Executive summary

The impact of U.S. educational policy on the implementation of the IB Primary Years Programme: A case study of an urban, low-income public school

Heather E. Mills, Ph.D.

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Background

In 2001, the No Child Left Behind (NCLB) Act was enacted by the George W. Bush administration as a means to improve U.S. education by holding schools and teachers accountable for meeting certain standards as measured by standardized tests (No Child Left Behind Act, 2002). This legislation had far-reaching and deep effects on the curriculum and pedagogy in U.S. public schools. NCLB created an atmosphere of standards-based, data-driven, scripted curriculum whereby the teacher was frequently required to adhere to strict pacing guides implemented by school districts in order to address the curriculum tested by state standardized tests (Hollins, 2011). The growth of central control emphasized by standardization has led to the de-skilling and de-professionalization of the teaching profession (Majhanovich, 2002). The autonomy with which teachers made curricular decisions was supplanted by "teacher proof" curricula (Shannon, 2000). NCLB was instituted in 2001 with the goal of increasing equity and improving student performance under the guise of educational reform (Ravitch, 2010). However, rather than providing students with a depth of knowledge, the system fostered by NCLB was centered on accountability for schools who received federal funding. Schools that failed to meet federal targets for specific sub-groups, as delineated by race and/or socio-economic status, were penalized and subjected to funding loss, school restructuring or the loss of students (Hess & Petrilli, 2009).

NCLB brought the state accountability movement begun in the 1990s to the federal level (Kress, Zechmann, & Schmitten, 2011). Schools further encouraged a transmission model of teaching that emphasized rote-memorization and "drill and kill" exercises with the goal of representing knowledge on easily quantified, standardized, multiple choice tests (Wood, 2004a). Elementary schools were most affected by NCLB (Hollins, 2011; Sandholz, Ogawa, & Scribner, 2004). According to Wood (2004a) NCLB inadvertently limited teaching pedagogy to the direct instruction, transmission model of instruction due to the pressure for efficiency in covering a long list of tested standards. This led many teachers to focus instruction on basic skills in tested subjects (i.e., math and English) thus resulting in decreased time spent on non-tested subjects (i.e., social studies, science, physical education or art). The transmission model of teaching is at odds with the trans-disciplinary, constructivist nature of International Baccalaureate Primary Years Programme (IB PYP).

The IB PYP was introduced to pre-kindergarten through sixth grade around the world in 1997 (International Baccalaureate Organization, 2009b). The IB PYP emphasizes the development of the whole child with a focus on international-mindedness within a concept-based, curriculum framework. IB PYP teachers write the curriculum in the context of six trans-disciplinary themes encompassing the knowledge, skills, attitudes, and action to be achieved by the students. The IB PYP espouses the belief that a constructivist approach is the best way for children to learn, consequently for the majority of the school day the teacher engages in inquiry-based teaching (International Baccalaureate Organization, 2010a). Therefore, teachers who teach in schools that must adhere to the requirements of both NCLB and the IB PYP experience conflict, personally and professionally, as they navigate both worlds.

Problem

IB programmes in the United States are frequently used as a means for providing

access to college and have been used as a model of reform for schools failing to make the adequate yearly progress required by the United States federal government (No Child Left Behind Act, 2002). Students who graduate with the IB diploma from the high school level Diploma Programme (DP) receive college credit at some universities similar to the Advanced Placement (AP) exams. The rapid growth of IB programmes in public schools in the United States means that more teachers are faced with the tensions of meeting district, state, and federal requirements while adhering to the precepts set forth by the IBO. IB programmes do not align with the standardized testing model that emphasizes breadth of knowledge rather than depth. IB programmes shun the transmission model of schooling and instead encourage deeper cognition on the part of the students through inquiry-based, student-centered instruction with multiple methods of assessment including tasks, portfolios, and projects (International Baccalaureate Organization, 2010b). Many U.S. public schools take advantage of the Magnet Schools Assistance Program (MSAP) in which to fund school restructuring. The International Baccalaureate is mentioned as one option for funding through the MSAP grant (No Child Left Behind Act, 2002). The increase of IB implementation in public schools in the U.S. has led to expectations that are at odds with the federally mandated testing and school evaluation systems (i.e., teaching for efficiency and test taking rather than teaching for meaning).

To meet the requirements of NCLB, many states adopted prescribed curricula in order to standardize the teaching in schools. Teachers have been handed "fool proof" scripted programs that required no more than a reading of the script to students resulting in minimized teacher autonomy. This transmission model of teaching assumes a didactic learning style and discourages using other instructional designs. Additionally, requiring the use of prescribed curricula removes teacher choice and expertise, effectively de-skilling and de-professionalizing teachers. Teachers who teach in IB programmes in public schools experience a return to teacher as expert, not felt since before NCLB legislation, by reestablishing teacher expertise through curriculum writing, collaboration, and inquiry-based instruction.

The number of IB Primary Years Programmes in North America has more than tripled in the last five years with 289 PYP schools in 2006 growing to 869 by the end of 2011 (International Baccalaureate Organization, 2012b). Due to this rapid increase of the IB, particularly in U.S. public schools, the IBO needs strategies to support teachers in the United States. IB Coordinators also need helpful approaches for the induction of new teachers into an established IB programme, particularly in a time of school district layoffs and the involuntary placement of teachers into IB schools. Additionally, this study filled a gap in the research for the IB in general and the IB PYP specifically, wherein the narratives of teachers are largely absent as most studies are of a quantitative nature. In the current era of teacher disempowerment and education reform, this study provided the means by which teachers shared their voices and agency through co-constructing the research design, analysis, and dissemination of findings thereby exercising their knowledge-making power.

Purpose

The purpose of this case study was to investigate how teachers in an urban, high-minority, low-income, U.S. public school navigated the challenges of NCLB requirements while teaching in an authorized IB PYP. Teachers in this situation have faced a complex set

of conflicting requirements and mandates that often diametrically oppose one another. This study investigated the processes involved in meeting these requirements within the context and atmosphere of educational accountability.

An additional focus of the study was the involvement of the participants in all aspects of the study, including the design, research questions, and analysis. This co-construction of the study served to disrupt the traditional power imbalance between the researcher and participants by recognizing teachers as experts in the field of education and assuming a stance of humility on the part of the researcher. The following overarching question was investigated in this case study: How do teachers experience the implementation of the IB PYP in an urban, public school situated in a low-socio-economic-status neighborhood?

This study is likely to advance the field in several ways. Pragmatically, teachers who are implementing the IB PYP in a public school are faced with a myriad of challenges. This study may offer others, in this situation, practical strategies for meeting conflicting demands of educational policies or caught between competing learning paradigms. Districts and schools considering the implementation of the IB PYP require a better understanding of the demands placed on teachers and must construct strategies to reconcile these demands prior to implementation. Additionally, given the absence of policy documents regarding IB programmes in low-income, public schools, this study informs the IBO of the unique challenges of these schools in the United States. Furthermore, the hope is that this study provides practical advice for induction and professional development activities that can assist new and veteran teachers in public IB PYP schools. Finally, this study offers researchers an alternative to the traditional research paradigm of researcher as expert, honoring the knowledge of the participants as equally important. Ultimately, while this culturally responsive research framework provides a model for researching in schools, it has the capacity for transfer to other research contexts.

Review of the literature

Historical trends in U.S. education. The current era of reform is heavily influenced by Edward Thorndike's mechanistic notion of education (Gibboney, 2006). According to Gibboney (2006), school reform in the last half of the 20th century (and the beginning of the 21st century) has been dominated by Thorndike's narrow view of education as a quantifiable science. Thorndike postulated that effective education could be quantified to such an extent that experts (i.e., researchers) alone could make the decisions on content, pedagogy, and assessment. This narrow view of education espoused the idea that learning could be measured by tests. Thorndike viewed people as machines and reality as fixed, measurable, and predictable.

In contrast to Thorndike's simplified view of reality, John Dewey viewed humans as the image of life with a reality that is uncertain, ever-changing, and influenced by context (Gibboney, 2006). Dewey (1902) believed that the purpose of school was to encourage an attitude of life-long-learning and to foster democracy. Dewey proposed that democratic life is dependent upon learning, for without intelligence, democracy cannot exist. In sharp juxtaposition to Thorndike's "all is measurable" theory, Dewey claimed that schools should be judged on the intangible ability to develop a love of learning in the students, something that is immeasurable on tests. Thorndike's scientific views of education are clearly seen in historical and current educational policies in the United States while John Dewey's

constructivist philosophy of learning has influenced the policies and philosophy of the International Baccalaureate. These competing views of Thorndike and Dewey are what have ultimately led to this case study and the idea that teachers need a greater voice in the field of education.

Urban educational reform. Haberman (2007) reported there are 7 million impoverished children attending school in the largest urban school districts with a great number of these children being classified as minority. According to Haberman (2007), urban schools typically have diverse populations and, in an effort to provide equal access to education for all, these school districts adopt standardized practices. Urban schools may lack individualized learning and become impersonal in an effort to correct perceived deficiencies in their students (Valencia, 2010; Weiner, 2003). According to researchers, much of the literature discusses what urban students lack, representing a deeply ingrained "deficit paradigm" (Valencia, 2010; Gardner, 2007; Milner, 2008; Weiner, 2003).

This deficit model has created extensive and systemic challenges within urban public education (Norman, Ault, Bentz, & Meskimen, 2001). In their 2001 study, Norman et al. discovered that the achievement gap mirrored the gap in resources between urban and suburban schools. The fewer resources the school had, the greater the achievement gap. Additionally, Norman et al. revealed a lack of cultural understanding by the teachers led to the view that their urban students lacked "appropriate values toward learning" and were "deficient in behavioral skills necessary for school success" (p. 1111). Teachers in urban environments may tend to rely on a teacher-centered environment in which the they are the providers of knowledge and the students are passive recipients (Marlow & Page, 1998). Moreover, researchers have found a lack of connection between school and home may be the cause of students' lack of interest or motivation in school (Basu & Barton, 2007; Martin & Hagan-Burke, 2002; Tyler et al., 2008). As a way to increase motivation and achievement, Kincheloe (2005) theorized that a constructivist paradigm of teaching acknowledges students' prior knowledge and will use this as a connection to facilitate the construction of new knowledge. The literature suggests that urban students could be better served with a constructivist teaching model.

Though Thorndike died in 1949, the influences of his theories remain pervasive in current U.S. educational policies (Gibboney, 2006). Goals 2000, enacted in 1994, was a set of national education goals set by the U.S. Congress (H.R. 1804). This legislation established a set of eight goals framed by globally competitive academic standards. Additionally, it legislated the measurement of student progress, and provided provisions to assist students in meeting these standards. Following Goals 2000, the No Child Left Behind Act of 2001 was passed by the United States Congress as a reauthorization of the Elementary and Secondary Education Act (ESEA), as a means of public school educational reform. The 1965 ESEA first introduced Title I , which provided funding for schools and school districts with high numbers of economically disadvantaged students (Dee, Jacob, Hoxby, & Ladd, 2010). NCLB, which greatly expanded the role of the federal government in public education, was proposed by President George W. Bush and received wide bipartisan support for its enactment (Ravitch, 2010; Wood, 2004b). The goal of the legislation was to support standards-based reform of the educational system wherein standards are set by each state individually, grounded in scientific research, and measurable goals are established with the aim of improving individual student outcomes (Wood, 2004b). NCLB required states to devise annual, standardized assessments of basic skills to all students in

conjunction with the states' education goals to receive federal funding for schools. States were required to test annually all students in grades three through eight, ten and twelve in reading and mathematics who attend public schools with the goal of 100% proficiency in these subjects by 2014 (No Child Left Behind Act, 2002). States were then required to rate schools based on the score results to determine whether the students have made Adequate Yearly Progress (AYP) towards the state's proficiency goals. Schools that failed to meet their AYP faced sanctions requiring them to offer parents the option of transferring their children to an achieving school, provide access to extra-curricular tutoring, or re-staff or restructure the school (No Child Left Behind Act, 2002).

NCLB legislation has had profound and widespread effects on public schools. While schools have seen some benefits from NCLB, such as an increase of funding, an increase in qualified teachers, and marginal increases in student achievement, the minimal or negative effects include skills-based teaching, narrowing of teaching focus, and emphasis on test preparation. Schools that do not meet the AYP are categorized as being in Program Improvement (PI) and receive consequences from the federal government in an effort to improve the school (Darling-Hammond, 2004; Hess & Petrilli, 2009).

Since the implementation of NCLB, student achievement has increased somewhat (Kress et al., 2011). According to Dee et al. (2010) NCLB has positively affected student achievement in mathematics, but not in reading performance. Specifically, mathematics performance improved in students in fourth and eighth grades. Researchers found the positive benefits seemed to be concentrated in historically disadvantaged populations with the largest effects for Hispanic students (Blank, 2011; Dee et al., 2010). Others argue that performance on state standardized tests can be misleading because states are able to adjust their assessments strategically with teachers limiting instruction to those areas in the curriculum that help learners meet the assessment of state standards (Hess & Petrilli, 2009; Ravitch, 2010). These increases in test scores may simply reflect instruction narrowly focused on test preparation rather than an actual increase in the retention and application of knowledge.

A primary criticism of NCLB has been the reduction of effective instruction due to the lowering of achievement goals by states and by encouraging the phenomenon of "teaching to the test" by teachers (Dee et al., 2010; Krieg, 2011). Dee et al. (2010) and Krieg (2011) revealed that teachers reallocated teaching time to a narrowed focus on tested skills and content. Teachers then would teach to a limited subset of skills believed to increase performance on the standardized test rather than teaching the curriculum in depth. Dee et al. (2010) found that teachers increased their teaching focus to the tested subjects of mathematics and English while reducing the teaching of non-tested subjects such as art, science, social studies or music. Instruction is narrowed more by the introduction of measures to "dummy proof" teaching, such as scripted curricula or to encourage developmentally inappropriate practices in order prepare for the "test" (Karp, 2004). Guccione (2011) found that "sticking to the script" had the additional effect of teacher isolation, thereby creating an atmosphere of demoralization and de-professionalism.

Should these tactics fail to increase achievement on federal accountability measures, schools that had received federal funding could be subject to consequences, which included decreased funding, the transfer of children out of the school, or school reconstitution or restructuring (No Child Left Behind Act, 2002). Increasingly, schools had been taking

advantage of the MSAP grant that funded the restructuring or reformation of a school (Hess & Petrilli, 2009). According to Hess and Petrilli (2009) the purpose of this grant was to support school choice and desegregation. Ironically, this provision of NCLB listed the International Baccalaureate as one model of reform funded under this program (No Child Left Behind Act, 2002).

Teacher culture. NCLB policies inadvertently encouraged the narrow teaching of tested subjects and skills. In efforts to "teacher proof" the curriculum, scripted programs were adopted that further deskilled and de-professionalized teaching culture. What constitutes the culture of being a teacher? How does one identify patterns that distinguish teachers from other professions? The *American Heritage New Dictionary of Cultural Literacy* (n.d.) defines culture as "the sum of attitudes, customs, and beliefs that distinguishes one group of people from another." Researchers have uncovered some common defining characteristics of teacher culture: individualism, a sense of responsibility, the importance of relationships, and a desire for connectedness (Anderson, Herr, & Nihlen, 2007; Hargreaves, 1995; Musanti & Pence, 2010).

Hargreaves (1995) cited a "deep-seated culture of individualism and classroom-centeredness" (p. 131) that has become embedded in the work of many teachers. Teachers often choose to work in isolation in order to meet the multiple demands placed upon them in the teaching profession even when provided with time for collaboration. The physical structure of schools inadvertently encourages individualism and privatism, isolating teachers due to the cellular arrangement of classrooms.

Isolation can also lead to reluctance to participate in collaboration. Musanti and Pence (2010) experienced teacher resistance when teachers were asked to observe each other's teaching. Teachers felt as if this were a violation of privacy and evaluatory in nature rather than helpful collaboration. The researchers attributed these feelings as stemming from a long tradition of teacher isolation within schools where teachers are separated from one another either physically due to the arrangement of classrooms or organizationally through a lack of time in the daily schedule. Moreover, accountability policies that reinforce a deficit model of teacher evaluations have created an atmosphere of hesitation toward peer collaboration (Musanti & Pence, 2010; Hargreaves, 1995). In the current era of accountability, teachers feel a strong sense of responsibility for the success of students in their classrooms. This sense of responsibility can encourage feelings of resistance to forced collaboration. Teachers feel that if collaboration is contrived, it lessens the time they have to teach and is, therefore, not as valuable as being with the students (Hargreaves, 1995). Ultimately, the students are the teacher's prime responsibility. Therefore, while teachers find collaboration a valuable means for overcoming isolation and the construction of knowledge (Musanti & Pence, 2010), it must be authentic rather than artificial (Hargreaves, 1995). Musanti and Pence (2010) found teachers ultimately perceived authentic collaboration as an important way to build trust and relationships with their peers.

NCLB policies limited teachers to scripted programs that diminished their autonomy. Teacher expertise was eliminated from curricular decision-making in exchange for "teacher proof" curriculum. This type of curriculum removes the need for teacher collaboration, which exacerbates feelings of isolation. Furthermore, accountability measures put pressure on individual teachers fostering a climate of competition and encouraging greater individualism. The International Baccalaureate offers an alternative to

this paradigm.

International Baccalaureate Organization (IBO). The International Baccalaureate was founded in 1968 as a non-profit educational foundation, by French and English teachers at the International School of Geneva with assistance from other international schools (International Baccalaureate Organization, 2012a). These teachers developed the high school level IB Diploma Programme (DP) in order to provide a consistent, college preparatory curriculum with common external examinations for students around the world. An additional goal of the DP was to encourage an "understanding and appreciation of other cultures, languages, and points of view" (IBO, 2012A, para. 1). While originally the majority of schools that offered the DP were privately funded, currently approximately 55% of IB schools globally are government funded (International Baccalaureate Organization, 2013).

As reported by the IBO (2012b) , there are currently a total of 3,324 schools in the world that offer one or more IB programmes situated in 141 countries. Of these schools, 1,307 are located in the United States with Canada running a distant second with 310 IB schools. Of the IB schools in the United States, 91% are classified as state-funded with the other 9% as privately funded (International Baccalaureate Organization, 2013). The PYP encompasses a wide range of schools around the world including public and private, secular, and religious, totaling 875 programmes in 93 countries. The U.S. currently houses 299 authorized PYP schools accounting for over one-third of the PYP schools in the world.

Pedagogy of inquiry. The IB PYP espouses a pedagogy of inquiry in which students are actively engaged in understanding the world. The role of the teacher is to "be a thoughtful participant in, and monitor of, the ongoing explorations and investigations" of the students (International Baccalaureate Organization, 2009a, p. 4). IB acknowledges the varying ways that inquiry manifests in classrooms and that success is reached when the students' questions drive the inquiry. This builds upon students' existing knowledge and allows for more authentic learning experiences, ultimately leading to new understandings. Successful learning is expected to encourage student initiated action as a result of their new learning. This explicit expectation of the PYP can be as simple as students extending their learning by further researching a topic at home, or something with greater social impact (e.g., organizing a beach clean-up) and reporting this to the teacher who then records the student's action on the unit planner.

Concept-driven curriculum. IB policy documents contend that structured inquiry can be "a powerful vehicle for learning that promotes meaning and understanding, and challenges students to engage with significant ideas" (International Baccalaureate Organization, 2009a, p. 5). PYP teachers write units within a given framework that includes eight key concepts essential to the implementation of the PYP. These concepts include form, function, causation, change, connection, perspective, and responsibility. While the IBO admits these are not the only means by which students and teachers can make sense of new learning, these concepts are central to the PYP curriculum. These concepts transcend discipline and support the trans-disciplinary nature of curriculum planning and the idea of international-mindedness espoused by the PYP.

The idea of international-mindedness is promoted by the IBO (2009a) as the "one compelling component that stands out from the common ground of good practice in all IB World Schools offering the PYP" (p. 11). The centerpiece of the notion of international-mindedness is the IB learner profile. The learner profile includes the attributes of being

knowledgeable, reflective, principled, open-minded, balanced, thinkers, communicators, and inquirers. These are the primary components of an internationally-minded IB student, and IB policy documents report these attributes as purposefully value-laden with the goal of fostering an environment that encourages positive attitudes and responsible student action towards local or global issues (International Baccalaureate Organization, 2009b).

Research on the IB. The majority of the literature produced about the IB focuses on the DP concentrating on topics such as assessment (Bunnell, 2011), student stress (Suldo, Shaunessy, Michalowski, & Shaffer, 2008; Suldo, Shaunessy, Thalji, Michalowski, & Shaffer, 2009), student perceptions (Foust, Hertberg-Davis, & Callahan, 2009), internationalism (Tarc, 2008), international education (Bunnell, 2008, 2010; Doherty, 2009), and minority students (Burris, 2007; Kyburg, Hertberg-Davis, & Callahan, 2007; Mayer, 2008). There are very few studies reporting on the PYP. Of these studies, seven employed a quantitative or mixed-methods approach while only two were qualitative case studies that used narrative inquiry, interview, and document analysis. Given that the PYP was developed in 1997, it is understandable that there would be a limited number of studies. Of these studies, the vast majority are dissertations rather than journal articles. These researchers have focused on inquiry (May, 2009), programme implementation (Hall, Elder, Thompson, & Pollack, 2009; Lopez, 2010; Stillisano, Waxman, Hostrup, & Rollins, 2011), the principal's effects on change (Hartman, 2008), student achievement (Jordan, 2009; Tan & Bibby, 2010), and teacher philosophy (Twigg, 2010).

Implementation of the PYP is the most frequently studied area. The former International Baccalaureate North America (IBNA) regional office (currently known as International Baccalaureate Americas or IBA) conducted a large scale mixed-methods study in Georgia in which teachers responded to a Likert-type online survey regarding aspects of implementation. These included IB regulations, the authorization process, meeting the IB standards, teacher support, advertising to parents, meeting state standards, successes and challenges (Hall, Elder, Thompson, & Pollack, 2009). Additionally, qualitative techniques such as interviews, observations, and document analyses were conducted at three case study sites. Case study data indicated schools opted to become PYP authorized for reasons related to district-mandated school restructuring, changes in the school neighborhood, and a desire to improve the reputation of the school. Teachers reported that the most challenging aspect of PYP implementation was aligning it to the state standards. Integration of Georgia state standards and the trans-disciplinary nature of the PYP curriculum proved to be the most demanding for schools (Hall, Elder, Thompson, & Pollack, 2009).

The challenge of PYP implementation in the face of state accountability requirements is echoed by other researchers. In their 2011 mixed-methods case study of eight Texas schools, Stillisano et al. included the balance of the IB philosophy with state and district accountability requirements as a challenge. Furthermore, they cited the recruitment and retention of staff and the lack of district support among obstacles to implementation. However, Stillisano et al. named improved teacher professional practice, instructional focus on higher-level thinking, cultural awareness, and the relevance of student learning as positive ramifications of the implementation of the PYP. Moreover, May (2009) discovered that in the PYP effort to encourage inquiry within the classroom, students need to feel respected, trusted and accepted by teacher and peers. May (2009) found state and school district accountability expectations hindered this process by

focusing too much on the use of scripted programs to increase student achievement. She discovered that in order for teachers to encourage a classroom environment conducive to inquiry, they too must have a positive relationship with the school principal, which includes being treated as a professional through interaction and collaboration with their peers and an embedded vision for professional learning, all requirements for the authorization of the PYP (International Baccalaureate Organization, 2010b).

The adoption of NCLB has furthered the mechanistic notion of education by reducing it to measurable data for the purposes of accountability and comparison. This presents a conflict for IB PYP teachers in public schools. The philosophies underpinning NCLB and IB are fundamentally at odds with one another. This conflict causes tensions for teachers who attempt to meet the requirements of both. This qualitative case study investigated the experiences of IB PYP teachers navigating this conflict within public, low-income schools. The following section details the methodology and methods utilized to understand this phenomenon.

Methodology

This study utilized a qualitative case study design framed by culturally responsive methodologies (CRM) (Berryman, SooHoo, & Nevin, 2013), and was informed by a grounded theory approach to analysis. This study involved five, experienced IB PYP teachers in a high-poverty, high minority, urban public school. The teachers assisted in the co-construction of the research design and were offered the opportunity to participate in the analysis of the data. Each teacher participated in conversations, which were the main source of data. Additionally, a mix of formal and informal classroom visitations and an analysis of school documents were utilized. Furthermore, additional data were collected from teachers' journals. Transcripts of conversations were coded and analyzed using the constant comparison method grounding the emergent themes in the data. From the data analysis, a conceptual framework emerged, which facilitated an understanding of the experiences of the participating teachers.

Setting. IB World School, a pseudonym for the school featured in this case study, is located in one of the largest urban school districts in the United States. According to the California Department of Education (2010-2011), this public kindergarten through eighth grade school is situated in a low-socio-economic-status neighborhood. At the time of this study, it was comprised of 1,037 students in grades kindergarten through eight with 45% of the students reported as Hispanic, 20% as African American, 27% as Filipino, 4% Pacific Islander, 2% Asian, less than 1% as White and 31% as English Language Learners. Additionally, 5% of the students resided in subsidized housing, shelters for those families who were homeless, and shelters for those families who sought respite from domestic violence.

The IB PYP encompassed grades kindergarten through fifth grade. The IB PYP had 18 general education teachers, three special education teachers for students with moderate to severe disabilities, one Spanish language teacher, and a half-time teacher-librarian. Of these 23 teachers, 6 were male and 17 were female. The ethnic breakdown of the teachers in the IB PYP included: 13 White; 7 Hispanic; 2 Filipino; 1 Asian. Seven teachers spoke Spanish as their first language and two spoke Tagalog as their first language. Kindergarten, first, and second grade classrooms maintained a district-imposed, student to teacher ratio of 30:1 and fourth and fifth grade classrooms were at 35:1. As indicated by eligibility for

free or reduced lunch, the school received Title I federal funds with 81% of the students' families living at or below the poverty line.

The school was authorized by the IBO in 2008 to offer the IB PYP as an all-inclusive program for students in grades kindergarten through five. The school has since successfully participated in IBO programme evaluation in 2011. The school incorporated California state standards into the IB PYP curriculum framework to create thematic, concept-based units that consist of student-centered, inquiry-based pedagogy. The school achieved an Academic Performance Index (API) score of 779, ranking a 7 out of 10 when compared to similar schools (California Department of Education, 2010-2011). In 2012, during the year of the study, the school was designated as Year 2 of Program Improvement (PI) for failing to meet the Adequate Yearly Progress (AYP) math and English proficiency targets set by the United States federal government in NCLB (2002).

Participants. The participants of this study were teachers in an urban, public school situated in a low-socio-economic-status neighborhood authorized to offer the IB PYP. Purposeful sampling was employed because it is "fundamental to the desire in qualitative research to seek the "optimal, rather than the average, experience" (Morse, 2007, p. 234). The participants were veterans both in the school and in the PYP and had taught at the school prior to the implementation of the PYP and afterwards. The teachers had seven or more years of teaching experience in this school. In addition to the number of years of teaching in the school, they had participated in at least two official IB trainings. Their classrooms represented a range of configurations including a self-contained, multi-grade, classroom for students with moderate-severe special education needs, general education classrooms, and classrooms for students designated as gifted and talented (see Table 1). In this way, the teachers demonstrated expertise in the implementation of the IB PYP bounded by the constraints of district and state mandates within a culturally, linguistically, and intellectually diverse student population.

Table 1

Participant Biographical Information

Name	Age	Ethnicity	Grade	Years at School
Angelina	39	Latina	4th Excel[a]	14
Beth	40	White	5th Excel	14
Cathie	30	White	1st-3rd M/S Sp.Ed.[b]	7
David	50	White	2nd	16
Elizabeth	35	Irish	1st	13

Note. All names are pseudonyms. Ethnicity as reported by each participant.
[a]Excel = class designated for high-achieving or gifted students. [b]M/S Sp.Ed. = special education class designated for students with moderate to severe disabilities.

Tools used. Data collection tools included a written survey, conversations and interviews with teachers, classroom observations/visitations, teacher journal reflections,

and school document analysis over the course of four months. Because individual interviews can be time consuming, the participants and I agreed upon an acceptable length of time for the interviews. Three rounds of formal interviews per participant ranging between 35-45 minutes in length were held at the time and place most convenient for each teacher. All conversations took place in each teacher's classroom. The first conversation most closely resembled a semi-structured interview format with the topics sent to the teachers prior to meeting as suggested by Baumfield, Hall, and Wall (2008) and as requested by the teachers. Initially all teachers were asked the same open-ended questions for the first conversation centered around the topic of their experiences teaching in the IB PYP in order to provide a flexible framework and common starting point in which their narratives could be constructed. Analysis of the initial conversations determined subsequent conversation topics. With permission from the participants, these conversations were audio recorded and then immediately transcribed. In addition to formal, recorded interviews, numerous informal conversations and interactions occurred with the participating teachers. As the IB coordinator for IB World School, I was in constant contact with the teachers. These interactions took place in the school's hallways and breezeways, during weekly collaborative planning sessions, in my office, and through email.

Additionally, Baumfield et al. (2008) indicated when investigating the way teachers manage particular practices, observation will be a key research tool. Because I sought to understand fully teachers' experiences teaching the IB PYP in an urban, public school in a low-income neighborhood, classroom visitations were considered an important source of data. A mix of formal and informal observations characterized all visitations to the participants' classrooms. For the purposes of this study formal visits refer to a jointly agreed upon topic of observation between the participants and the researcher. Informal visits refer to instances of "walking through" classrooms without a specific objective. I arranged to visit each classroom to photograph the room environment. These visits were scheduled at the convenience of the teachers to occur when students were not present. In addition, informal observations of lessons and activities occurred during the normal teaching day as I passed through classrooms for other purposes. While the majority of observations were completed for each teacher individually, I conducted one joint, formal observation at the request of Cathie and David to observe a co-taught lesson. The content of observations was co-constructed between the teachers and me and included teacher pedagogy, curriculum, and classroom environment. I took detailed field notes and photos to record my observations. Upon completion of each observation, the teachers had the opportunity to review my field notes and offer any clarifications they deemed necessary.

Ideally, a major source of data would have come from teachers' reflections. However, although the teachers could have written in a way that was most convenient for them, only three teachers participated to varying degrees in journal writing. Two teachers minimally participated sending only one reflection each (one through email and one handwritten). David submitted the most journal entries (five short paragraphs and two full single-spaced pages) by typewritten hardcopy. Furthermore, each teacher provided background information by completing an open-ended biographical survey.

In addition to interviews and observations, school documents provided rich sources of data. School documents including thematic unit planners, policy documents, and the IB PYP programme of inquiry provided insight into the philosophies of the school and

teachers, as most of these documents were created as a collaborative effort. Curriculum unit planners revealed the pedagogical beliefs and practices of the teachers as well as provided a written record of the ways in which the teachers adapted curriculum to manage the California standards, the expectations of the IBO, and the characteristics/learning needs of their students.

Data analysis. The data were analyzed using the grounded theory method as defined by Bryant and Charmaz (2007) as "a systemic, inductive, and comparative approach for conducting inquiry for the purpose of constructing theory" (p. 1). Data collection and data analysis were simultaneous, persistent, and interactive allowing for the emerging analysis of data to gradually become more focused and progressively more theoretical (Bryant & Charmaz, 2007; Charmaz, 2011). As data were collected, I employed a process of coding, analysis, and comparing known as constant comparison as originally suggested by Glaser and Straus (1967). The data were closely examined and deconstructed while comparing, contrasting, and categorizing continuously throughout the study until theoretical saturation was achieved and no new concepts emerged (Charmaz, 2011; Glaser, 1978).

Results. Themes of "navigating constraints" and "resisting and persevering" resulted from the data collected from the teachers. Table 2 displays the themes and subthemes extrapolated from the data.

Table 2
Resulting Themes and Subthemes

Themes	Subthemes
Navigating Constraints	Meeting state/district mandates
	Double counting curriculum
	Challenge of time management
	Coping with increasing class sizes
	Resource inequities compared to private IB schools
	Staffing retention and displacement
Resisting and Persevering	Maintaining high expectations for students
	Student Centeredness in teaching and assessing
	Providing student choice
	Cultural responsiveness

Key findings

In this study, the teachers experienced conflict between the controlling policies stemming from NCLB and the autonomy provided by the IB PYP. In response to institutionally embedded notions and policies such as standardized curriculum and testing, and top-down decision making, the teachers presented acts of resistance and conformity. Each participating teacher enacted resistance to the single definition of knowledge as defined by national policy. This resistance, exemplified in their personal beliefs and philosophies, curriculum choices, and pedagogical styles, was a reaction to the constraints

of district, state, and federal educational mandates. Teachers demonstrated this resistance by countering notions of deficiency commonly believed regarding marginalized students with student choice and differentiated teaching and assessment. Their words and actions honored students' ways of knowing through the celebration of culture and student driven learning and in the writing of curriculum that incorporates multiple ways of learning.

Despite the challenges of incorporating the IB PYP in a public school, the IB PYP provided a framework of freedom and flexibility to be able to express resistance to institutional constraints. The IB PYP encouraged inquiry-based pedagogy within student-centered classrooms. The teachers exercised creativity and freedom through the writing of curriculum units that incorporated student input and questions as a driving focus of the units. The teachers maintained a delicate balance of conformity and resistance that allowed them to retain some autonomy in their curriculum and pedagogical choices while expressing dissatisfaction with the limits of NCLB.

Conceptualizing resistance and conformity

All of the teachers expressed philosophies resisting limited practices of standardized testing, scripted curriculum, and decontextualized skills-only learning encouraged by NCLB policies and further enforced by state and district mandates. Additionally, the teachers demonstrated views of students as agents of their own learning and frequently discussed notions of student choice and student-centered curriculum choices. The requirements set forth by NCLB and the interpretation of those standards by the school district created tension for the participating teachers. While the participating teachers all expressed instances of resistance to certain institutional pressures, when faced with no other choice, the teachers reluctantly conformed to mandates. Despite disagreeing with the notion of standardized testing, all of the participating teachers complied with the requirement nonetheless. They provided test preparation despite their philosophical beliefs against "one test for all." They ensured their students were prepared for state and district assessments and used the state standards as the basis for their IB PYP units. Through the analysis of data, a conceptual framework of resistance and conformity emerged to illuminate the phenomenon of the IB PYP at this urban, low-income school (see figure 1).

- Quadrant 1 of Figure 1 characterizes *active resistance* and represents a thoughtful, willful refusal to accept or comply, in both words and actions, with institutional pressures and restraints. Teachers who enact *active resistance* can thoughtfully articulate their reasoning for resistance and reflect on their choices. They are proactive rather than reactive.
- Quadrant 2*, reactive resistance,* refers to automatic, unconsidered resistance of policy or ideology. Teachers who exhibit *reactive resistance* automatically reject new practices, curricula, or reforms because of unwillingness to change rather than from a conscious non-acceptance of inequity or misalignment with personal or professional principles. *Reactive resistance* can be manifested through antagonistic hostility or negativity, but may also be seen as passivity. Many teachers at IB World School initially manifested *reactive resistance* to the IB PYP due to the dubious nature of the principal's initial implementation without regard to the merits and/or challenges of the

programme. Teachers may enact this resistance in ways such as non-participation in professional development, silence, engaging in other activities during collaborative planning such as grading papers, or neglecting to bringing requested items to facilitate planning. The participating teachers in this study recounted experiences with colleagues who exhibited *reactive resistance*.

- Quadrant 3 of Figure 1 represents *unquestioned conformity* and refers to the unquestioning acceptance and enactment of institutional policies. This quadrant represents compliance with curriculum, policies, and beliefs presented or implied in school, district, and government policies. Many classroom management strategies are examples of this type of conformity. Teachers may extol the virtues of constructivist classrooms, but unwittingly reinforce behaviorist values by incorporating classroom management monitoring systems that include rewards for good behavior and consequences for unacceptable behavior often in the form of sticker charts or card pulling. Because these systems of management are ubiquitous in most classrooms, teachers may not question their use and consequently unconsciously conform to institutional policies. Practices such as strict adherence to district pacing or scripted programs, the implementation of standardized tests, or the traditional placement of desks into rows can reflect unquestioned conformity.
- Quadrant 4 in Figure 1 represents *compromised conformity* and refers to acceptance of the unwanted because the desirable is unattainable. This reflects a philosophical questioning of policies while conforming to these same policies nevertheless. Conformity is a conscious choice despite disagreeing with personal principles because there is no alternative. The teachers in this case study exemplified *compromised conformity* when they begrudgingly adhered to mandated policies such as content standards and standardized testing. They complied with policies they philosophically opposed. Given a choice, these teachers would refrain from administering the state standardized tests. In our conversations, they clearly expressed their concerns with the limitations of these tests. Additionally, though they would have preferred to teach the IB PYP in a school without curricular mandates, they compromised by adapting and aligning their units to meet the state standards.

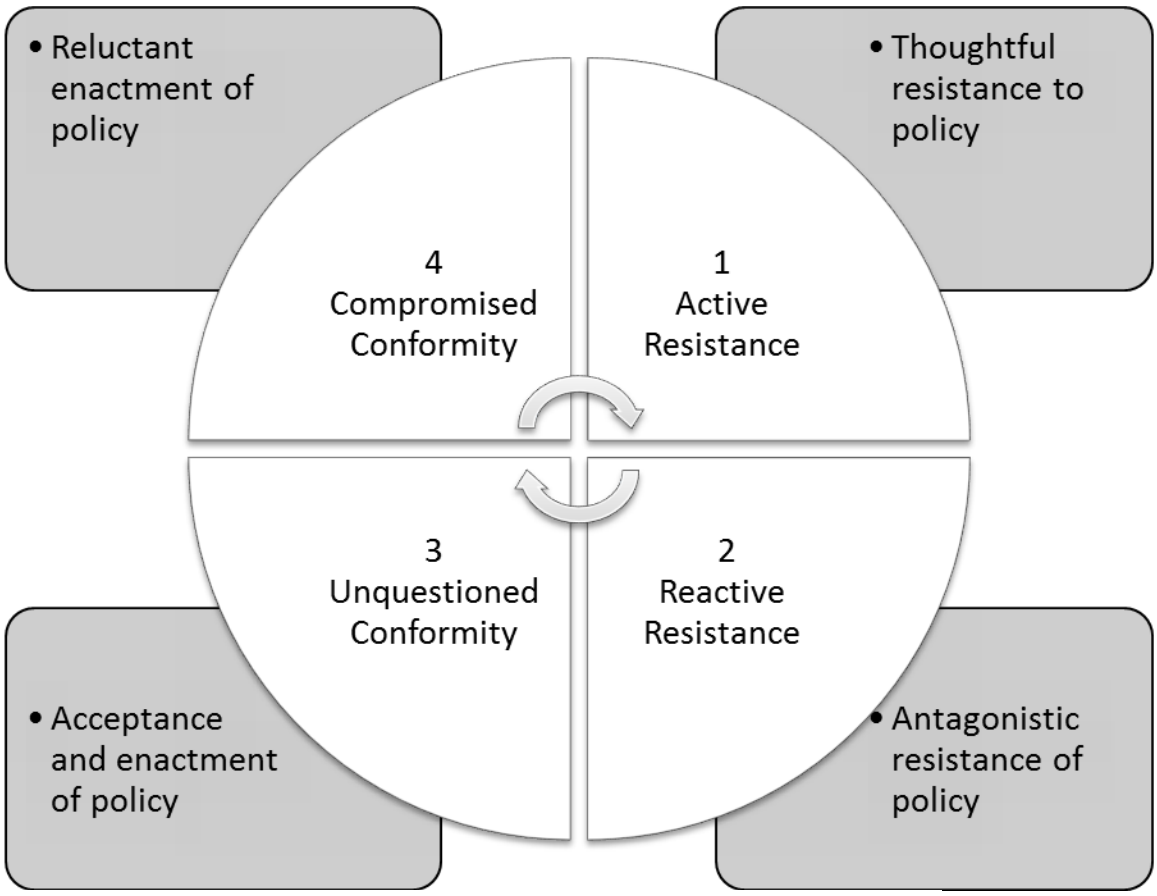

Figure 1. Conceptual Model of Resistance

Implications

The data revealed themes of navigating constraints and resisting and persevering. The IB PYP teachers were challenged to meet the requirements of district, state, and federal mandates in an atmosphere of decreased resources, time, and fiscal uncertainty. The flexibility of IB PYP units enabled the teachers to cope with these challenges. They were able to persevere in challenging circumstances yet maintain student-centered classrooms and high expectations. This is reflected in the choices made regarding teaching, assessment, and culturally responsive curriculum. The intersecting complexities of the findings indicated that each teacher expressed various forms of conformity and resistance to the limiting aspects of NCLB while remaining steadfast in their implementation of an inquiry-based program. A Conceptual Model of Resistance (CMR) emerged to explain these findings. The model is not meant to rank teachers into static categories where one is in either one quadrant or the other, but is meant to categorize discourses, actions, and dispositions. It recognizes the fluid and multifaceted nature of those existing within a complex system of constraints. While the actions and beliefs of the participating teachers may fall in one quadrant more frequently, no teacher could be characterized in any quadrant 100% of the time. Every teacher enacted visible instances of actions or beliefs characterized as *compromised conformity* or *active resistance* and provided anecdotal stories of colleagues exhibiting *reactive resistance* and *unquestioned conformity*. Because of the purposeful method of seeking participants for this study, this was not surprising. Given

that these teachers are all leaders in the school, have participated in numerous IB trainings, and have remained at the school after a number of years navigating the constraints of NCLB policies and the requirements of the IB PYP, speaks to their consciousness and expertise regarding the complexities of the educational system.

The findings from this study indicated that the active resistance enacted by the teachers in this study stemmed from deep commitments to their students and the education profession thereby challenging the notion that a resistant teacher is a deficient teacher. A sense of agency as evidenced by their active resistance to limiting policies and ideologies coupled with the freedom provided by the IB PYP framework likely provided an avenue for teachers to maintain autonomy in the face of prescriptive educational policies.

The results from this study had a number of implications. At a practical level, this study acknowledged the struggles that IB PYP teachers faced when teaching in a low-income, urban school. Accountability measures that utilize standardized test scores to assess progress presented a complex challenge for IB PYP teachers. The strict, prescriptive requirements of NCLB policies competed with the freer, flexible nature of the IB PYP. Despite these limitations, the participating teachers in this study presented the philosophy that the IB PYP was for all children regardless of income level, ability, or background. The teachers in this study compromised when they needed to and resisted when possible in order to adapt state and district mandates to the IB PYP curriculum framework. This study offered strategies for adaptation for others caught between competing learning paradigms. Moreover, it filled a gap in IB policy regarding the IB PYP in public, low-income schools and provided a better understanding of the demands of IB PYP teachers in these schools. For schools with similar student populations, the experiences of these teachers may provide starting points for professional development.

At a methodological level, this study elucidated the methods by which research with teachers can be culturally responsive and socially responsible. This research encouraged the stance of "teacher as experts" in the collaboration of teachers with researcher in the investigations. By including the teachers in all aspects of the planning, design, and analysis, the research process became transparent and the intentionality of the researcher became known. CMR has the possibility of transferring beyond this study to others who wish to engage in research that challenges traditional positivistic approaches.

Lastly, the grounded theory method of letting the findings emerge from the data collection process yielded a model to explain the findings. A grounded theory model of resistance within a professional culture of teachers adds to the conceptual/theoretical literature base. The Conceptual Model of Resistance provided the means to understand better the dispositions of teachers within complex systems of policy mandates that encourage the deskilling of teachers. The Conceptual Model of Resistance is fluid in nature, avoiding oversimplified notions of resistance by recognizing the complexities of being a teacher. It emerged in this study as a way to illustrate the philosophies or dispositions of teachers who have been successful in the implementation of the IB PYP in an urban public school and may be used as a tool to understand the experiences of any teacher in the midst of educational reform or change. The IB PYP curriculum framework provided the participating teachers with the pedagogical freedom to meet the diversity of their learners. Teachers are neither all conforming nor perpetually resistant. They can simultaneously enact forms of resistance and conformity. They are not static but constantly adapting to the situation physically, through curriculum design and the enactment of pedagogy, but

also philosophically, in their beliefs and values regarding teaching. The Conceptual Model of Resistance provides a means to understanding teacher dispositions and philosophies in response to change or reform.

References

American Association of Educational Research. (2011). Code of ethics. *Educational Researcher, 40*(3), 145-156. doi:10.3102/0013189X11410403

Anderson, G. L., Herr, K., & Nihlen, A. S. (2007). *Studying your own school: An educator's guide to practictioner research*. Thousand Oaks, CA: Corwin Press.

Basu, S. J., & Barton, A. C. (2007). Developing sustained interest in science in amoung urban minority youth. *Journal of Research in Science Teaching, 44*(3), 466-489. doi:10.1002/tea.20143

Baumfield, V., Hall, E., & Wall, K. (2008). Exploring your own and your colleagues' professional knowledge: Action research in the classroom. *Sage Research Methods Online*. doi:10.4135/9780857024305

Berryman, M., Soohoo, S., & Nevin, A. (Eds.). (2013). *Culturally responsive methodologies*. London: Emerald.

Blank, R. K. (2011). Closing the achievement gap for economically disadvantaged students? Analyzing change since No Child Left Behind using state assessments and the National Assessment of Educational Progress. Washington, DC: Council of Chief State School Officers.

Bryant, A., & Charmaz, K. (2007). Grounded theory research: Methods and practices. In A. Bryant & K. Charmaz (Eds.), *The Sage Book of Grounded Theory* (pp. 1-28). London, U.K.: Sage Publications Ltd.

Bunnell, T. (2008). International education and the 'second phase': A framework for conceptualizing its nature and for the future assessment of its effectiveness. *Compare: A Journal of Comparative Education, 38*(4), 415-426. doi:10.1080/03057920701420841

Bunnell, T. (2010). The momentum behind the International Primary Curriculum in schools in England. *Journal of Curriculum Studies, 42*(4), 471-486. doi:10.1080/00220272.2010.487315

Bunnell, T. (2011). The International Baccalaureate: Its growth and complexity of challenges. In R. Bates (Ed.), *Schooling internationally: Globalisation, internationalisation and the future for international schools* (pp. 165-181). New York, NY: Routledge.

Burris, C. C. K. G. W. E. W. M. J. (2007). A World-Class Curriculum for All. *Educational Leadership, 64*(7), 53.

California Department of Education. (2010-2011). http://www.cde.ca.gov.

Charmaz, K. (2011). Grounded theory methods in social justice research. In N. K. Denzin & Y. S. Lincoln (Eds.), *SAGE Handbook of Qualitative Research* (pp. 359-380). Thousand Oaks, California: SAGE Publications.

culture. (n.d.). *The American heritage new dictionary of cultural literacy* Retrieved from http://dictionary.reference.com/browse/culture

Darling-Hammond, L. (2004). From "separate but equal" to "No Child Left Behind": The collision of new standards and old inequalities. In D. Meier & G. Wood (Eds.), *Many children left behind: How the No Child Left Behind Act is damaging our children and our schools* (pp. 3-32). Boston, MA: Beacon Press.

Dee, T. S., Jacob, B. A., Hoxby, C. M., & Ladd, H. F. (2010). The impact of No Child Left Behind on students, teachers, and schools. *Brookings Papers on Economic Activity,* (Fall), 149-207.

Dewey, J. (1902). *The child and the curriculum*. Chicago: University of Chicago Press.

Doherty, C. (2009). The appeal of the International Baccalaureate in Australia's educational market: A curriculum of choice for mobile futures. *Discourse: Studies in the Cultural Politics of Education, 30*(1), 73-89. doi:10.1080/01596300802643108

Foust, R. C., Hertberg-Davis, H., & Callahan, C. M. (2009). Students' perceptions of the non-academic advantages and disadvantages of participation in advanced placement cources and International Baccalaureate programs. *Adolescence, 44*(174), 289-312.

Gardner, D. (2007). Confronting the achievement gap. *Phi Delta Kappan, 88*(7), 542-546.

Gibboney, R. A. (2006). Intelligence by design: Thorndike Versus Dewey. *Phi Delta Kappan, 88*(2), 170.

Glaser, B. G. (1978). Theoretical sensitivity: Advances in the methodology of grounded theory. Mill Valley, CA: Sociology Press.

Glaser, B. G., & Strauss, A. L. (1967). The discovery of grounded theory: Strategies for qualitative research. Chicago: Aldine.

Guccione, L. M. (2011). The tale of two schools. *Schools: Studies in Education, 8*(2), 252-264.

Haberman, M. (2007). Who benefits from failing urban schools? An essay. *Theory into Practice, 46*(3), 179-186.

Hall, J., Elder, T., Thompson, J., & Pollack, S. (2009). IBNA: *The Primary Years Programme field study*. Athens, Georgia: University of Georgia Education Policy and Evaluation Center.

Hargreaves, A. (1995). Changing teachers, changing times: Teachers' work and culture in the postmodern age. New York, NY: Teachers College Pressz.

Hartman, J. (2008). A descriptive study of characteristics and practices of International Baccalaureate elementary principals as perceived by principals, coordinators, and teachers. (Doctor of Education Dissertation), Retrieved from ProQuest Dissertations and Theses database. (3338003)

Hess, F. M., & Petrilli, M. J. (2009). *No Child Left Behind*. New York, NY: Peter Lang.

Hollins, E. R. (2011). Teacher preparation for quality teaching. *Journal of Teacher Education, 62*(4), 13. doi:10.1177/0022487111409415

H.R. 1804. 103rd Congress: Goals 2000: Educate America Act. (1993). Retrieved August 6, 2013, from http://www.govtrack.us/congress/bills

International Baccalaureate Organization. (2009a). *The Primary Years Programme: A basis for practice*. Cardiff, Wales, United Kingdom: International Baccalaureate Organization.

International Baccalaureate Organization. (2009b). *Making the PYP happen: A curriculum framework for international primary education*. Cardiff, Wales, United Kingdom: International Baccalaureate Organization.

International Baccalaureate Organization. (2010a). *The Primary Years Programme as a model of transdisciplinary learning*. Cardif, Wales, United Kingdom: International Baccalaureate Organization.

International Baccalaureate Organization. (2010b). *Primary Years Programme, Middle Years Programme and Diploma Programme: Programme standards and practices*. Cardiff, Wales, United Kingdom: International Baccalaureate Organization.

International Baccalaureate Organization. (2012a). *History of the IB.* Retrieved 2/24/2012, from www.ibo.org/history/regions/
International Baccalaureate Organization. (2012b). *IB statistics*. Retrieved 02/06/2012, from www.IBO.org/facts/schoolstats/progsbycountry.cfm
International Baccalaureate Organization. (2013). *IB world schools advanced find.* Retreived 11/17/2013, from www.ibo.org/school/search
Jordan, F. (2009). The impact of the Primary Years Program of the International Baccalaureate Organization on the English language arts test scores of third, fourth, and fifth grade students in South Carolina. (Doctor of Education Dissertation), Retrieved from, ProQuest Dissertations and Theses database. (3421368)
Karp, S. (2004). NCLB's selective vision of equality: Some gaps count more than others. In D. Meier & G. Wood (Eds.), *Many children left behind: How the No Child Left Behind Act is damaging our children and our schools* (pp. 53-65). Boston, MA: Beacon Press.
Kincheloe, J. L. (2005). *Critical constructivism*. New York: Peter Lang Publishing Inc.
Kress, S., Zechmann, S., & Schmitten, J. M. (2011). When performance matters: The past, present, and future of consequential accountability in public education. *Harvard Journal on Legislation, 48*(1), 185-234.
Krieg, J. M. (2011). Which students are left behind? The racial impacts of the No Child Left Behind Act. *Economics of Education Review, 30*(4), 654-664.
Kyburg, R. M., Hertberg-Davis, H., & Callahan, C. M. (2007). Advanced placement and International Baccalaureate Programs: Optimal learning environments for talented minorities. *Journal of Advanced Academics, 18*(2).
Lopez, S. M. (2010). Internationalizing education: A study of the impact of implementing an international program on an urban elementary school. (Ph.D. Dissertation), Retrieved from ProQuest Dissertations and Theses database. (3434461)
Mabry, L. (2008). Case study in social research. In P. Alasuutari, L. Bickman, & J. Brannen (Eds.), *The Sage handbook of social research methods* (pp. 214-227). London: Sage Publications Ltd.
Majhanovich, S. (2002). Conflicting visions, competing expectations: Control and de-skilling of education: A perspective from Ontario. *McGill Journal of Education, 37*(2), 159-176.
Marlow, B. A., & Page, M. L. (1998). *Creating and sustaining the consructivist classroom*. Thousand Oaks, CA: Corwin Press.
Martin, E. J., & Hagan-Burke, S. (2002). Establishing a home-school connection: Strengthening the partnership between families and schools. *Preventing School Failure, 46*(2), 62-65.
May, S. (2009). *The visibility of Deweyan inquiry in an International Baccalaureate elementary school.* (Ph.D. dissertation), Retrieved from ProQuest Dissertations & Theses database. (AA3410728)
Mayer, A. P. (2008). Expanding opportunities for high academic achievement: An International Baccalaureate Diploma Program in an urban high school. *Journal of Advanced Academics, 19*(2), 202-235.
Moore, A., Edwards, G., Halpin, D., & George, R. (2002). Compliance, resistance and pragmatism: The (re)construction of schoolteacher identities in a period of intensive educational reform. *British Educational Research Journal, 28*(4), 551-565. doi:10.1080/014119202200000582 3

Morse, J. M. (2007). Sampling in gounded theory. In A. C. Bryant, K. (Ed.), *The Sage Handbook of Grounded Theory* (pp. 229-244). London: Sage Publications.
Musanti, S. I., & Pence, L. (2010). Collaboration and teacher development: Unpacking resistance, constructing knowledge, and navigating identities. *Teacher Education Quarterly, 37*(1), 73-89.
No Child Left Behind Act of 2001, 20 C.F.R. § 5301 (2002).
Norman, O., Ault, C. R., Bentz, B., & Meskimen, L. (2001). The black white 'achievement gap' as a perrenial challenge of urban science education: A sociocultural and historical overview with implications for research and practice. *Journal of Research in Science Teaching, 38*(10), 1101-1114. doi:10.1002/tea.10004
Ravitch, D. (2010). The death and life of the great American school system: How testing and choice are undermining education. New York, NY: Basic Books.
Sandholz, J. H., Ogawa, R. T., & Scribner, S. P. (2004). Standards gaps: Unintended consequences of local standards-based reform. *Teachers College Record, 106*(6), 1177-1202.
Shannon, P. (2000). If you ain't got the ABCs. *Reading Teacher, 54*(1), 64-66.
Stillisano, J. R., Waxman, H. C., Hostrup, J., & Rollins, K. B. (2011). Case studies of eight Texas schools implementing International Baccalaureate programs. *Journal of Ethnographic & Qualitative Research, 5*, 171-185.
Suldo, S. M., Shaunessy, E., Michalowski, J., & Shaffer, E. J. (2008). Coping strategies of high school students in an International Baccalaureate program. *Psychology in the Schools, 45*(10), 960-977.
Suldo, S. M., Shaunessy, E., Thalji, A., Michalowski, J., & Shaffer, E. (2009). Sources of stress for students in high school college preparatory and general education programs: Group differences and associations with adjustment. *Adolescence, 44*(176), 925-948.
Tan, L., & Bibby, Y. (2010). IB PYP and MYP student performance on the International Schools' Assessment (ISA). Melbourne: Australian Council for Educational Research.
Tarc, P. (2008). *What is the "international" of the International Baccalaureate? Towards a periodization of IB in the world.* (Ph.D. dissertation), Retrieved from ProQuest Dissertations and Theses database. (AATNR32071)
Twigg, V. V. (2010). Teachers' practices, values and beliefs for successful inquiry-based teaching in the International Baccalaureate Primary Years Programme. *Journal of Research in International Education, 9*(1), 40-65. doi: 10.1177/1475240909356947
Tyler, K. M., Uqdah, A. L., Dillihunt, M. L., Beatty-Hazelbaker, R., Conner, T., Gadson, N., . . . Stevens, R. (2008). Cultural discontinuity: Toward a quantitative investigation of a major hypothesis in education. *Educational Researcher, 37*(5), 280-297.
U.S. Department of Education. (2009a). from http://www.ed.gov/about/overview/fed/role.html
U.S. Department of Education. (2009b). from http://www.ed.gov/policy/elsec/leg/esea02/pg1.html
Valencia, R. R. (2010). Dismantling contemporary deficit thinking: Educational thought and practice. New York, NY: Routledge.
Weiner, L. (2003). Challenging deficit thinking. *Educational Leadership, 64*(1), 42-45.
Wood, G. (2004a). A view from the field: NCLB's effects on classrooms and schools. In D. Meier & G. Wood (Eds.), *Many children left behind: How the No Child Left Behind Act*

is damaging our children and our schools (pp. 43-50). Boston, Massachusetts: Beacon Press.

Wood, G. (2004b). Introduction. In D. Meier & G. Wood (Eds.), *Many children left behind: How the No Child Left Act is damaging our children and our schools* (pp. vii-xv). Boston, MA: Beacon Press.