school has created more welcoming, more accessible, more equitable environments for Hispanic/Latinx students, which may be associated with the higher rates of IB program participation.

At both schools, the policies and practices that may be related to higher rates of program participation have been organized according to the themes created through my literature review and the framework of Nieto's (2016) theory of social justice educational leadership. These themes were: (a) disrupting stereotypes and believing in students; (b) equitable resource provision; (c) culturally relevant pedagogy; and (d) cultural capital. Policies and practices that fit within these four themes were present at both schools. Additionally, one of the studies revealed additional policies and practices that did not fit within one of these previously identified themes. I have described these policies and practices within the following additional themes: (a) cultural representation among staff, which includes school administrators, teachers, and other support staff who share racial, ethnic, and linguistic culture with Hispanic/Latinx students; and (b) positionality of the IBDP Coordinator, which refers to ways in which the IBDP Coordinator is socially and professionally situated within the culture of the school. Each school and the ways in which its policies and practices address each of the themes, are described in turn below.

Cottonwood High School

In studying the IB Diploma Program at Cottonwood High School, I examined program documents and artifacts including the school's website, an IB promotional brochure for students and parents, an IB student registration form, slides presented during outreach sessions with students, slides presented during informational sessions with parents, and the school's current IB handbook for students. I also interviewed the IBDP Coordinator, who for the purposes of this study will be referred to as Karla.

In describing herself, Karla clearly stated, "I'm not a big academic person." Having previously served in the military and taught engineering courses at a community college, Karla's entry into work in public education and at Cottonwood was originally serving as the school's college and career center director. When a vacancy opened in the IBDP Coordinator's role and according to Karla, "no one wanted to do it", she stepped up.

"There was actually no one in the position for six months of the school year," she noted in describing a gap in leadership that was created after the previous Coordinator became an Assistant Principal at the school. Although Karla felt like she, "knew nothing about how to run the program" when she first started, she says she was driven by her "huge passion for the demographics of our school."

Karla says that relationships are at the core of the success of the IBDP at Cottonwood, and it is this focus on relationships and dedication to serving the historically underserved, namely Hispanic/Latinx students in the region, that may be the driving forces behind the school's high rate of representation in the program. Karla has worked to enact policies and practices that are aligned with the themes derived from past research on IB access for underrepresented groups and with Nieto's (2016) framework for social justice educational leadership. These themes, as

they relate to Cottonwood’s capacity for attracting, supporting, and retaining Hispanic/Latinx students, and especially male students, are described below.

Disrupting stereotypes and believing in students. Cottonwood has an honors program for its ninth and tenth grade students, which is influenced by earlier tracking in place at its middle schools. Students identified as “honors” students in 8th grade are auto enrolled in honors English and honors math classes as ninth graders at Cottonwood. Students in the honors program access what Karla describes as “pre-IB” curriculum, in which the students are exposed to content rooted in the traits of the IB Learner Profile. Students in this track receive instruction geared toward the IB courses which await them in grade 11 and 12. This practice is in stark contrast to the research on effectively increasing participation in the IB among diverse groups of students, and although Karla noted that she is unable to change policy at that level, she has worked to create access for students to the IB in grade 11, regardless of their participation in the honors programs in grades nine and ten.

Despite the school’s tracking system, once students reach grade 11, the IBDP and individual IB courses are open to any student who elects to enroll. Karla visits all tenth-grade core classes to deliver an informational presentation about the IBDP at Cottonwood. This presentation includes information about IB courses available at Cottonwood, how students can register for these courses as well as the IB Diploma, and the benefits of enrollment and registration, including access to college credit. Karla makes a specific point of inviting all students, honors or not, to participate in the IB during grade 11. There are no screening tools, no applications, no letters of recommendation, effectively no gatekeeping measures at that point, other than perhaps an “academic identity” differential among honors students, who have had access to “pre-IB” curriculum when others have not.

Noting that the tracked structure of the school's general curriculum and schedule are out of her hands, Karla shared that at least in terms of access to the DP in grade 11, she has adopted a more inclusive open-access system. "If kids want to try, we let them. We encourage them," she says, and the idea that "anybody can be successful, with support" is one of her key beliefs about the IBDP. Language in Cottonwood's IB promotional presentations support this ideology. Presentation slides shared with both tenth-grade students and parents clearly indicate that while ninth and tenth grade honors classes provide "excellent preparation" for IB courses, any student may enroll in IB courses in grade 11. These presentations also contain photos depicting students from a variety of racial ethnic backgrounds, including Hispanic/Latinx students, female and male.

Karla reports working to convince IB teachers and teachers of grade nine and ten students at Cottonwood, not always successfully, that all students can achieve in the IB. She shared the following.

I know that these kids can do it. I tell the teachers that, and most teachers respond by being supportive and encouraging...There are some who aren't. We had one who was very cranky with students, expecting them to already be IB students, expecting them to already be performing and not needing to be taught.

That attitude is the opposite of Karla's philosophy, and she has reportedly worked with administration to "weed out" some of those teachers from the IB program. She is direct with students about the challenge that the IB presents, specifically students who have not had the privilege of honors classes before entering DP courses. This includes many Hispanic/Latinx students, who are being offered that challenge for the first time in year one of the DP. With an

indomitable belief, she says, “I tell them, ‘You won’t be good when you start, and that’s ok, but we can get you there by the end.’ ”

Equitable resource provision. Students navigating poverty at Cottonwood receive assistance in paying fees associated with IB registration. Through state and federal grant programs, any student who qualifies for free or reduced-price school meals under federal guidelines is eligible for free IB registration. 60% of all students at Cottonwood qualify for federal free/reduced priced meal programs, and although those data are not disaggregated by race/ethnicity and cannot be shared on the student level for purposes of privacy and confidentiality, Karla noted that “a good portion of the students who are accessing fee assistance are our Hispanic/Latinx students.”

However, there are many students, of all racial and ethnic groups, according to Karla who struggle to pay fees associated with IB registration yet fall outside the boundary of qualification for the grant assistance programs. In these cases, it was reported that Karla shares widely with students and families that they should communicate with the Coordinator and that she can help with financial assistance. “Teachers just tend to pitch in, or we find some other funds, in that case,” Karla said, explaining that she is committed to not having finances be a barrier for any student to participate in the IBDP at Cottonwood.

Although Karla could not identify the exact number or percentage, she shared that some Hispanic/Latinx students at Cottonwood qualify as members of the federally funded Migrant Education Program (MEP). The MEP’s purpose is to ensure that the children of parents who participate in migratory work, namely farming, fishing, and forestry, can meet challenging academic standards and can graduate from high school with a diploma. While MEP funds cannot be used to pay for IB registration, the MEP supports Hispanic/Latinx IB students at Cottonwood

in other ways. This support from the MEP includes the presence of a graduation specialist on campus who can provide academic advisory, tutoring support, and study skills development. Additionally, some financial support for supplies associated with courses or fees for class trips is also available for IB students through the MEP.

IB students also have access to academic support at Cottonwood High School through the academic success program that meets daily after school and during lunch time. The school has funded a “success coordinator” position for each grade level. This individual tracks student grades and conducts outreach to bring students who are struggling into the academic success program. The program, which is staffed by at least one Hispanic/Latinx and Spanish speaking staff member, is open to not only struggling students who are invited or encouraged to attend; it is open to all students on a drop-in basis and also provides technology access for students who may lack a computer or Wi-Fi at home.

Although not a program or a bank of funds, Karla’s level of dedication and commitment to the students, particularly historically underserved students, is an additional resource provided to IB candidates at Cottonwood. A self-described “relationships person,” Karla admits that the role of IBDP Coordinator “would not be [her] favorite thing to do,” if she had a choice of career, but she takes pride in the work and sees the value of the services she provides.

“A lot of this is about problem solving,” she says when describing the ways in which she supports students. Noting that many Hispanic/Latinx students, especially those who are the first in their families to attend school in the US, may be at a disadvantage when trying to navigate school-based systems, she clarifies that much of her support “is beyond the academic.” Karla also provides social-emotional support, especially when things become academically

overwhelming. She maintains an “open-door policy” and works with students to “take small steps” and find ways to “avoid the overwhelm.”

No specific racial or cultural affinity groups for students exist at Cottonwood, but an International Club is popular with many who participate in the IBDP, including Hispanic Latinx males. This club meets regularly after school to promote “international mindedness,” a key element of the International Baccalaureate Organization’s philosophy. Karla notes that this is a place where many Hispanic/Latinx students, including the boys, feel welcomed and comfortable, and within which a community of support among IB students develops.

Culturally responsive pedagogy. Karla describes Cottonwood’s IB offerings as “STEM heavy.” For example, according to the IB program information produced by the school, a student wishing to take on the full IB Diploma must complete two two-year science courses in grades 11 and 12. According to Karla, this curricular framework is partially based on the school’s administration’s beliefs about who among staff can be an IB teacher and who cannot, namely who is “rigorous enough.” This creates some barriers to cultural responsiveness within the curriculum, says Karla. She notes that non-IB teachers have, in the past, suggested adding a new IB course to the curriculum, for example IB Cultural Anthropology or IB Global Politics, which may offer greater opportunity for cultural relevance and responsiveness. However, additions in recent years have been rejected by the administration, according to Karla, due to a lack of confidence in the staff. Fortunately for Karla and her students, the English and Spanish departments have responded to a need to engage and support Hispanic/Latinx students.

The Spanish and English departments have made great strides with culturally responsive pedagogy and as a result have become the two subject areas where Hispanic/Latinx students gravitate. The school offers IB English Literature but also IB English Language and Literature, a

course of study developed by the IB in 2013, which offers students opportunities to engage with a broader range of texts than the traditional English Literature course. These text options include speeches, blogs, scripts, advertisements, social media, and more. Karla describes the course as “more adaptable,” allowing teachers to tailor the content to student cultures and interests, providing more opportunities for students to see themselves and their life experiences reflected in the curriculum. Teachers have “lots of success” attracting Hispanic/Latinx students to the Language and Literature strand of IB English, according to Karla.

IB Spanish is also a hub for Hispanic/Latinx students within the IBDP at Cottonwood. The course is offered as a “Language B,” or language acquisition study, but the school permits heritage Spanish speakers to enroll. Reasoning that the course aims to promote literacy in the target language, Karla reported that many students who speak Spanish at home have had little academic training in the language and it is, therefore, an appropriate course for heritage Spanish speakers. “Spanish B also becomes a gateway to the IB,” says Karla, reporting that the course is a place where students who have not typically been identified for participation in advanced courses can feel “confident and comfortable” and “know they will be successful”. Describing the instructor of this course, Karla, noted, ““The teacher is *really* encouraging!”, and returning to the idea of relationships, she said, “It just takes one class” for students to build a positive relationship and a positive association with the IBDP.

Cultural capital and family engagement. As the only IB school in its district and the surrounding region, Cottonwood attracts many students from out of district, and it is not uncommon, according to Karla, for as many as 50 families from out of district to attend Cottonwood’s IB Information Night events. However, it was not until Karla became the

Coordinator that any outreach was done at an in-district feeder middle school with a large population of Hispanic/Latinx students that is located just a few miles away from Cottonwood.

“Kids who were coming from that school, Hispanic/Latinx kids, were missed and misinformed,” she said, referencing students, whom she claims were essentially denied information about the opportunity to participate in the IB at Cottonwood. Since taking over as Coordinator, Karla has visited that middle school every spring and provides a presentation for eighth grade students and their families about the opportunities available with the IBDP at Cottonwood.

Karla is not bilingual, and parent presentations are currently offered only in English; however, when Spanish speaking parents or caregivers want to communicate with Karla, the school provides on-demand interpretation services. Karla is “happy to meet, individually with Spanish-speaking parents” in either small group or individual settings. Although she noted that “school-wide, there is not huge parent support or communication” and that “that’s just not the culture of the school here,” Karla contends that when she has made time to communicate with parents in Spanish, it has made a difference in students and families feeling connected to and empowered in the program.

Balsam High School.

Outside of the IB program office at Balsam High School, there is a large mirror on the wall. Above the mirror, in bold lettering, is the sentence, “You are what an IB student looks like!” This phrase, posted above the mirror and repeated often to students by the IB Diploma Program Coordinator at Balsam is a simple declaration to students, but it’s also a powerful statement about the policies, practices, and leadership that underpin the school’s IB Diploma Program.

In studying the IB Diploma Program at Balsam High School, I examined program documents and artifacts including the school's website, an IBDP information packet provided to prospective students and parents, the slides from a bilingual presentation titled "How to Sign-up for IB," the school's IB Diploma Program website, and the school's IB handbook for current students. I also interviewed Alice (a pseudonym used for this case study), who has taught Spanish at Balsam for nearly a decade, and who also serves in the role of IBDP Coordinator, and Rita, a faculty member who teaches in the schools' Spanish for heritage speakers program and advises the Latino Student Union.

"I hate the idea that the perfect IB student is the one with straight A's", says Alice. Prior to Alice taking on the role, in 2017, the previous IBDP Coordinator had been in the position for more than twenty years. "[My predecessor] was really ahead of her time," says Alice, noting that the previous coordinator, like Alice, rejected the notion that there was only one type of successful IB student. Additionally, the previous Coordinator had the foresight to recognize the shifting demographics of the school and to move the program in a direction that would be more accessible and attractive to Hispanic/Latinx students, and these changes are summarized in the sections that follow. When it came time for her to retire, Alice, who had been her unofficial mentee, stepped into the Coordinator role.

"She basically raised me in her philosophy that IB students are created, not born, that there are no perfect IB students... so it was really a seamless transition," says Alice of her stepping into the position of IB leadership at Balsam. Alice believes that all students can be successful in the IBDP and that it holds tremendous power for students in the opportunities that it can provide, not just in the form of college credit and tuition dollars saved, but also in the form of providing a challenge to students. As past research indicates, this is an intellectual challenge

of which some students, particularly students of color, have not been deemed worthy in previous learning environments.

These core beliefs, that IB students are nurtured not born, that diverse students can be successful in the IB, and that the school has a responsibility to be culturally responsive, are some of the elements that might be related to the school's high rate of representation of Hispanic/Latinx students, and specifically Hispanic/Latinx males in the IB Diploma Program (i.e., DIs of 0.95, 1.33, and 1.03 over the three year period). Alice and others at Balsam High School have put in place and enacted many policies and practices aligned with the themes of past research on IB access for underrepresented groups and with Nieto's (2016) framework for social justice educational leadership. This case study of the IBDP at Balsam High School confirms many of the findings from my review of the literature and elucidates two new themes which emerged from studying the school, namely cultural representation among staff and positionality of the IBDP Coordinator. All of the themes, as they relate to Balsam's capacity for attracting, supporting, and retaining Hispanic/Latinx students, and especially male students, are described below.

Disrupting stereotypes and believing in students. While traditional tracking in the form of advanced classes in the core subjects for ninth and tenth graders does exist at Balsam High School, the school has taken steps to eliminate the impact of this practice. For example, in 2013, the school was authorized to provide the IB Middle Years Program (MYP) for its ninth and tenth grade students. The MYP utilizes a specific framework designed to prepare students for the rigor of the Diploma Program and at the same time expose them to the types of language, assessment practices, and cross-curricular integration that can be expected within DP courses that they may

take in grade 11. Since the adoption of the MYP, all core courses at Balsam utilize the MYP framework, preparing all students to go on to take IBDP classes.

Also beginning in 2013, most students at Balsam, whether they had previously been enrolled in advanced classes or not, were required to take at least one course in English Language Arts within the IBDP. Students had the choice of taking a Literature course or a Language and Literature course. This requirement extended to all students except for those in the life skills special education program and those enrolled in the “Newcomers” English language learning program.

There are no traditional gatekeeping methods in place for the IBDP at Balsam, no applications, no letters of recommendation, no entrance exams. If a student is interested in enrolling in additional IB courses beyond the IB English class that is required of all students, the doors are open. The school’s published IB information pamphlet lists an array of IB courses in the areas of Social Studies, Science, World Language, and the Arts, between two and six options in each of these areas that students can access once they reach the eleventh grade.

“Our philosophy,” says Alice, “is that if you want the challenge, we want to support you in that.” In the past, this philosophy came under criticism from some students and families within the community. Parents of some students, mostly White students, who had been in advanced courses in middle school and then in advanced courses in ninth and tenth grade pushed back on the idea that any student could join their children in IB courses. However, school leadership and most IB teachers have stood firm in their equity stance, rejecting criticisms of the open-access, inclusive nature of the program. Alice noted the following:

In the past, our district and some families within our district had an idea of what smart looked like. But we’re working to change that. We believe that everyone has a gift of

something. We all can and we all want to challenge ourselves somewhere. What's your gift? What are you passionate about?

Yet, it is Alice's perception that not all teachers within the school and its IB program share this idea that many on the staff are working to promote. The belief that all students can be successful varies by teacher and department. Some teachers see IB courses as "too hard" for some students; some actively discourage some students from trying an IB course. According to Alice, it is predominantly the teachers who have been at the school for "a long time" and have "an outdated view of what IB is" who express beliefs that not all students can succeed. Alice gave the following as an example of the kind of resistance she has experienced.

I've had conversations with teachers in our math department about the students coming to IB math courses unprepared. They expect the students to already know the material and have certain habits. They have ideas about the perfect IB students, but that's like 20 years ago.

Long-held beliefs about what an IB student "should be" are still a barrier in some departments at Balsam, but as teacher demographics shift, says Alice, "the mentality is shifting."

Equitable Resource Provision. For the last ten years, the school district has paid all fees associated with all aspects of the IB Diploma Program for all students at Balsam High School. Through a combination of state and federal grant programs and district funds allocated for IB support, the school covers all registration costs for IB Course and IB Diploma candidates. Additionally, unlike most public IB schools, where students must produce some form of proof of qualification for federal or state assistance based on family income, there are no forms to complete nor documentation to provide for students at Balsam. There are no conversations whatsoever with students about the costs of IB participation. The district office handles all

billing with the IBO, which frees Alice of the responsibilities of informing students about fees or payment-plans, collecting registration, and potentially having uncomfortable conversations about who can or can't afford to participate. In addition to simply making the program financially accessible to students at a school where more than half of the population is considered low income, this also removes social barriers potentially created by students having to navigate conversations about family finances or the program Coordinator having to track down unpaid fees from students.

Balsam couldn't engage many of its Hispanic/Latinx students in the IB, according to Alice, without the existing financial policy associated with fees. It provides many students access that they otherwise couldn't have. But there's more to that policy, according to Alice.

It's also a powerful statement. It's a way that we say to students, 'You're worth paying for, even if you don't pass, because then you have tried something hard...You *should* try something hard. You will need to do hard things in life; this *experience* is what we are paying for, not just the test fee. Passing is not the most important thing.'

In addition to financial support, Balsam High School also provides academic support to students through two distinct after-school programs. One program specifically targets students who have been identified as struggling in classes, and the other is an open, drop-in time, during which students can access help from a teacher or have a structured place to work on assignments and projects. For both programs, the school provides an extra-duty contract for core subject area teachers to staff the program after regular school hours.

An informal support, tied to the previously discussed idea of teacher attitudes, is the notion of flexibility, according to Rita. "Flexibility is key! These kids have other obligations,"

she says, specifically of her Hispanic/Latinx students. Many Hispanic/Latinx students in Balsam's IB program have jobs after school or younger siblings for whom they provide childcare. Additionally, some students reportedly miss regularly scheduled class times to help with family businesses.

"It's not that they don't care," says Rita. "Some of them literally can't be here on certain days, or at certain times of the year." However, the flexibility that has become a hallmark of the IB program at Balsam, specifically among the Spanish and English departments, is a support which ensures that students whose family or work schedules may not be aligned with those of the typical school day still have opportunities to learn and to demonstrate knowledge and skills. Rita often schedules the IB Spanish internal oral assessment, a major oral presentation which is recorded and moderated by the teacher, but then sent to the IB for official scoring, at 9 or 10 p.m., if that's what students need. Because of the amount of time required and the individual nature of the assessment, these are often conducted outside of class times. "So, if a student has a job and can't stay after school, what? Am I supposed to just say, 'Oh, I guess you don't get to do the oral?'" Rita asks rhetorically. "Of course not! We're flexible. They can do it. We want them to do it."

Rita also serves as the faculty adviser for the Balsam Latinx Student Union, or LSU, one of the largest and most active student affinity groups on the campus. The LSU, according to Rita and Alice, is also a factor in the rates at which Hispanic/Latinx students participate in the IBDP. "Social accountability" is a term used by both Rita and Alice to describe the ways that students encourage and keep each other in check regarding the IB. Members of the LSU take IB classes together and then expect each other to attend class regularly, to put in effort, to do well. Related to Research Question 4 specifically, according to Rita, there is an additional gender component

to this dynamic as well. “The girls *totally* encourage the boys,” she says. “They’re [the girls] just like, ‘Come on. You need to do this.’ And they [the boys] *do*. They totally follow. They need that level of social accountability, and they respond to it.”

One other form of support and social accountability which Balsam has cultivated for and among its Hispanic/Latinx students in the IB Diploma Program pathway is the presence of peer mentors in the Heritage Spanish classes. In 10th grade MYP and the 11th grade DP first year IB classes, senior students engaged in upper-level Heritage IB Spanish classes are scheduled as peer mentors. These older students serve as teacher’s aides, small group leaders, academic mentors, and social role models for their younger schoolmates. Having taken the lower-level Heritage Spanish classes and progressed into the IB, they are well positioned to share their experiences formally and informally and provide academic support to younger students in the class. Rita describes the experiences of the mentors as mutually beneficial. The younger students benefit from the modeling and wisdom of their predecessors, and the mentors benefit from the leadership opportunity. Of note is that this opportunity to mentor is only available to IB Course candidates; seniors enrolled in the IB as Diploma candidates have a full schedule of IB courses and are not able to set aside a period to mentor younger students.

Culturally responsive pedagogy. Balsam High School and its IB program staff are working to change district perceptions of “what smart looks like.” In 2016, embracing an asset-based approach to educating Hispanic/Latinx students, Balsam High School launched a Spanish for Heritage Speakers Program which was designed as a study of Spanish language and literature for students who were raised speaking Spanish as their first language. Recognizing that many students who speak Spanish as their first language at home are not academically literate in the language, the school sought to provide instruction and support in the development of Spanish

literacy, with a specific focus on reading and writing. Classes within the program are open to any Heritage Spanish speakers, and after the ninth and tenth grade, these courses feed into the IB Spanish course.

Although this practice of having heritage Spanish speakers take Spanish as language acquisition courses may not be what the IBO intends for students, Alice points out that permitting this at Balsam has led to some positive outcomes for Hispanic/Latinx students. Utilizing the IB curriculum for the Heritage Spanish course for grades 11 and 12 provides students the opportunity to engage with an internationally focused curriculum centered on the development of higher-order thinking in the context of language acquisition. Students are learning to read critically, think analytically, and write clearly. Heritage Spanish speaking students gain skills in the familiar environment of the heritage course that they learn to transfer into other courses taught in English. Additionally, for newcomers to the United States, the class often becomes a home, a safe space, an anchor for the students at Balsam.

“Newcomers feel welcomed,” says Rita. “They feel like right away this is a place where they can be successful at something, which is often such a challenge for new arrivals, feeling lost. This class helps with that.” According to both Alice and Rita, if a Hispanic/Latinx student is enrolled in the Heritage IB Spanish course, they are more likely to participate in another IB class. Most often that additional IB class is IB English.

In most other IB schools in the US, IB students take English as their designated *Language A* and a second language as their *Language B*, or language acquisition course. As an additional element of the Heritage program, the school has offered English B, a study of English as a language acquisition course. Students can take the course to build their English language

skills and also access college credit through the IB for successful completion of a language acquisition course.

Particularly as it relates to the engagement of male students in the IB, Alice notes that the Heritage IB Spanish program is one of the only ways that long-term English language learners (LTELLs) engage in rigorous content at Balsam. “Almost all of our LTELLs are boys,” says Alice. “I don’t fully know why. Maybe it’s a pride thing, or an expectations thing, but there are lots of boys who have not progressed out of ELL.” The Heritage IB Spanish program provides these students an opportunity for rigorous work that engages them in higher-order thinking and also provides community.

Within the program, students also have the opportunity to earn the state seal of biliteracy on their high school diplomas by demonstrating proficiency in both Spanish and English. Rejecting deficit perspectives, drawing on student strengths and culturally relevant pedagogy, the Heritage program, explains Alice, is a way to validate students’ experience, and its focus on drawing on student strengths and rejecting deficit perspectives has caught on in other departments. A “huge amount of attention” has been devoted to shifting the curriculum, specifically in the English and Social Studies departments, says Alice, and not only in the DP, but also in the lower-level courses that feed into IB courses. Over the last decade, English teachers at Balsam have been intentional about adopting literary works that reflect the experiences of students. The syllabi include representation from contemporary Hispanic/Latinx authors, and according to Alice, although they have been challenged by some students and parents, teachers are committed to a representational curriculum. The adoption of statewide Ethnic Studies standards has also moved the IB curricula toward more diverse perspectives and narratives, and the Social Studies department has responded. “Our history curriculum will need

to change, and it already is changing”, says Alice, noting that grade-level teams of teachers are working on incorporating the Ethnic Studies standards into the IB History curriculum in meaningful ways.

This culturally responsive philosophy is not limited to Spanish and the humanities. The music department at Balsam also plays a role. Alice describes the IB music class and instructor as “kid magnets” especially for Hispanic/Latinx students. The school also offers a mariachi music program as a music class which is very popular with Hispanic/Latinx boys and eventually feeds into the IB Music class. Two of the IB science teachers are fluent Spanish speakers, and although they do not teach in Spanish, according to Alice, they communicate with students and parents, when needed, in Spanish. According to Alice, “This helps. Kids know that if they need that, they *can* communicate in Spanish,” and it sets a tone that is welcoming and supportive.

Although not inherently related to cultural responsiveness, Balsam offers many different course options within the IBDP. Many IBDPs provide a very narrow path to the IB Diploma, with only one course offering within each of the six IB subject areas. At Balsam, students have multiple choices within all IB subject areas, including at least three different options in science and social studies depending on the year. For all students, including Hispanic/Latinx males, this range of offerings provides for several ways in which students can find their personalized interests represented within the IB and choose to participate.

Cultural capital and family engagement. Within the IBDP at Balsam High School there are numerous opportunities for Hispanic/Latinx students to develop cultural capital within the school community and assume leadership roles in academic and social contexts. The school sponsors students’ participation in an annual statewide bilingual leadership camp and conference for Hispanic/Latinx students, covering all costs associated with travel and attendance. The

student leaders then have the opportunity to serve as mentors for Hispanic/Latinx students from local middle schools at one-day events, designed to promote dignity and the valuing of students' identities in academic settings. According to Rita, many Hispanic/Latinx students who are involved with the IBDP end up being role models for the middle school students at these events. "Kids see other kids that they look up to doing something, and they want to be involved," she says, describing the mutual benefit of this type of leadership opportunity. The high school students benefit from the opportunity to lead and hold positions of social capital in the community, and the middle school students benefit by gaining early knowledge about the IBDP and other opportunities available to Hispanic/Latinx students at Balsam.

Another form of empowerment for Hispanic/Latinx students at Balsam that builds social capital and also connects them to the IBDP is the Latino Student Union (LSU). Rita serves as the adviser of the LSU, which positions an IB teacher as a trusted adult and close contact for the largest social organization for Hispanic/Latinx students on campus. This affinity group provides another opportunity for younger students to see older students go through courses in the IBDP, to make meaning of that, to ask questions, to be encouraged by older peers, and to make informed decisions. Rita's consistent encouragement of students and leadership within both the LSU and the Heritage IB Spanish Program creates a bridge between the two that ushers students who might otherwise not feel welcomed into the IBDP.

Communicating and connecting effectively with Hispanic/Latinx parents and caregivers has also been a focus of the work at Balsam. Alice reports that when parents have access to accurate information and knowledge about the program, they are more likely to support and encourage their students in participating in the IBDP. She commented that there have been barriers to effectively communicating and connecting with the Hispanic/Latinx community. "It is

often the case with many of our Latinx parents that there's a belief that the school knows best," she said, noting that this often keeps parents away from info nights and other school events. However, the school has added specific Spanish language IB information nights to work on providing accurate information which can lead to increased knowledge and understanding of the program for families who may not have engaged in the past. A goal of this outreach, according to Alice is to "build understanding of the program, its importance, its value, it's worth" among families who may not have realized that their students have certain options and opportunities.

Additional themes

Through studying the policies and practices in place at Balsam High School, I observed the emergence of two other themes that did not fit neatly into one of the four *a priori* themes I had identified through a review of the literature and the use of a theoretical framework. These themes were *the presence of and engagement of culturally and linguistically representative staff* and *an intentional focus on IB Course candidacy rather than the full IB Diploma*.

Alice reported that in the school years leading up to and included in the quantitative study, two administrators at Balsam identified as Hispanic/Latinx. According to Alice, having an administrator who understands the IBDP and is a strong supporter of the program is key to a successful IBDP. In this case, Balsam had not one but two administrators who were knowledgeable, strong supporters of the program, and in addition they shared culture and language with Hispanic/Latinx students on campus. Alice and Rita also shared that although some of the White IB teaching staff are bilingual, the fact that many classified staff who have supporting roles at the school are Hispanic/Latinx and Spanish speaking also makes a difference for students. These classified staff are secretaries, instructional assistants, and other support staff,

but according to Alice, they are a visible part of the school community and contribute to the sense of belonging for Hispanic/Latinx students at Balsam.

Balsam's Disparity Indices (DIs) for Hispanic/Latinx male students in the Course registration category were the highest in the region, meaning that male Hispanic/Latinx students were engaged in the program at a level of representation that was proportional or greater to their representation within the student body as a whole. However, in the Diploma category, Balsam's DIs for Hispanic/Latinx males were comparable to other schools included in this study; they were low. When I asked whether the school has intentionally focused more on engaging students as Course candidates and less on the full IB Diploma, Alice unapologetically confirmed that this was the case.

"We totally got nailed on our evaluation from the IB for that, and I didn't care", she said. "The full diploma might not be the best choice for every kid. It's probably *not* the best choice." Alice believes that it's difficult for students to do more than four or five things well. Taking six IB subjects, managing the IBDP core which includes a Theory of Knowledge course, completing a 4,000-word extended research essay, and participating in 18 months of self-directed engagement in the areas of creativity, physical activity, and community service is very challenging, according to Alice. In speaking of the reality of students balancing the requirements of the full diploma and other aspects of their lives, she noted the following:

Our students have a lot of commitments beyond school, and this especially true of many of our Hispanic/Latinx students. We don't live in this perfect little world where they can just focus on academics. That's an incredible privilege that a lot of our students just don't have.

Alice believes that for any student the full DP can be “overwhelming.” She reported that the small cohort of students completing the full Diploma tend to be a majority of White and Asian students, although according to the NCES database, White and Asian students do not make up the majority of the overall student population at Balsam. Many of these students, according to Alice, have access to support outside of school, in the form of private tutoring, or a non-working parent at home who helps with schoolwork. As a leader of this program, Alice recognizes that and has deliberately chosen to lead the program in a direction that she believes better serves all students. “We want to prioritize whatever makes a student feel like the program is accessible to them and that they can do it,” she says. “However *they* want to be an IB student, we’re in.”

CHAPTER V

DISCUSSION

The purpose of this two-phase mixed-methods study was to examine race- and gender-based disparities in IBDP participation in Pacific Northwest public schools and to examine the policies and practices in place at schools which have experienced less disparity among historically underrepresented student groups. I sought to observe the interactions of race and gender on the rates of representation among various race/gender groups (e.g., White/Female or Black/African American/Male) through quantitative analysis of three years of cross-sectional retrospective data collected from IB schools. I then sought to spotlight qualitatively the policies and practices in place at two schools which emerged as contexts of interest from quantitative analyses.

Student Diversity in the Pacific Northwest

The original intention of this study was to build on past research (Bunnell 2008; Corbett-Burris, et al., 2007; Garrity, 2007; Kyburg et al, 2007; Mayer, 2008; Mayer & Tucker, 2010; Ochoa, 2013; Perna et al., 2015; Siskin 2010; Southworth & Mickelson, 2007) and examine rates of representation within the IBDP in the Pacific Northwest across multiple historically underrepresented racial groups, including students identified as American Indian/Alaskan Native, Black/African American, Hispanic/Latinx, Pacific Islander/Native Hawaiian, and a combination of two or more races. However, unlike in past studies (Corbett-Burris, et al., 2007; Garrity, 2007; Mayer & Tucker, 2010; Perna et al., 2015) the schools in this study were not racially diverse enough to allow for a thorough analysis of participation among historically underrepresented student groups other than Hispanic/Latinx students when accounting for gender. That is, when looking at each racial group by gender, only the Hispanic/Latinx and

White groups had enough students to meet the low-end threshold for reporting disaggregated data put in place by the states of Oregon and Washington. Of the 37 IB Schools in operation during the years considered for the study, only six met the threshold for participation among twelfth grade students for any historically underrepresented racial group other than Hispanic/Latinx students. Of the 22 schools which consented to participate in the study, only two met the threshold for any historically underrepresented racial groups outside of Hispanic/Latinx. Although not entirely unanticipated, this is a valuable finding, nonetheless, for my first research question.

In the years included in this study, 85% of all enrolled students in Oregon were White or Hispanic/Latinx; 78% of all enrolled students in Washington were in one of the two groups. In collecting enrollment data from the NCES database, I found that a majority of the public schools that offer the IBDP in Oregon and Washington are not particularly diverse, but that this was consistent with statewide enrollment data. Although this study suggests that the public schools in Oregon and Washington may lack the broad diversity of student enrollment present within other states that have implemented the IBDP as an equity level as reported in past studies (Mayer, 2008; Saavedra, 2014), this study does indicate a presence of IB Diploma Programs in schools that serve Hispanic/Latinx students in the region.

Patterns in IBDP Participation

Based on prior research (Kyburg et al., 2007; Perna et al., 2015; Siskin, 2016), I expected to observe that, within Oregon and Washington IB schools, male students from historically underrepresented racial groups would experience the greatest rates of disparity of representation in the IBDP. However, the analyses did not fully support this expectation. In each of the three years examined, among the four race/gender/registration category groups, the mean disparity

indices for Hispanic/Latinx males were consistently the lowest in both the Course and the Diploma registration categories, but this pattern was not significant.

Results demonstrated that patterns in IBDP participation showed significant differences by gender, race, and registration, but that these differences did not depend upon each other. For example, differences observed between males and females were consistent for both races and both registration types. In all three years, females experienced significantly greater representation than males, regardless of race or registration type. This finding corroborated past studies (Conger et al., 2009; Grose & Sanchez, 2020) which produced findings demonstrating a greater likelihood for females to engage in IB courses and other college preparatory academic programs. In the current study, White students experienced significantly greater representation than Hispanic/Latinx students, regardless of gender or registration type. This finding also supported past research (Bunnell, 2008; Garrity, 2007; Kyburg et al., 2007; Perna et al., 2015; Siskin, 2016.) which has demonstrated lower rates of representation for Hispanic/Latinx students, as well as other students of color.

In the current study, IB students who participated as Course candidates experienced significantly greater representation than those enrolled in the full Diploma, independent of gender or race. Studies in the past have considered Diploma versus Course registration as a factor in post-secondary success of IB students. However, to my knowledge, there have not been prior studies which have examined level of registration in the manner of the current study, making this a unique finding.

Hispanic/Latinx Male Students in IBDP

Despite the lack of an overall interaction, I conducted planned *a priori* contrasts comparing Hispanic/Latinx male students specifically to White male students and to female

Hispanic/Latinx students to answer my second research question. The results of both contrasts proved consistent with the hypothesis that as a race/gender intersectional group, Hispanic/Latinx male students would experience greater disparity when compared to White male students as a group and Hispanic/Latinx female students as a group.

These results are supported by previous research focused on race and access to the IB, (Bunnell, 2008; Garrity, 2007; Perna et al., 2015). Hispanic/Latinx male students did experience greater disparity than White males and Hispanic/Latinx females, however in this case, the lack of significant interaction between race and gender is important. The observed difference when comparing Hispanic/Latinx and White students was not significant based on gender. Likewise, the observed difference when comparing male and female students was not significant based on race. This may have been a result of a lack of statistical power for the examination of the interaction of race and gender due to the small sample size.

However, as was my hope for Phase 2 of this study, there were contexts that stood out in that Hispanic/Latinx male students were proportionally represented or even overrepresented in the IB Diploma Program. Through an examination and comparison of the Disparity Indices among the schools included in the analyses, I identified two schools which were outliers in this way. It was in these contexts that I was able to consider the fourth and final research question, the exploration of which provides valuable findings for practitioners.

Policies and Practices Identified through Case Studies

Based on my literature review, I expected to see common themes emerge as I conducted interviews with leaders from the IBDPs of each school and examined program documents and artifacts. Using Nieto's (2016) theory of Social Justice Educational Leadership as a theoretical framework, I expected to see the leaders within the schools creating and implementing policies

or developing and sustaining practices that were culturally responsive, that rejected deficit-based stereotypes about Hispanic/Latinx students, that provided resources equitably, and that boosted cultural capital among Hispanic/Latinx students and families. Both schools included within the qualitative phase of this study, exhibited characteristics associated with Social Justice Educational Leadership, which may have been associated with greater access to and participation in the IBDP for Hispanic/Latinx male students during the years of this study.

Both programs had an IBDP Coordinator, who was committed to challenging, confronting, and disrupting misconceptions, untruths, and stereotypes that lead to structural inequality and discrimination, a key commitment for Social Justice Educational Leaders according to Nieto (2016). In both schools, the IBDP Coordinator held a firm conviction that all students could succeed in the IBDP. Despite some degree of tracking in both contexts, tracking which numerous studies (Garrity, 2004; Mayer & Tucker, 2010; Perna et al., 2015; Southworth & Mickelson, 2007) have demonstrated to be a barrier to IB access, both schools had open-access systems in place after the tenth grade. These open-access policies allowed any student in these schools to access the IBDP in grade 11 regardless of their previous academic records. The absence of gate-keeping measures in students' access to the IBDP in both schools corroborates past research on best practices for increasing access to the IB (Garrity, 2004; Mayer & Tucker, 2010; Perna et al., 2015) and was cited by both IBDP Coordinators as a foundational aspect of making their programs welcoming and accessible to historically underrepresented student groups.

In both programs, relationships were also identified as an important element in the recruitment, support, and retention of Hispanic/Latinx male students. The two Coordinators and one teacher interviewed during the case studies all pointed to relationships between the

Coordinator and students, teachers and students, and students and students as meaningful factors, especially for Hispanic/Latinx male students. Trusted adults, who provide thoughtful and accurate counsel to students, instructors who believe in and are willing to advocate for students, and older peers who serve as role models within a cultural peer-group have all been associated with greater access and representation for historically underrepresented student groups within the IBDP (Brown, 2018; Kyburg et al, 2007; Mayer, 2008; Mayer & Tucker, 2010; Ochoa, 2013; Siskin 2010), and all of these were verified as present at Cottonwood and Balsam High Schools.

Additionally, an asset-based approach to working with students who are members of historically marginalized communities was visible in the policies and practices in place at both Cottonwood and Balsam. The interviews with both Coordinators and the teacher from Balsam demonstrated a belief that students bringing their home culture and language into the school was an asset. In a program like the IBDP that aims to promote “international mindedness” among its graduates, being fluent in a language other than English is celebrated, as it was among the IBDP leadership at both Cottonwood and Balsam.

Studying the implementation of the IBDP at both schools provided evidence of Social Justice Educational Leadership and policies and practices identified through past research to have a positive impact on representation within the program for historically underrepresented student groups. However, Balsam High School stood out from Cottonwood in several ways. The program demonstrated substantial creativity and flexibility in implementing an asset-based IBDP, full funding for students in the IBDP, and the presence of an influential student affinity group, features that did not emerge through the study of Cottonwood.

The establishment of a specific Heritage IB Spanish program may run contrary to how the IB envisions schools teaching language acquisition courses, but that did not stop Balsam’s

leadership from developing the program and then engaging many students. Previous studies (Kyburg et al, 2007; Mayer, 2008) have highlighted the importance of culturally relevant curriculum that specifically meets the skill needs of historically underrepresented student groups. Balsam's unique combination of Heritage IB Spanish and IB English B is a powerful example of adapting curriculum for heightened cultural relevance and responsiveness. The program serves as a gateway into the IBDP for Hispanic/Latinx students, and its teachers, like Rita, who approach the work with maximum flexibility, serve as trusted adults who are there to greet them at the gate and usher them through.

No student at Balsam pays a single cent out of pocket for any fees associated with the IBDP. Prior research does not directly link schools paying IBDP registration fees with increased access for historically underrepresented student groups. However, Alice's opinion, based on conversations with students, was that Balsam would not have as diverse a program without the ability to provide financial support for students. In adopting this policy of full funding for all students, Balsam High School eliminated not only a financial but also a social barrier.

The last unique element of the IBDP at Balsam that stood out was the strength of the Latino Student union as a positive presence on campus for Hispanic/Latinx students. This group was advised by Rita, the Heritage IB Spanish teacher, creating a strong link between the affinity group and the IBDP. Not only does the LSU provide opportunities for positive social interactions and the development of cultural capital on campus, which Kyburg et al. (2007) linked to retention and success in the IB, specifically for male students, but it also serves as a link to leadership and mentorship programs outside of the school. In facilitating this group, Rita has exemplified one of Nieto's characteristics of Social Justice Leadership, extending the school

environment into new environments that promote agency for change and community engagement for students.

Limitations

Several limitations should be kept in mind when interpreting the results of this study. A first limitation involves the lack of racial diversity in the Pacific Northwest region of the United States. A second limitation is the size of the sample. A third limitation involves the inherently problematic nature of racial identifiers. A fourth is the use of the Disparity Index (DI) as a measurement of representation, or lack thereof, and a fifth is the demographic makeup of the two schools selected as case studies in Phase 2. A final limitation is the cross-sectional observational nature of the qualitative portion of the study. Each of the limitations is described in greater detail below.

As discussed above, the findings related to my first research question indicate a lack of diversity beyond White and Hispanic/Latinx students in IB schools in Oregon and Washington, at least to the extent that allowed for reporting on data collected from schools included in this study. Therefore, the findings associated with the quantitative analysis of disparity as well as the case studies may be relevant for practitioners working within the Pacific Northwest region, or other areas within the United States with similar racial demographics. However, the generalizability of the results of this study to more diverse areas is questionable.

The COVID 19 global pandemic and the shutdown of schools across the nation may have influenced the number of schools that agreed to participate in this study. Due to the temporary closure of some schools, the suspension of in-person operations at schools and district offices, and the myriad challenges facing school leaders associated with the eventual return to in-person or hybrid learning, some schools that met the threshold for participation declined to participate.

Representatives for these schools or their districts cited being short-staffed, too busy, or having a temporary district policy that suspended research conducted within the district as reasons for declining participation. Although it is impossible to predict with certainty whether some of these schools may have shared data during a typical school year, it is worth noting the unique circumstances of the period of data collection and its potential impact on the sample size. Although the sample size did allow for an examination of the research questions, the study was not well powered to effectively answer research question two and examine the interactions of race and gender. Potentially a study that included all IB schools within the region, but certainly a larger sample that included schools across the West of the United States could improve the level of statistical power.

The grouping of Asian students into one large aggregate data group is another limitation to this study and in general serves as a limitation to accurately capturing the experiences of diverse groups of students. In the extant data collected for this study, students were categorized into the racial groups which are used by both the IBO and the states of Oregon and Washington, including Asian. Although the label is used by the IBO and the states to categorize students, it lacks specificity and may serve to homogenize diverse groups of people. The term Asian is used to describe people born in or claiming ancestors from over 40 different countries. Grouping all of these people under one label does not account for the broad range of cultural diversity, including social capital differentials, among people descended from the Asian continent. This study did not examine the disparity of representation among Asian students in Oregon and Washington IBDPs because past research has indicated that Asian students have not been historically underrepresented (Hertberg-Davis, & Callahan, 2007; Mayer, 2008). However, this grouping of multiple cultural groups under the umbrella term Asian is a limitation of this study in that it does

not explore the potentially more nuanced discrepancies in representation between various cultural groups within the umbrella term.

The use of the DI as a measurement of representation, or lack thereof, can be considered another limitation to this study. This study examined disparities between the representation of a race/gender group in a school's total student body and the representation of that same group within the school's IBDP. A Disparity Index for each group in each school (DI) was calculated by dividing the percentage of participants in a school's IBDP from a specific race/gender group (e.g., Hispanic/Latinx male) by the percentage that that same race/gender group makes up within a school's total enrollment. Because of the relative homogeneity of the Pacific Northwest population, at least among the schools included for analysis in this study, I was only able to examine DIs for White and Hispanic/Latinx students. As noted in the Results section, DIs are sensitive to group size; they are more volatile for smaller groups. DIs also vary based on what is determined to be the total population in any given proportion. This study considered all students in a school as the divisor for creating the proportion for the calculation of the DIs for White and Hispanic/Latinx students, not just those student groups. This resulted in almost all groups included within the analysis (i.e., White/male, White/female, Hispanic/Latinx male, Hispanic/Latinx female) experiencing underrepresentation. If the analysis had been conducted in such a way that examined representation in the IBDP among White and Hispanic/Latinx students only in relation to the White and Hispanic/Latinx populations of their schools, the DIs would have been different. However, this study took a maximally inclusive approach to considering and answering the research questions and therefore included all students, from all racial groups in the calculation.

The racial make-up of the two schools selected as case studies in Phase 2 of this study can also be considered a limitation. At both case study schools Hispanic/Latinx students represented the largest racial group within the school during the years of data collection. The study examined proportions of student groups participating in IBDPs in schools in the region. These two schools were selected as case studies because they were outliers in that they had the highest rates of representation, the lowest disparities, for Hispanic/Latinx males, among all schools included in the study, but they were also not the norm in the study based on the demographic makeup of the student bodies at large. At the majority of schools included in the study, like the majority of schools in Oregon and Washington, White students made up the largest racial demographic group. These schools were distinct in that regard. Any connections drawn between the results Phase 1 and Phase 2 should be considered with this in mind.

Additionally, the unknown and unexamined racial identities of the two IBDP Coordinators and one teacher interviewed during Phase 2 of this study serve as a limitation. The Coordinators and teachers were not asked to identify themselves racially in the case study process. Because the study examined disparity between student groups based on race, it is possible that the race of the program Coordinator or a highly involved teacher may have been relevant to the results.

Within the two case study contexts, the presence or absence of alternative college credit earning programs, in addition to the IBDP, was not considered as a possible factor that may have influenced DIs for groups of students. It is possible that the presence or absence of an Advanced Placement program or a credit articulation agreement with a local community college, and the ways that those programs were implemented within the schools, might have influenced the rates

of IBDP participation. The unknown potential impact of competing programs is another limitation to this study.

A final limitation to this study is the cross-sectional observational nature of the Phase 2 case studies. The qualitative data collected through studying the two schools selected as case studies, suggests that there may be some causal relationship between the policies and practices in place at these schools and the higher rates of representation among Hispanic/Latinx males in the IBDP. However, these inferences are based on the perceptions of individuals within the sample, who were interviewed about their unique experiences working in the IBDP within their contexts. We cannot rely on the inference of this relationship to draw any conclusions beyond the observations made in this study. For this reason, future research on this subject is necessary.

Implications for Research

The results of this study, as well as its limitations, present several new questions and avenues for future research in the area of access to the IB Diploma Program for historically underrepresented groups of students. It would be useful to build on the current findings by including more schools in future studies of this type, for both the purposes of increasing the sample size, the potential for diversity within sampled schools, and the statistical power of any future analysis. Additionally, considering the lack of diversity in the schools included within this study, there is value in future research that examines why the IBDP does not exist in more diverse schools within the Pacific Northwest region and the extent to which this is specific to the Pacific Northwest or a more general trend. Future research could explore, through additional case studies, the experiences of districts or schools that have tried to launch an IBDP and encountered barriers or existing programs that have tried to improve racial representation unsuccessfully.

This study only considered access to and participation in the IB Diploma Program. It did not examine how diverse populations of student achieve within the IBDP. As IB schools become more interested in increasing access and participation among more diverse populations of students, future research should examine achievement within the IBDP among historically underrepresented student groups. Researchers could explore the impact of race and gender on the rates at which students earn university credit through the IBDP and the relationship between increased access and participation and proportionally representative achievement.

The findings of this study related to student participation in the IBDP as Course candidates in comparison to those who participate as Diploma candidates raise some compelling questions for future research. There is a need for research exploring why students opt to take IB courses but not attempt the full IB Diploma. The current results suggest that the intensity of the full Diploma program for students with commitments beyond school may play a role, but this remains to be seen, and future research is needed.

Finally, future research could build on the qualitative findings presented within Phase 2 of this study by conducting experimental or quasi-experimental designs that examine the degree to which the perceived effects of policies or practices described in the case studies are related to increased representation. Researchers could involve multiple schools and randomly assign a particular treatment or condition to some, for example offering full funding for all IB registrants regardless of financial status. Researchers could assign a team of race/ethnicity-alike peer mentors to some IB classes and not to others and measure the effects on retention. The use of some form of experimental or quasi experimental design would allow future researchers to move beyond cross-sectional observation and test causal hypotheses about specific policies and practices.

Implications for Practice in IB Schools

Despite its limitations, the results of this study suggest several implications for practitioners, specifically Coordinators or building-level administrators, responsible for the operations of IBDPs within schools. However, some of these implications are also relevant for district or state level administrators responsible for the creation of financial or curricular policy or guidance that can have an impact in IB schools. This study does not offer definitive solutions to the complex issue of increasing diverse representation within the IB. It does, however, contribute to the body of research by considering the intersection of race and gender for students from historically underrepresented racial groups and examining two contexts which demonstrated comparatively high rates of representation among Hispanic/Latinx male students in the Pacific Northwest region.

The current findings suggest that if educators in the Pacific Northwest region hope to utilize the full strength of the IBDP as an equity lever, as has been done in other areas of the US, (Mayer & Tucker, 2008; Perna, et al., 2015; Saavedra, 2014) the program must be brought to the region's most diverse schools. However, this study supports the idea that the presence of an IB Diploma Program in a school is by no means a guarantee that all students within a school setting will access the program (Perna et al., 2015; Southworth & Mickelson, 2007). This study supports the findings of previous studies (Kyburg et al, 2007; Mayer, 2008; Mayer & Tucker, 2010; Siskin 2010) which identify a need for culturally responsive teaching and curriculum, affinity spaces for students, and a clearly expressed belief among staff as keys to increasing participation in the IBDP among racially diverse students. Educational leaders will not simply be able to bring an IBDP into a school and expect achievement gaps to disappear. They must invest the time and effort in the appropriate supports.

Additionally, this study suggests that resource provision in the form of financial resources to reduce the impact of IB registration fees on students and families may have an impact on historically underrepresented groups of students accessing the program. The cases of Balsam and Cottonwood High Schools suggest that if schools have the resources to completely cover IB fees for all students, the removal of any discussion of finances may increase access.

Another important consideration for practitioners working specifically with Hispanic/Latinx students is the potential of the IB Spanish language course to be a gateway into the program. The case studies included herein indicated that, within the two contexts examined, IB Spanish was for many Hispanic/Latinx students a first point of contact with the IB in grade 11. After this initial experience, in an asset-based environment, with a caring teacher who expressed belief in the students' abilities, many students were willing to take on the challenge of another course within the IBDP.

Perhaps most importantly, this study builds on the work of previous research (Brown, 2018; Kyburg et al, 2007; Mayer, 2008; Ochoa, 2013) in reiterating the importance of educators' attitudes and beliefs about student potential, and explicitly expressing those attitudes and beliefs. The case studies presented here highlighted schools in which Hispanic/Latinx male students are accessing the IBDP at some of the highest rates in the Pacific Northwest region. The IBDPs in these schools are led by influential and inspirational social justice educational leaders, who believe that all students belong and that students should be able to choose their challenges, regardless of their race, language spoken, or previous academic opportunities. Nonetheless....

Negative attitudes This study suggests that that belief has an impact on students' senses of belonging within the IBDP. It's possible that Rita, the IB Spanish teacher from Balsam High School, in the opening words of her interview, captured this best. "You want to know why our

school does so well with Hispanic/Latinx boys in our IB program?”, she asked, and then added, with a laugh, “It’s ‘cause I’m their teacher!” It was clearly a joke, but it also might have been true.

Implications for Policy within the International Baccalaureate Organization

In consideration of the implications for school leaders in the roles of IBDP Coordinator or Head of School discussed above, the International Baccalaureate Organization (IBO) can consider ways to institute policy which will set global standards for academic equity and inclusion and potentially reduce the inequities in program implementation and access across programs. Based on the findings of this study, relevant policy recommendations are described below.

Prior research indicates that gatekeeping measures have served as a barrier to IBDP participation for historically underrepresented student groups, and this study suggests that the removal of barriers of may be related to higher rates of participation among Hispanic/Latinx students (Kyburg et al, 2007; Mayer & Tucker, 2008; Perna, et al., 2015; Saavedra, 2014). The IBO, in an attempt to create more equitable access to the DP could restrict schools from imposing entrance requirements upon students. This strategic move on the part of the IBO would set a standard across all schools and promote a belief that all students can be successful in rigorous programs.

The removal of all fees at the student level is also a policy change that the IBO should consider. Although not an academic gatekeeping measure like entrance exams or earned grades in prerequisite courses, past studies have indicated that financial support from schools and districts can serve to bolster program participation for students from historically underrepresented groups. The case study of Balsam High School included within the current

study supports that idea and strongly suggests that removal of all fees can contribute to greater access by not only removing a financial barrier but also removing any social stigma attached to receiving financial assistance.

This study presents two implications for potential policy shift related to curriculum and instruction for heritage Spanish speaking students within the IBDP. Prior research has suggested that affinity groups or other environments in which historically underrepresented groups of students have opportunities to interact with peers who share racial cultural, or linguistic identity (Barber & Torney-Purta, 2008; Kyburg, 2008, Tucker, 2008). Considering these past results and the findings of the case studies included in the current study, it is recommended that the IBO look more closely at the possibility of endorsing study within the group B language acquisition subjects for heritage language speaking students. In the cases of Cottonwood and Balsam High Schools, heritage Spanish speaking students identified as Hispanic/Latinx were drawn to the IB through the opportunity to expand their literacy in their native language. This move by the school to promote heritage language study for this group of students, historically underrepresented within the IBDP, increased access opened a gateway to other courses within the program.

In addition to policy that authorizes and promotes heritage language programs for Hispanic/Latinx students in US IB schools, the IBO might also consider authorizing and ensuring the availability of English B as a course offering for students identified as English language learners. The IBO can demonstrate its commitments to international-mindedness and multi-lingual-ism that the organization is known for through policy that not only allows for English B to be taught and assessed in US schools but encourages the practice. There is a need for language learning with many US IB schools, among a population that is often denied access to rigorous curriculum and instruction. This shift in pedagogy and policy can allow for that need to be met in

far more inclusive ways than it often is, and in ways that open the doors of the IBDP to a more diverse spectrum of students.

Finally, the IBO may promote more valuable scholarship with the potential to produce results that can lead to program improvement and enhanced educational experiences for students by making data more readily available to the research community. If researchers are granted open access to de-identified data related to IB program participation, not only at the national but also the state and school level, practitioners may have access to more studies like this one, and others with the capacity to shed light on important problems of practice. If de-identified quantitative data related to enrollment, course completion, assessment scores, and other measures of both access and achievement were accessible directly from the IBO, studies focused on the IB may soon rival in number those focused on Advanced Placement programs. Through this expansion of data access and research production, the IBO, its schools, and IB students worldwide, may benefit.

Despite its limitations, this study can be viewed as an initial step toward integrating analyses of student participation in the IB Diploma Program, accounting for race and gender, with case studies that examine how practitioners might contribute to participation equity. To my knowledge this is the first study of its kind, and it is my hope that this research might prompt others toward further investigation into this subject.

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