

International Baccalaureate (IB) Programmes: Evidence of their Efficacy (Update)

Prepared for District XYZ

In this report, The Hanover Research Council explores the forces behind the recent global renaissance of the International Baccalaureate programme and evaluates the effects of the Primary Years Programme, the Middle Years Programme, and the Diploma Programme on student success and a number of achievement outcomes. In particular, the report analyzes the relationship between IB and educational and social outcomes for low-income and minority students. The first section of the report details studies aimed at identifying the positive effects of participation in IB programmes, while the second section of the report provides a series of case studies that profile successful examples of all levels of IB programming.

Introduction

The International Baccalaureate (IB) programme—founded roughly 40 years ago to simplify, streamline, and standardize education for students whose parents frequently travel transnationally—has experienced a significant global renaissance over the past decade.¹ In a marked shift from past patterns, and in spite of the global economic climate, the most recent wave of school applications for IB status and student interest in IB programming has come not from international private schools, but from American institutions—many of them public.² To wit, International Baccalaureate projects that the number of IB programmes in the United States will double in the next several years.³ In the public school districts of areas as socioeconomically, politically and racially distinct as San Gabriel Valley, California; Katy, Texas; and St. Paul, Minnesota, administrators are investing significant resources into IB accreditation for underperforming and recently reopened schools.⁴ Parents in Washington, D.C. are pushing controversial Chancellor Michelle Rhee to add IB programmes—in elementary, middle, and high schools—to her plans for revitalizing public schools.⁵ And many states, including Georgia, have included International Baccalaureate programmes in their applications for the Obama administration’s “Race to the Top” initiative.⁶

The International Baccalaureate (IB) programme...has experienced a significant global renaissance over the past decade.

A review of longitudinal data reveals just how dramatic the revival of International Baccalaureate education has been over the past decade.⁷ In 1999, just 300 IB programmes were registered in the United States. Of those programmes, 282 were Diploma Programmes (DP) for high school students, 16 were Middle Year Programmes (MYP) for middle school students, and two were Primary Year Programmes (PYP) for kindergarten and elementary school students. Ten years later,

¹ Stephen Hoare, “Why the popularity of international schools is growing,” 25 March 2010, <http://www.guardianweekly.co.uk/?page=editorial&id=1519&catID=5>

² Ibid.

³ International Baccalaureate, “United States IB Profile,” http://www.ibo.org/iba/countryprofiles/documents/US_CountryProfile.pdf

⁴ San Gabriel Valley Tribune, “Students show interest in attending Edgewood High School,” 29 March 2010, http://www.sgytribune.com/news/ci_14780870; The Katy Times, “Design for IB programme nearing completion,” <http://www.katytimes.com/articles/2010/03/31/news/doc4bb35467080cf064795258.txt>; The Minnesota Spokesman-Recorder, “North High announces International Baccalaureate certification,” <http://www.spokesman-recorder.com/news/article/article.asp?NewsID=102243&sID=4&ItemSource=L>

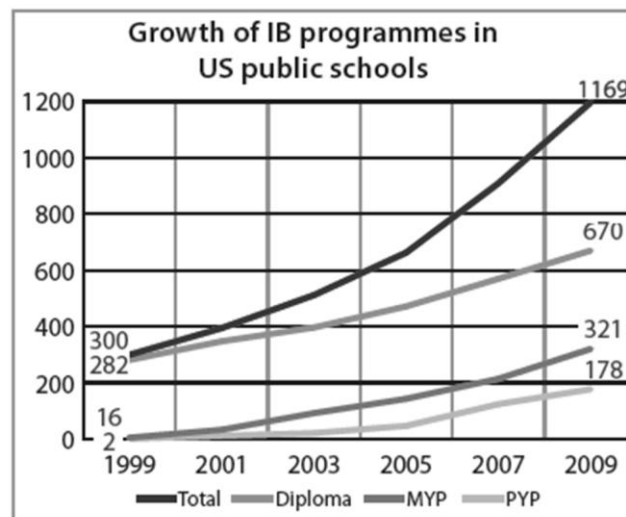
⁵ Bill Turque, “D.C. Ward 6 parents seek new options for middle school,” *Washington Post*, 12 March 2010, <http://www.washingtonpost.com/wp-dyn/content/article/2010/03/11/AR2010031102574.html>

⁶ The Macon Telegraph, “Ga. Finalist for federal school funds,” <http://www.macon.com/2010/03/05/1047645/ga-finalist-for-federal-school.html>

⁷ The Roanoke Times, “Roanoke schools expect \$8.8 million budget gap,” <http://www.roanoke.com/news/roanoke/wb/241049>

International Baccalaureate recorded 1,169 IB programmes at more than 900 public and private institutions in the United States. That year, there were 670 Diploma Programmes, 321 Middle Year Programmes, and 178 Primary Year Programmes, representing dramatic ten-year changes of 137 percent, 1,906 percent, and 8,800 percent, respectively. As noted above, International Baccalaureate projects that surging demand for programmes at schools across the United States means that the number of IB programmes could double over the next several years. At present, there are 466 programme candidates awaiting authorization, and an additional 500 institutions have made a formal inquiry into IB candidacy.⁸

FIGURE 1. Growth of IB Programmes (1999-2009)



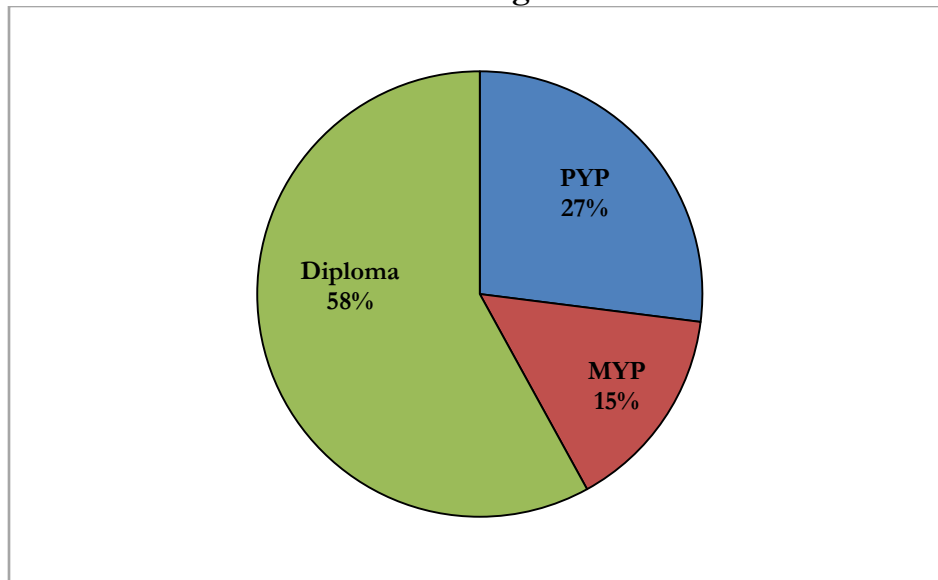
Reproduced from International Baccalaureate,
http://www.ibo.org/iba/countryprofiles/documents/US_CountryProfile.pdf

Today, 1,096 IB World Schools in the United States offer at least one of International Baccalaureate's three signature programmes—the Primary Years Programme (PYP), the Middle Years Programme (MYP), and the Diploma Programme (DP). Two hundred U.S. schools currently offer the Primary Years Programme, 337 schools offer the Middle Years Programme, and 695 schools offer the Diploma Programme.⁹ Ninety-one percent of these schools are public institutions.¹⁰

⁸ International Baccalaureate, "United States IB Profile,"
http://www.ibo.org/iba/countryprofiles/documents/US_CountryProfile.pdf

⁹ International Baccalaureate, "Country information for the United States," <http://www.ibo.org/country/US/>

¹⁰ International Baccalaureate, "United States IB Profile,"
http://www.ibo.org/iba/countryprofiles/documents/US_CountryProfile.pdf

FIGURE 2. Distribution of IB Programmes in the United States

Reproduced from International Baccalaureate,
http://www.ibo.org/iba/countryprofiles/documents/US_CountryProfile.pdf

The rapid domestic growth of IB programmes can be attributed to a number of factors—failure of traditional and tested secondary education models, the emphasis on four-year college preparation by school boards and parents, the perceived importance of “international education” in the age of globalization, and the remarkable empirical success of the IB programme. Another reason for widespread adoption of International Baccalaureate is that impressionistic evidence suggests that IB has a significant and differential impact on minority and low-income communities.

Impressionistic evidence suggests that IB has a significant and differential impact on minority and low-income communities

In 2008, the Bill and Melinda Gates Foundation funded a McKinsey study of the effects of IB programmes on underserved populations. The report concluded that

the Diploma Programme stands out among other high school curriculums available today in the United States public education system because it offers a rigorous, aligned, integrated instructional system that is both appropriate and valuable for students of average skill proficiency, and transformative for minority and low-income, that is, ‘high needs’ students.¹¹

¹¹ Quoted from International Baccalaureate, 2008 *Annual Report*, <http://www.ibo.org/facts/annualreview/2008/documents/IBReview08.pdf>; A summary of the McKinsey report is available at the following website: <http://www.ibmidatlantic.org/DPGap-Overview-Apr09.pdf>

Challenges do remain, however. While the McKinsey study found that International Baccalaureate programmes had a powerful effect on the achievement of low-income and minority students, it also found that these students access IB programmes at a lower rate than their Caucasian and upper-income peers. According to International Baccalaureate, the IB reaches fewer under-represented students in the Diploma Programme **“due to its relatively small scale, the lack of academic preparation of many high-need students for the level of rigor in the Diploma Programme, and the perceptions held by schools and students that the programme is for the ‘elite’ students.”**¹² To address these challenges, the Gates Foundation agreed to fund a series of three-year demonstration projects at a number of school districts designed to increase the number of low-income and minority students in the IB Diploma Programme (\$2.4 million).¹³

Some states are performing significantly better than their peers in the effort to recruit more diverse IB cohorts.

It should be noted that some states are performing significantly better than their peers in the effort to recruit more diverse IB cohorts. On average, 19 percent of the students enrolled in Primary Year IB programmes in the state of Texas are African American, and nine percent are Asian; this is somewhat higher than the 14 percent African American and three percent Asian averages across all states with International Baccalaureate programmes.¹⁴ Similarly, in California, non-white students are now in the majority at two-thirds of the state’s 12 Primary Year IB programmes in public schools. In Georgia, this is the case in nine of the state’s 15 IB Primary Year Programme schools. At the high school level—where 59 percent of all IB Diploma candidates are non-Hispanic whites, ten percent are black, 12 percent are Hispanic, and 16 percent are Asian or Pacific Islander—there are major racial discrepancies between states and localities. For example, in 2007, 96.3 percent of Idaho IB Diploma candidates and 96.2 percent of Montana IB Diploma candidates were non-Hispanic whites; meanwhile, 100 percent of IB Diploma candidates in Mississippi, 97 percent of Diploma candidates in the District of Columbia, and 75 percent of the candidates in Illinois were minorities—American Indians, Asians/Pacific Islanders, Blacks/Non-Hispanics, and Hispanics.¹⁵

In 2008, only 15 percent of IB Diploma candidates qualified for free or reduced lunch. But as with race, some states have proven much more effective at recruiting low-income students for International Baccalaureate programmes. Illinois,

¹² International Baccalaureate, *2008 Annual Report*,

<http://www.ibo.org/facts/annualreview/2008/documents/IBReview08.pdf>

¹³ International Baccalaureate, “Gates Foundation awards IB grant,”

<http://www.ibo.org/announcements/gatesfoundationawardsibgrant.cfm>

¹⁴ International Baccalaureate, “United States IB Profile,”

http://www.ibo.org/iba/countryprofiles/documents/US_CountryProfile.pdf

¹⁵ Ibid.

Mississippi, and the District of Columbia have enrolled the highest proportion of low-income students (68 percent, 57 percent, and 43 percent, respectively, in 2007), while IB programmes in other states, such as Nebraska and North Carolina, remain socioeconomically elite.

In this report, The Hanover Research Council discusses the effects of the Primary Years Programme, the Middle Years Programme, and the Diploma Programme on student success and achievement across a number of constituencies, with special emphasis on low-income and minority students. The first section of the report details studies aimed at determining the positive effects of participation in IB programmes, while the second section of the report provides a series of case studies of successful examples for all levels of IB programming.

International Baccalaureate: The “New Gold Standard” in Education?

“The International Baccalaureate (IB) aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect”

—The International Baccalaureate Organization

The recent surge of interest in the International Baccalaureate programme has led many to ask if IB is the new “gold standard” in secondary education.¹⁶

Much of this argument is based on the fact that IB represents what is arguably the most rigorous of all of the college preparatory programmes in existence. Students seeking an International Baccalaureate Diploma must complete three year-long *standard level courses* and three two year-long *higher level courses* from six curricular areas

International Baccalaureate (IB) Diploma Requirements

- Accumulate 24 course points from *three standard level & three higher level courses*
- Write a 3,000-4,000 word extended essay
- Pass mandatory epistemology course “*A Theory of Knowledge*”
- Assemble a Creativity, Action, and Service (CAS) Portfolio

during the junior and senior year of high school. Each of these courses is graded on a scale from one to seven, with a score of four denoting proficiency. In order to qualify for an IB diploma, candidates must accumulate 24 points. In addition, candidates must write a 3,000-4,000 word extended essay, pass a mandatory course on epistemology, and assemble a Creativity, Action, and Service portfolio that documents their involvement in, among other things, community work.

But does all of the additional work required by IB programme guidelines translate into measurably better learning and achievement outcomes? Naturally, due to the breadth of the programme and its influence on the future of so many students worldwide, evaluation of the overall quality and effectiveness of IB programmes is essential. Furthermore, considering the great rigors of the IB programme and its growing use in secondary education, education providers must ensure that the programme is truly providing the intended long-term benefits for its participants.

¹⁶ For example, see Shawnee Mission School District, <http://www.shawneemissionib.com/curriculum/default.htm>; and Attain Magazine, “The Rise of the IB,” <http://www.attainmagazine.co.uk/index.cfm?fuseaction=archive.content&cmid=25>

Studies consistently find that the causal relationship between high achievement and the IB programme is bi-directional—high-achieving students are more likely to become IB students, and the IB experience amplifies learning success. At the same time, high expectations of IB candidates at the rigors of the IB programme often create real stresses for students...

Studies consistently find that the causal relationship between high achievement levels and the IB programme is bi-directional—high-achieving students are more likely to become International Baccalaureate students, and the International Baccalaureate experience amplifies learning success. (The extent of the amplification effect, of course, is difficult to measure and the subject of considerable debate, as noted below). At the same time, high expectations of IB candidates and the rigors of the IB programme often create stress for students, which may have a deleterious effect on social development. As with all learning paradigms, there are benefits and costs associated with International Baccalaureate, and each must be evaluated. One 2006 study, published in the *Journal of Secondary Gifted Education*, evinces the need to evaluate both the costs and benefits of IB programmes, particularly at the Diploma Programme (DP) level:

Anecdotal evidence strongly suggests that students enter the IB DP with **high expectations of themselves**. They hope to maintain the high grades that they have achieved in previous years, and they hope to be well prepared for postsecondary studies upon graduation from high school. They also carry with them the **high expectations of their families, friends, and teachers**. These hopes and expectations, coupled with the demands of the IB curriculum itself, can lead to a stressful situation for IB candidates. The resultant stress leads students, parents, and teachers to ask if the pressures and challenges these students face are worth the final result. Are there long-lasting benefits to having been in the IB Programme that compensate for the time and effort demanded by the IB DP?¹⁷

Indeed, many studies and research efforts have sought to answer the question of the long-term effects of IB education. Of course, a majority of these studies have been performed by the International Baccalaureate Organization (IBO) itself. As our overview suggests, **almost all of the existing research relating to IB education appears to focus exclusively upon the Diploma Programme**, and there is a corresponding need for greater research regarding the Primary Years Programme and the Middle Years Programme (MYP). As such, the following review focuses primarily upon results of the Diploma Programme.

¹⁷ Taylor, M. and Porath, M. "Reflections on the International Baccalaureate Programme: Graduates' perspectives." *Journal of Secondary Gifted Education*. Vol. XVII, No. 3. 2006. . 7.
www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/2a/e8/76.pdf

IB Research through the Years (1991-2007)

According to one internal study completed by the IBO in 1991, participation in the Diploma Programme is correlated with postsecondary success. In a study of IB students at 26 universities in the United Kingdom, it was found that 98 percent of IB students at these universities went on to complete honors degrees after graduating from the IB Diploma Programme.¹⁸

In 1992, University of Florida researcher Jaime Torre-Halscott conducted a study to determine if a relationship existed between certain variables and high levels of performance in the IB programme.¹⁹ These variables included “intelligence, gender, GPA, teacher predictions of success, and parental environmental process variables.”²⁰ Among these variables, only one – “teacher predictions of student success” – was found to have an impact on a student’s performance in the IB programme. According to the study, IB teachers and administrators viewed successful IB students as “gifted, inquisitive, scholarly, tenacious, emotionally mature, academically motivated, well-organized, analytical, verbally talented, academically focused, independent thinkers, and come from supportive homes with parents who are college graduates.”

A Purdue University study...found that the completion of the Diploma Programme was “an effective predictor of completion of a first degree at university.”

A 1999 Purdue University study sought to discover “whether earning an International Baccalaureate diploma was a predictor of success at university and beyond.”²¹ This descriptive study, which surveyed registrars from 12 universities in the United States,²² found that completion of the Diploma Programme was “an effective predictor of completion of a first degree at university.”²³ The study found that, among IB diploma graduates, 92 percent earned Bachelor’s degrees while 87 percent did so in five years or less.²⁴ In addition to collecting degree completion figures, the study’s survey of 95 IB diploma holders sought “reflections, as adults, on high school experiences, university performance, and career choice.” Among these individuals, two-thirds had graduated from secondary schools in the United States and one-third

¹⁸ “A review of research relating to the IB Diploma Programme.” International Baccalaureate Organization. April 2008. 14. www.ibo.org/programmes/research/resources/documents/dpresearchreview.pdf

¹⁹ Ibid., 19

²⁰ Ibid.

²¹ Duevel, L. “The International Baccalaureate Experience: University Perseverance, Attainment, and Perspectives on the Process.” Purdue University. 1999. <http://proquest.umi.com/pqdlink?Ver=1&Exp=03-10-2015&FMT=7&DID=730230971&RQT=309&attempt=1&cfc=1>

²² The universities surveyed included: Columbia, Cornell, Georgia Tech, Harvard, Indiana-Bloomington, Purdue, Stanford, Texas-Austin, Illinois-Urbana, Virginia, Washington, and Wisconsin-Madison.

²³ “A review of research relating to the IB Diploma Programme,” Op. Cit., 14-16.

²⁴ Duevel, Op. Cit.

from international schools. Meanwhile, 54 percent of these former IB participants had gone on to graduate school. Generally speaking, respondents expressed having benefited from the challenging nature of the programme and its instrumental hand in preparing students for the rigors of postsecondary education.

By contrast, the two most-commonly cited negative aspects of the programme were the “elitist atmosphere and workload stress.” According to the study, “[r]espondents were more positive toward aspects that affected them as individuals, less positive where there was a need to work with, or rely upon others.” Other notable findings from the study included:

- ❖ 82 percent of respondents were employed in professions closely associated to their undergraduate majors.
- ❖ Over 50 percent indicated that the programme influenced their careers through impacting college major choice, awareness of global, social and environmental topics, and desire to work internationally.
- ❖ Regardless of career choices, respondents felt that the most valuable classes were English (31 percent) and History (18 percent).
- ❖ The majority of adults who had been enrolled in IB programmes were involved in community service (74 percent).
- ❖ The vast majority (90 percent) would encourage their children enroll in an IB programme.²⁵

Another aspect of the study involved examining the relationship of the IB programme to “educational stakeholders.”²⁶ In the United States, participation in the IB programme is generally limited to “gifted students,” but the study pointed to the benefits of the “more inclusive selection criteria” seen at international school IB programmes, and therefore recommended similar inclusion among secondary schools in the country. Finally, certain aspects of the IB programme were directly tied to the postsecondary success of participating students, including the breadth and depth of the topics covering, the role the IB programme played in developing students’ productivity and study skills, the programme’s emphasis on developing strong writing, research, analytical thinking skills, and the development of a global perspective of students.²⁷

²⁵ Ibid.

²⁶ Ibid.

²⁷ Ibid.

The results of a **2003 survey of high school seniors participating in the IB programme also indicated a number of related positive outcomes.**²⁸ Though the IBO acknowledged the need for further research, the survey results pointed to higher performance on standardized tests and higher rates of acceptance at postsecondary institutions. These IB Diploma Programme participants were also characterized by frequent “national recognition for...academic performance.” The primary results of the survey, as described by the IBO, are provided below:

- ❖ Respondents earned an average SAT or ACT score that was significantly higher than the average SAT or ACT score of the total population.
- ❖ Furthermore, the Diploma candidates’ mean SAT or ACT score was significantly higher than the mean SAT or ACT score obtained by Certificate candidates.
- ❖ 98.5 percent of respondents from the IB programme applied to a university or college, and “IB acceptance rates into universities and colleges were higher than acceptance rates of the total applicant population.”
- ❖ “A considerable number of participants in the IB Diploma Programme received recognition from the National Merit Scholar, National Achievement Scholar, and National Hispanic Scholar programmes.”
- ❖ Scores on the IB and AP exams were comparable.²⁹

The survey results pointed to higher performance on standardized tests and higher rates of acceptance at post-secondary institutions.

According to the IBO, a number of subsequent surveys have been conducted by IB New York with the goal of determining the relationship between earning an IB diploma and being admitted into a postsecondary institution. The results of these surveys, completed in 2005 and 2006, indicated that “IB diploma holders had higher acceptance rates than other applicants to universities.”³⁰

Another IBO-commissioned study found that IB participants in the United Kingdom enjoyed higher rates of university acceptance than their peers. In 2007, through the United Kingdom’s Universities & Colleges Admissions Service (UCAS), the IBO

²⁸ “2003 United States Student Survey of High School Seniors Participating in the International Baccalaureate Programme.” International Baccalaureate Organization. 2007.

www.ibo.org/ibna/research/documents/2003StudentSurvey.US.pdf

²⁹ Ibid., 3.

³⁰ “A review of research relating to the IB Diploma Programme,” Op. Cit., 14-16

conducted a study to observe trends in university acceptance rates.³¹ Focusing on figures from the 2005 group of students entering postsecondary education, the study found that 70.3 percent of the applications from IB students were converted into some form of offer of acceptance, while 65.8 percent of the non-IB student applications were converted into offers. The disparity between these figures is not overwhelming, but suggests that **students participating in IB programmes may experience slightly higher acceptance rates at postsecondary institutions.**

Perceptions of the International Baccalaureate Programme

Another area in which substantial research has been devoted is the perception of the IB programme. In 2006, a study published in the *Journal of Secondary Gifted Education* addressed the views of IB Diploma Programme graduates towards the programme in three areas: “the curriculum, the stress graduates experienced while in IB, and their preparation for postsecondary studies.”³² The study collected the opinions of graduates and other individuals with close involvement with the programme, who provided “reflections about the programme as a whole.”

Regarding the curriculum, **respondents generally expressed positive views**; the study found that the majority of respondents appreciated exposure to “a richer curriculum with a wider range of topics they could discuss in some depth,” and felt that the programme allowed them to develop “good critical thinking skills.” Despite this finding, a “significant minority” of the study’s participants did report that the programme’s workload was “excessive and very stressful at times,” often experiencing anxiety about meeting the programme’s demands and getting into college. However, these anxieties also led to the development of “good time management strategies,” according to the study.

Moreover, **respondents also indicated the IB DP was instrumental in preparing them for their postsecondary education and career success.** According to the study, 87.5 percent of the respondents indicated feeling “better prepared for introductory-level postsecondary courses than those not in IB,” while a majority also felt the programme prepared them for higher-level university coursework. Among respondents, 62.5 percent were able to apply credits earned in the IB programme towards postsecondary courses, but a number of these respondents also “chose not to invoke that option for a variety of reasons.” Overall, the IB graduates appeared to value their education and the rich curriculum offered by the IB programme, even if it was stressful at times. Furthermore, the IB graduates indicated that the depth and breadth of the IB programme contributed to their postsecondary education and occupational success.

³¹ Ibid.

³² Taylor and Porath, Op. Cit., 6.

The study also noted that more universities appear to be adopting a more favorable view of the IB programme; between graduating classes of 1996 and 2000, an increase was seen in the number of IB credits accepted by postsecondary institutions.³³

The IBO has also conducted research into the perceptions of its programming. A recent study from the organization involved surveys and interviews of universities in Australia and New Zealand, and found that “senior university representatives have a very high level of regard for the IB Diploma.”³⁴ Many university representatives noted the limited experience of IB graduates, but nevertheless expressed a positive view of the programme. The survey component of the study asked these representatives to rate the significance of “seven aspects of the IB Diploma in helping to make it a successful programme.” The results are shown in Table 1 below:

TABLE 1. Perceived importance of various aspects of the IB (percent of responses)³⁵

	Not Sure	Very Low	Low	Medium	High	Very High
<i>Spreading all subjects over two years</i>	13%	1%	12%	38%	27%	11%
<i>A 100-hour course on the theory of knowledge</i>	13%	6%	18%	23%	29%	13%
<i>150 hours of creative, physical and community service activities</i>	10%	5%	15%	33%	25%	12%
<i>A 4,000 word extended essay</i>	8%	4%	12%	23%	33%	19%
<i>The use of a range of assessment strategies</i>	8%	0%	2%	23%	50%	18%
<i>A broad curriculum with subjects in six different areas</i>	7%	0%	2%	24%	51%	16%
<i>Studying at least three subjects in depth</i>	6%	0%	7%	14%	50%	23%

Source: IBO

As seen above, among the elements of the programme that they were asked to assess, respondents had the most positive views towards the use and range of assessment strategies, the broad curriculum, and the requirement that students must study three subjects in depth. On the other hand, survey respondents expressed the least amount of certainty about the positive effects of “the extended essay, the study of theory of knowledge, and the creative, physical and community services component.”³⁶

The results of the study’s open-ended survey also indicated that universities were “supportive” of the IB Diploma Programme, and many participants stated that the programme contributed to students’ “academic competence and capability...experience of greater breadth and depth...internationalized educational experience with a greater emphasis on community engagement, and that it should be

³³ Ibid., 7.

³⁴ Coates, H., Rosicka, C. and MacMahon-Ball, M. “Perceptions of the International Baccalaureate Diploma Programme among Australian and New Zealand Universities.” Australian Council for Educational Research. 2007. 7.

www.ibo.org/programmes/research/resources/acerperception/documents/IBOPerceptionsReportFinal.pdf

³⁵ Ibid., 23.

³⁶ Ibid.

more widely adopted.”³⁷ Only a small number of comments were critical of the programme, citing a negative elitism tied to the programme or stating that it offered “no specific advantage over alternative preparations for university study.” Other respondents worried about “adjustment problems” related to the programme or issues relating to its delivery.

Comparison to Other Programmes

A number of studies have been devoted to examining the IB programme as compared with other programmes designed to serve high-achieving students as they prepare for postsecondary education. For example, a study that appeared in the *Journal Secondary Gifted Education* in 1996 assessed the achievement levels of IB students as compared to students participating in traditional programmes in Alberta, Canada.³⁸ In each of the disciplines examined by the study – biology, chemistry, and physics – higher achievement levels were found for students in the IB programme.

“Whereas Advanced Placement prepares students for college work in North America, the International Baccalaureate prepares students for an international range of universities.”

Research has been devoted to addressing the differences between the IB and the Advanced Placement programme in North America. As suggested in a report from the North Vancouver School District, “whereas Advanced Placement prepares students for college work in North America, the International Baccalaureate prepares students for an international range of universities.”³⁹ This international scope is found primarily in the design of the IB’s history and language courses, while the AP and IB are fairly similar in terms of their math and science offerings. Additionally, the IB programme is characterized by a more rigid structure, while the AP programme is founded more upon the idea that individual schools “should decide what the student ought to learn.”

A 2001 study in Australia examined which secondary education programmes provided the best postsecondary preparation for students. Aside from the IB programme, the study analyzed the value of the Victorian Certificate of Education (VCE) and the Monash University Foundation Year Programme (MUFY).⁴⁰ In

³⁷ Ibid., 32.

³⁸ Poelzer, G. and Feldhusen, J. “An empirical study of the achievement of international baccalaureate students in biology, chemistry, and physics- in Alberta.” *Journal of Secondary Gifted Education*. 2006.

³⁹ Buchanan, S., Douglas, L., Hachlaf, K., Varner, E. and Williams, P. “Evaluating the International Baccalaureate Programme: An IB Proposal for the Consideration of the North Vancouver School District.” University of British Columbia. 2005. 15. <http://slc.educ.ubc.ca/Masters/Buchannan.pdf>

⁴⁰ McKenzie, C. “The Victorian Certificate of Education, the Monash University Foundation Year Programme and the International Baccalaureate: Choosing a Course as Preparation for Tertiary Study.” Monash University.

addition to collecting information from students currently enrolled in these programmes, the study sought the views of former students, secondary school administrators, and university representatives.

The study found that the IB programme was the most academically challenging, although the VCE programme offered the widest range of subjects. Further, while the VCE programme was considered better for nurturing and guiding students, the IB and MUFY programmes were more closely related to higher test scores. While students from all of the programmes were motivated to improve their university or career prospects, IB students “generally also had broader goals.”⁴¹

Underrepresented and Minority Students

Though little research appears to have been performed regarding the efficacy of the IB programme below the Diploma Programme level, a 2006 education doctorate thesis at the Virginia Polytechnic Institute and State University sought to determine if a relationship existed between ethnicity and the academic achievement of students in the IB Middle Years Programme (MYP). Specifically, the study examined to what extent there is a difference between the SOL achievement scores of all students enrolled and not enrolled in the MYP, of Black students enrolled and not enrolled in the MYP, of Hispanic students enrolled and not enrolled in the MYP, and of white students enrolled and not enrolled in the MYP.⁴² **After examining SOL achievement scores among these groups, the study found the IB students’ scores were higher but that the difference was not statistically significant.** This was found within each individual ethnic group and generally among all students regardless of ethnicity..⁴³

Another study, published in the *Journal of Advanced Academics* in 2007, sought to determine if the AP and IB programmes offered “optimal learning environments for talented minorities.”⁴⁴ In three different urban schools, data was gathered through

2001. http://cunningham.acer.edu.au/dbtw-wpd/exec/dbtwpub.dll?AC=SEE_ALSO&QF0=AUTHOR&QI0=%22McKenzie+C+M.%22&XC=/dbtw-

[wpd/exec/dbtwpub.dll?BU=&TN=ndrie&SN=AUTO23722&SE=1036&RN=3&MR=50&TR=0&TX=1000&ES=0&CS=1&XP=&RF=idpfullrecord&EF=&DF=&RL=0&EL=0&DL=0&NP=1&ID=&MF=WPEngMsg.ini&MQ=&TI=0&DT=&ST=0&IR=23469&NR=0&NB=0&SV=0&SS=0&BG=&FG=&QS=&OEX=ISO-8859-1&OEH=ISO-8859-1](http://cunningham.acer.edu.au/dbtw-wpd/exec/dbtwpub.dll?BU=&TN=ndrie&SN=AUTO23722&SE=1036&RN=3&MR=50&TR=0&TX=1000&ES=0&CS=1&XP=&RF=idpfullrecord&EF=&DF=&RL=0&EL=0&DL=0&NP=1&ID=&MF=WPEngMsg.ini&MQ=&TI=0&DT=&ST=0&IR=23469&NR=0&NB=0&SV=0&SS=0&BG=&FG=&QS=&OEX=ISO-8859-1&OEH=ISO-8859-1)

⁴¹ McKenzie, Op Cit.

⁴² Jackson, D. “The International Baccalaureate Middle Years Programme: A Comparison of the Standards of Learning Achievement Levels by Total Group and Ethnicity.” Virginia Polytechnic Institute and State University. March 2006. 105-106. <http://scholar.lib.vt.edu/theses/available/etd-04172006-173212/unrestricted/DissertationDeborahRJackson.pdf>

⁴³ Ibid.

⁴⁴ “Advanced Placement and International Baccalaureate programmes: optimal learning environments for talented minorities?” *Journal of Advanced Academics*. January 2007. Vol 18, No 2 www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/2a/53/5f.pdf

classroom observation and interviews with students and teachers. Some of the study's primary findings included:

- ❖ Educational opportunity tended to be extended to traditionally under-served gifted learners in school environments where AP and IB teachers recognized the diversity and complexity of their students' backgrounds and were cognizant of potential limitations of students who were less prepared to engage in challenging academic study.
- ❖ The presence of a cooperative network of support involving administrators, counselors, gifted coordinators, teachers, parents, and students seemed to foster the expectation that all students would succeed given the appropriate external scaffolding and internal motivation.
- ❖ [A] focus on academic rigor and on illuminating pathways to higher education seemed to help students feel ready to take on the challenges of future schooling.
- ❖ Environments in which supports were either more fragmented or nonexistent tended to be less successful at fostering academic commitment and led to student decisions to drop the courses or programmes.⁴⁵

The creation of a nurturing environment for diverse student populations is an essential aspect of fostering success among minority students.

As indicated above, the creation of a nurturing environment for diverse student populations is an essential aspect of fostering success among minority students. According to the study, the two major factors that were most closely related to creating these environments included the (1) pervasive belief that students could succeed coupled with instructional and group support, and (2) scaffolding in the form of extracurricular help, discussion forms, college preparatory activities, etc., to help support and challenges students.⁴⁶

At schools where these needs were fulfilled, an environment existed that fostered success of minority students. Conversely, ineffective programmes tended towards a strict "one-size-fits-all approach to the AP/IB curriculum," which often led to student dropouts, including many minority students who left the programme because "they believed that the curriculum, instruction, and environment of the classes were inappropriate for their individual needs." The study also identified other ways in which the AP/IB programmes failed to meet the needs of minority students.

⁴⁵ Quoted verbatim from: Ibid., 32-33.

⁴⁶ Ibid., 33.

Primarily, **the biggest failure of the IB/AP courses involved the difference between the programme curricula and the learning needs of students.** The inability of IB or AP course curricula to meet the learning needs of minority students and students from impoverished backgrounds was especially problematic.⁴⁷ Ultimately, the study concluded that AP and IB programmes can provide the opportunity for minority students to succeed if a programme works to create a culture of “high expectations” school-wide, an environment that fosters growth, and sufficient support structures to ensure these students’ success.⁴⁸

Criticism of the International Baccalaureate

AP and IB programmes can provide the opportunity for minority students to succeed if a programme works to create a culture of “high expectations” school-wide, an environment that fosters growth, and sufficient support structures to ensure these

While many studies indicate the existence of benefits associated with the IB programmes, doubts do exist regarding certain aspects of the IB. Aside from the drawbacks of the programme alluded to earlier in this section, such as the **heavy workload and high stress level** associated with IB, other studies have put forth critical analyses of the programme.

A study published by the National Research Council in 2002 sought to determine the quality of science and mathematics education for advanced students in AP and IB programmes. As stated in the report, “the kinds and levels of questions that appear on both the Advanced Placement and the International Baccalaureate examinations reinforce[s] the emphasis on broad but shallow coverage of topics.”⁴⁹ The report also asserted that a “perverse,” if unintended, effect of the IB and AP programmes is that “the exam-driven nature of...may cause the development of intellectual curiosity in students to fall victim to the pace of the courses – all in the name of ‘rigor.’”

Our research indicates that **the body of research suggesting that IB students outperform non-IB students academically is incomplete**, and there may be concerns about the biases of existing studies because of frequent ties to the International Baccalaureate Organization itself. Accordingly, many studies reviewed in this report point to the need for additional independent research regarding the positive (and negative) effects of participation in IB programmes. As stated in the review performed by the North Vancouver School District, there is not enough research supporting a definitive answer to the question of whether IB students

⁴⁷ Ibid., 35.

⁴⁸ Ibid.

⁴⁹ Stanitski, C. “Learning and Understanding: Improving Advanced Study of Mathematics and Science in U.S. High Schools: Report of the Content Panel for Chemistry.” National Research Council. 2002. 15. http://www.nap.edu/openbook.php?record_id=10364&page=15

outperform their non-IB peers.⁵⁰ With that said, existing studies do suggest that participation in IB programming does generally lead to positive educational experiences for students.

⁵⁰ Buchanan et al., Op. Cit., 17.

International Baccalaureate Programme Case Studies

In the following section of the report, we provide examples of schools located across the United States—particularly those serving a significant percentage of minority and/or disadvantaged students—where IB programmes have been successfully implemented. These case studies are provided for each level of the International Baccalaureate, from the Primary Years to the Middle Years and Diploma programmes. For each school presented in this section, we provide a discussion of the benefits experienced from implementation of an IB programme. To begin this case study analysis, we first provide an analysis of a study that examined the effects of IB participation of students in grades 5 through 10 at Academy School District Twenty in the state of Colorado. The study examined the effects of the IB programme on student performance in terms of reading achievement, mathematics achievement, and other qualitative factors at the Colorado school district.

Effects of IB Participation at Academy School District Twenty

In 2005, the IBO published a longitudinal study of an evaluation of the academic achievement and growth of students participating in the IB programme at Academy School District Twenty (ASD 20) of Colorado Springs, Colorado over the 2001-04 period. In addition to examining achievement and growth in reading and mathematics among IB students from grades 5 through 10, the study produced a “qualitative” analysis of trends relating to the academic growth of these students.

Reading Achievement

According to the IBO, **students in ASD 20’s IB programme regularly perform better than non-participants in Colorado Student Assessment Programme (CSAP) tests.** With this achievement in mind, this study sought to discover the elements of the IB programme that contributed to this higher level of achievement. Particularly, the study sought to determine if the programme itself affects this achievement or if achievement is due to a selection process in which the programme’s participants are more inclined towards greater academic performance because of the “academic ability and prior achievement, motivation, [and] family background characteristics” that may have led to their participation in the IB programme?⁵¹

It found that while higher performance for middle school students (grades 4-8) may be attributable to a selection process, **the IB programme itself may have a positive effect on the reading achievement of participants in grades 3 through 5 and 7**

⁵¹ Kiplinger, V. “Effects of IB Participation on Reading Achievement and Growth, 2000-2004 in Academy School District Twenty.” Academy School District Twenty. June 9, 2005. 2.
www.ibo.org/programmes/research/resources/reading/documents/IB_ReadingReport_Final_revised11_17_05copyrighted.pdf

through 10. While there is a lack of definitive evidence regarding the effect of the IB programme on reading achievement, it should be noted that the “homogeneity and typically high performance of all three cohorts of students [elementary, middle and secondary] make it difficult to discriminate between groups of students and evaluate the effectiveness...”⁵²

While the results of this segment of the study revealed that IB students perform consistently better than non-IB students, the IBO was unable to confirm that this performance was the direct result of participation in the programme, as opposed to various selection efforts. As indicated above, selection efforts may indeed have been the result of this higher performance, as IB students were perceived to be “brighter and more motivated” than students outside of the programme.⁵³

Mathematics Achievement

As with its examination of reading achievement among IB students, the portion of the study addressing mathematics achievement sought to determine whether high performance of IB students was the result of the programme itself or its “selection efforts.”⁵⁴

The study indicated that the **IB programme had a positive, if “relatively small,” impact on the achievement of students in mathematics as compared with non-participating peers.**⁵⁵ The IBO pointed to uncertainty regarding the effects of the programme because of the overall high performance of students in the district whether or not they participated in the IB programme. However, it did find that IB students in the **diploma programme showed significant average annual gains over their non-IB peers.** It also found that students’ mathematics performance in grades 5 and 8 is strongly related to their reading ability at these grade levels (although male students scored higher than female students in the grade 8 mathematics assessment on average).⁵⁶

Qualitative Study

The qualitative segment of the ASD 20 study relied on focus groups, interviews, surveys, and classroom observations to assess the quality of “IB structures, teaching

⁵² Ibid.

⁵³ Ibid.

⁵⁴ Kiplinger, V. “Effects of IB Participation on Mathematics Achievement and Growth, 2001-2004 in Academy School District Twenty.” Academy School District Twenty. October 7, 2005. 2.

www.ibo.org/programmes/research/resources/math/documents/IB_MSHSMathReport_10_7_05copyrighted.pdf

⁵⁵ Ibid.

⁵⁶ Ibid.

strategies, and student responsiveness.”⁵⁷ These research methods led to the conclusion that there is a “pervasive belief” that **“the techniques inherent in the [IB] programme are...beneficial in fostering students’ continued success,”** despite the fact that the programme may not be suitable for every student.

Study participants indicated that **the programme instills “lasting skills for life-long learning.”**⁵⁸ One respondent from the IB teacher focus group stated the IB programme “is very natural for kids at the elementary level,” and expressed that the programme instills students at this level with a spirit of ongoing inquiry rather than treating them like “vessel[s]” for information. Meanwhile, another participant in the IB student focus group expressed the belief that the **MYP was very beneficial in preparing students for the rigors of the Diploma Programme**, stating, “I think that middle years...give a distinct benefit because a lot of stuff we’re studying in English right now, people had a grounding in years before.” Another response highlighted by the district related to the Diploma Programme – one teacher stated that “in terms of academics, **not everybody can do the DP...[but] any student can benefit from the techniques.**”

Overall, the district concluded from this portion of the study that at all levels of the IB programme, students are equipped with the “skills to learn” as opposed to simply asking them to store “disparate facts.” In doing so, the programme fosters the greater academic success of its students on a long-term basis.

Primary Years Programmes (PYP)

Referring to **Broad River Elementary School** in South Carolina, “canny insiders of the educational world describe [the school] as challenging.”⁵⁹ The elementary school, which serves students from pre-school to fifth grade, receives funding for 80 percent of its “at-risk” students, and nearly half of its 434 students are eligible for free lunches. Broad River also notes that its annual student turnover rate is 56 percent, and “[s]ome of the pre-schoolers are the children of students still enrolled in local high schools.” In terms of ethnicity, the population of students is characterized as being “an equal mix of Afro-Americans and Caucasians, and 5 percent of students are Hispanic.” Moreover, these conditions make Broad River an unlikely candidate for introducing the IB PYP.

⁵⁷ “A Qualitative Study of Student Achievement and Growth Associated with the International Baccalaureate Programme In Academy School District 20.” Academy School District Twenty, Office of Deputy Superintendent. February 22, 2007. 4.
www.ibo.org/programmes/research/resources/achievement/documents/Final_Report_on_IB_Qualitative_Study_2_23_2007copyrighted.pdf

⁵⁸ Ibid., 13.

⁵⁹ “Case study of Broad River Elementary, USA.” International Baccalaureate Organization.
www.ibo.org/school/casestudy/001897/

However, in 1997, school principal Dr. Melissa Sheppard was inspired to implement the PYP at Broad River after attending workshop in the Netherlands held by the International Schools Curriculum Project. Three years later, the school implemented the programme with the hope that it would have “a transforming effect on the life of our school and its community.”⁶⁰ The implementation of the PYP has indeed had a transformative influence, and students at Broad River now participate in a series of activities that “reflect a deeper engagement with the core values of the PYP, as students reflect on their place in the multiple communities of classroom, school, locality, and the wider world.”

According to a 2008 article about the programme in *IB World*, the PYP has provided students “a basic appreciation of their own historical identity and the understanding that they, as citizens of a local and world community, have the responsibility to share their talents and skills with their peers and with the wider community.”⁶¹ The article described the elements used to foster community within students in year 1 and year 2 classes at the school. For instance, every week, students discuss problems in an “agenda book,” which contains classroom problems written down that have occurred during the week. Students are also engaged in an inquiry unit named “Rules and Responsibilities,” which students aged 6-8 years explore their responsibilities to their community, such as cleaning up their trash. During this inquiry, students not only discussed their responsibility to their community, but also organized a school and neighborhood litter campaign.⁶²

At **King/Robinson Interdistrict Magnet School**, now the only school in Connecticut that serves students grades Pre-K–8, the introduction of the IB PYP was an integral part of the school’s plans to merge schools and upgrade its facilities. Previously known as Jackie Robinson Middle School, the school merged with the nearby Martin Luther King Elementary to form the King/Robinson Interdistrict Magnet School, under which the PYP was introduced. In an IBO report, the reasoning behind this transition to the “student-focused” PYP was described by programme coordinator Cheryl Merritt:

It allows so much freedom to differentiate, to play to the strengths of the students while building on their weaknesses. And because it’s **inquiry-based**, their boundaries aren’t restricted. They’re allowed to explore and research and go as far they can. And the teachers can, too. They can be more creative in their instruction, think outside the box without being criticized and really get to know their students. In building on students’ weaknesses and building up their strengths, teachers are much more effective at getting students to accomplish the skills mastery they’re trying to acquire...Our goal is to move

⁶⁰ Ibid.

⁶¹ “A community within a community.” *IB World*. International Baccalaureate Organization. November 2008. 11. www.ibo.org/ibworld/documents/nov04.pdf

⁶² Ibid.

all of our students from good to great and we're using IB as our tool to do that.⁶³

As a result of implementing the PYP, the school now has a “uniquely open environment” founded on the programme’s “Essential Agreement” which involves teachers setting less rigid and “arbitrary” rules for the classroom.⁶⁴ Rather, teachers “talk with their students to determine what rules are necessary to make each individual classroom successful.” The rules established through this process are tied to specific consequences and rewards, ensuring that good behavior is rewarded and that the consequences of poor behavior are clear. Overall, the “Agreement” gives agency to the students in creating a positive learning environment.

Another successful element of the PYP at King/Robinson has been the **involvement of parents**, who feel as though they are participating in the process of the education of their children because of the PYP. Because of the “inquiry-based framework” of the programme, parents “feel more connected to what’s going on in the classroom.”⁶⁵ Parents also participate in various workshops that teach “strategies for positive reinforcement,” and have partnered with the school to develop a “new kind of report card” for students in which teacher assessments are paired insights from parents.

Beyond these qualitative improvements to the educational experience of its students, the school has also recorded quantitative evidence of the programme’s effectiveness, including:

- ❖ From 2007 to 2008, Developmental Reading Assessment (DRA) test scores increased by 26 percent for 2nd grade students and by 37 percent for 3rd grade students.
- ❖ 2nd grade IB students outperformed the combined scores of non-IB students in the school district by 10 percent on the District Wide Mini-Assessments.
- ❖ 3rd grade IB students scored 8 to 12 percent higher on January and April math assessments than other non-IB students in the district.⁶⁶

An example of the recent implementation of the PYP at an Ohio school may be found in that of **Cassingham Elementary School**. The programme, Ohio’s first Primary Years IB Programme, was started last summer⁶⁷ to provide students at Cassingham with the opportunity to achieve the IB student characteristics: “inquirer,

⁶³ “Primary Years Programme Case Study: Creating a Dynamic Learning Environment.” International Baccalaureate Organization. 2. www.ibo.org/actionkits/documents/CO_CaseStudy-PYPatKingRobinson.pdf

⁶⁴ Ibid.

⁶⁵ Ibid.

⁶⁶ Ibid., 3.

⁶⁷ “Cassingham Attracting Visitors.” Bexley City School District.

http://www.bexleyschools.org/school_NewsArticle.aspx?artID=301&school

thinker, communicator, risk-taker, knowledgeable, principled, caring, open-minded, balanced, and reflective.”⁶⁸ Teachers at Cassingham are using these learner characteristics to “help maintain a **common language within the school community** and guide more global thought in the classroom.” They spend at least one planning period per week creating and evaluating IB lesson plans.

Additionally, the Cassingham staff have three years to accomplish recommendations from the IB in order to continue providing the PYP. Recommendations include the improvement of assessment strategies and other instructional changes. Several of the teachers have participated in the “Assessment for Learning” through the Battelle for Kids organization and IB North America in order to accomplish these improvements. As Cassingham moves forward with its PYP, it will be focused on improving the achievement of both its students as well as improvement of the schools.⁶⁹

Middle Years Programme (MYP)

Semillas is now a vital “social safety net” for youth who are at risk of being disenfranchised

For **Semillas Community Schools** in California, the introduction of the IB Middle Years Programme was intended to address issues relating to “educational inequity” in “one of the most under-served neighborhoods in Los Angeles.”⁷⁰ Spearheaded by teachers in urban public schools, the MYP was the foundation for Semillas Community Schools, “a Mexican Indigenous, non-governmental, community-based, educational organization whose mission is to promote academic excellence rooted in the cultural and intellectual heritage of Indigenous Peoples and the advancement of social justice.” Semillas is now a vital “social safety net” for youth who are at great risk of being disenfranchised. The organization’s director described the bleak outlook for the children it serves:

Over 90% of Semillas students live in poverty. The majority of Semillas students reside in communities with the highest gang violence rates in Los Angeles, making prison an all too common prospect. Nearly 100% of the over four hundred Semillas students are Indigenous children of Mexican origin whose parents have migrated to Los Angeles in the hopes of finding a better future. Public schools our students would otherwise attend have

⁶⁸ “Understanding IB.” Bexley City School District.

http://www.bexleyschools.org/school_NewsArticle.aspx?artID=495&school

⁶⁹ Ibid.

⁷⁰ Aguilar, M. “One School’s Story: a passionate response to educational inequity and a new beginning with the IB Middle Years Programme.” *IB Americas December eNewsletter*. International Baccalaureate Organization. December 2009. Third Edition. 5.

www.ibo.org/iba/enewsletter/documents/December2009eNewsletterDownload_001.pdf

alarming dropout rates of over 60%. Of those that are fortunate to graduate, less than 5% attend four-year universities.⁷¹

Because Semillas' goal is not only to educate at-risk students, but to strengthen and serve a struggling community, the MYP's community focus offers an ideal foundation for these schools. Upon this foundation, the schools are "decisively paving the way for university success on the international stage" for its students.⁷²

The transformative power of the IB MYP is also evident at Chicago Public Schools (CPS) in Illinois, where the benefits of the programme have been continually witnessed in schools and the communities they serve.⁷³ While the Diploma Programme has been in place at CPS since 1981, it was not until 1999 that the System implemented the MYP with the goal of "creating a continuum of learning that instills the values of academic excellence in students at a younger age." Of course, the introduction of the MYP would also help students transition more easily to the Diploma Programme. To build this continuity, for each region CPS paired two MYP schools with one DP school. The implementation of these partnerships served to increase the number of students participating in the MYP – from 669 students in 1999 to 2,800 students in 2004. Additionally, the students participating in the programme represent a diverse population, the vast majority of which are either African American or Hispanic.

In order to support in these efforts, community organizations like the Beverly Area Planning Association (BAPA), applied for a grant to "start the school system's first-ever cluster of IB schools." This cluster has been very important to the success of the IB programme in the region. In the words of Fadwa Hasan, a retired MYP coordinator for the Chicago Public School System:

Being able to offer both the MYP and the Diploma Programme has created continuity not only for students, but also for educators. Students lay a strong academic foundation early on and teachers speak the same language, even across schools, neighborhoods, and disciplines.⁷⁴

Though concrete data has not yet been released regarding the effect of dual MYP-Diploma offering on the success of DP students, the strength of anecdotal evidence has resulted in a number of CPS primary schools introducing the PYP as a way to strengthen this continuity and promote student achievement. Due to the success of the programme, many CPS schools have expanded the MYP from a small programme within a school to "whole-school model."⁷⁵ Moreover, the MYP at CPS is

⁷¹ Ibid., 3.

⁷² Ibid.

⁷³ "Case Study: Building a Continuum of Excellence." International Baccalaureate Organization. www.ibo.org/ibna/actionkits/documents/MYPCaseStudy.pdf

⁷⁴ Ibid., 2.

⁷⁵ Ibid.

a strong example of a school system providing “a continuum of access and excellence for students.”

Diploma Programme (DP)

In order to address the overall low participation and performance of “low-income and minority students” in its Diploma Programme, the IBO commissioned a pair of case studies examining two schools with “unusually strong records recruiting students from underrepresented groups and ensuring their success” in the programme.⁷⁶ These schools were **Lamar Academy** (McAllen, Texas) and **Hillsborough High School** (Tampa, Florida), both of which “offer magnet IB Diploma Programmes in large and diverse school districts,” and have “a record of high pass rates across all racial/ethnic and socioeconomic groups.” Examination of these schools revealed a number of converging strategies used “for outreach and recruitment” and relating to “general programme availability, early preparation, and student supports.”

One positive element of these schools’ programmes was simply that both were magnet programmes, unrestricted by the geographic boundaries that define traditional public secondary schools. As such, more students – including low-income and minority students – were able to participate in the programmes at Lamar and Hillsborough. Both programmes have also taken action to “increase rigor in the elementary and middle school grades,” as a way to prepare students for the Diploma Programme.⁷⁷ Aside from implementation of MYP and PYP curricula within school districts, both Lamar and Hillsborough have established “feeder” programmes for students in 9th and 10th grade “to teach content and skills” designed to prepare students for Diploma Programme.

Common outreach and recruitment strategies were also found at both schools, including mailing information and application materials to prospective students, hosting presentations and open houses to teach students and parents about the programme, and providing shadowing opportunities for prospective students.⁷⁸ In the case of Hillsborough, in addition to mailings, the school directly follows up with “promising students from underrepresented groups.”⁷⁹ Meanwhile, both schools communicate the idea that academic success is the result of “student motivation,” and therefore expand its reach beyond only “gifted” students. Meanwhile, the selection of students at Lamar and Hillsborough are subject to an admissions process that examines “academic performance information...teacher recommendations, essays or interviews, and other information...”

⁷⁶ Bland, J. and Woodworth, K. “Case Studies of Participation and Performance in the IB Diploma Programme.” SRI International, Center for Education Policy. 2009. 9.

policyweb.sri.com/cep/publications/ParticipationPerformance-IBDiplomaProgramme.pdf

⁷⁷ Ibid.

⁷⁸ Ibid.

⁷⁹ Ibid.

The success of these programmes is also largely dependent on the support systems established at each school...

The success of these programmes is also largely dependent on the support systems established at each school, and these supports are in place from the school level to district and state levels. At the school level, “academic and social support” is provided to students and the schools work foster “a sense of community” among DP students.⁸⁰ Specific school level actions include, “keeping IB relatively small, requiring that all IB students attempt the full Diploma, and emphasizing the shared values that motivate students and teachers to participate.”

Student performance is also recorded within these schools so that struggling students can be identified and assisted. At the district level, both programmes have devoted leaders that arrange for professional development of employees, provide funding, and allow the schools to make independent hiring choices. Meanwhile, at the state level, the programmes are strengthened through IB-affiliate organizations, which “coordinate professional development, provide instructional guidance, and advocate for supportive policies at the state level.” As a result of advocacy initiatives, the programmes have benefited from various “college credit and scholarship opportunities for IB Diploma recipients,” among other incentives arranged at the state level.

In addition to discussing the findings of case studies at these schools, a SRI International report presented a series of “lessons” to be learned from the success of programmes at Lamar and Hillsborough. **The overarching lessons from these case studies** include:

- ❖ Expand programme availability;
- ❖ Focus on early preparation;
- ❖ Engage in targeted student outreach and recruitment;
- ❖ Consider the balance between selectivity and student persistence;
- ❖ Monitor student progress and ensure the availability of academic assistance;
- ❖ Ensure adequate district support for the Diploma Programme; and
- ❖ Encourage state entities to adopt policies that incentivize IB participation and the establishment of additional IB programmes.⁸¹

As a reference, the many beneficial actions related to each of the lessons listed above are detailed in this report’s Appendix 2.

Finally, **Firestone High School** in Akron, Ohio, has noticed improved student performance as a result of its implementation of the Diploma Programme. Firestone

⁸⁰ Ibid., 10.

⁸¹ Quoted verbatim from: Ibid., 10-11.

teaches six areas of the IB programme: (1) Language A (the native language of the student), (2) Language B (a spoken foreign language), (3) Individuals and Societies, (4) Experimental Sciences, (5) Mathematics, and (6) Electives (Arts and design; ITGS, second science, or third language).⁸² As a result, Firestone has seen an 86.21 percent Diploma pass rate, compared to 70.91 percent in Ohio and 77.85 percent in the U.S. in 2002. Furthermore, the percent of Firestone students earning a four or above on the IB test was 86.7 percent, compared to 67.51 percent for Ohio and 83.28 percent for the U.S.⁸³ These results have remained consistent throughout the years, and in 2006, 81 percent of students earned the full IB diploma, compared to 79.86 percent worldwide.⁸⁴

Requested Case Studies

In addition to the schools listed above, District XYZ requested case studies of several schools districts with publicized IB programmes, many of which must manage issues associated with large low-income and minority populations. The schools and school districts are:

- ❖ South Side High School, Rockville Center, NY
- ❖ Cherry Hill Public School District, Cherry Hill, NJ
- ❖ Pinellas County Public Schools, Pinellas, FL
- ❖ Philadelphia City Schools, Philadelphia, PA
- ❖ Columbus Alternative High School, Columbus, OH
- ❖ Alexandria City Public Schools, Alexandria, VA

South Side High School (Rockville Centre Union Free School District) is the sole public high school in the Long Island village of Rockville Centre, New York. According to the most recent American Community Survey (ACS) data from the U.S. Census Bureau, Rockville Centre is home to approximately 25,000 permanent residents. The median annual household income (in 2008 inflation-adjusted dollars) was \$52,175, and only 4.6 percent of the population fell below their respective poverty thresholds.⁸⁵ 74.3 percent of the population was white, and 12.3 percent were African American.⁸⁶

The International Baccalaureate programme at South Side began in 1990 with five IB diploma candidates and has rapidly grown over the past 20 years to support 26 IB courses and serve more than 100 students.⁸⁷ Between 2001 and 2007, the programme more than doubled in size, from 67 IB degree candidates to 136. Since the

⁸² "IB: Programme of Study." Firestone High School.

<http://www.akron.k12.oh.us/schools/445/programme.html>

⁸³ "IB Results 2002." Firestone High School. <http://www.akron.k12.oh.us/schools/445/results.htm>

⁸⁴ "About Firestone High School." Firestone High School. <http://www.firestonehigh.com/>

⁸⁵ U.S. Census Bureau, 2006-2008 American Community Survey, "Rockville Centre village, New York"

⁸⁶ Ibid.

⁸⁷ South Side High School, <http://rockville.ny.schoolwebpages.com/education/dept/dept.php?sectionid=887>

programme's inception, nearly 80 percent of the declared IB candidates have successfully completed the full programme. In 2009, 90 students—nearly 34 percent of the graduating class—earned IB diplomas, setting a school record.

TABLE 2. IB Diploma Success Rates at South Side High School, 1990-2007

Year	Candidates	Diplomas	Pass Rate
1990	5	4	80 %
1991	12	9	75%
1992	11	9	81%
1993	7	6	85%
1994	13	9	69%
1995	20	18	90%
1996	30	30	100%
1997	20	14	70%
1998	49	43	87%
1999	58	43	74%
2000	76	69	90%
2001	67	54	80%
2002	80	66	82%
2003	84	69	82%
2004	91	77	85%
2005	97	72	74%
2006	124	83	67%
2007	136	102	75%

Source: South Side High School,

<http://rockville.ny.schoolwebpages.com/education/components/docmgr/download.php?sectiondetailid=6815&fileitem=2316&catfilter=307>

South Side has also produced a considerable amount of data showing that the benefits of the International Baccalaureate extend well beyond the formal IB degree programme and have a positive effect on learning outcomes for students who take IB classes. While 102 students received IB diplomas in 2007, nearly 438 students at South Side sat for more than 1,000 International Baccalaureate content exams. Of the 1,222 exams taken, 887 (or 72.59 percent) received a score of 4.0 (proficiency) or higher. That amounts to 2.86 scores of 4.0 or higher per capita at South Side.⁸⁸ In 2009, 419 students at South Side took at least one IB course, with more than 3.15 scores of 4.0 or higher per capita.⁸⁹

⁸⁸ Rockville UCD,

http://www.rvcschools.org/education/sctemp/1cf4d5d4922dc857597c9ce5318d6e58/1269980288/may_09_results-_board_meeting.pdf

⁸⁹ Ibid.

TABLE 3. Exam Candidates at South Side High School, 1990-2007

Year	Candidates Examined	Exams Administered	Exam Scores 4+ ⁹⁰	# of 4's per South Side graduate	Diplomas Awarded
1992	110	194	146	.62	9
1993	127	221	146	.62	6
1994	109	203	142	.58	9
1995	121	230	191	.88	18
1996	139	279	241	1.09	30
1997	138	271	194	.94	14
1998	177	455	361	1.55	43
1999	199	498	405	1.81	43
2000	209	608	466	1.89	69
2001	198	577	494	2.09	54
2002	260	668	569	2.16	66
2003	286	738	605	2.18	69
2004	287	760	643	2.42	77
2005	354	933	752	3.00	72
2006	398	1081	841	2.98	82
2007	438	1222	887	2.86	102
Total	-	-	-	-	763

Source: Reproduced from South Side High School,

<http://rockville.ny.schoolwebpages.com/education/components/docmgr/download.php?sectiondetailid=6815&fileitem=2316&catfilter=307>

South Side uses global averages on International Baccalaureate tests as the benchmark for its programme. The chart below shows that South Side exceeded the global average in a number of subjects—Biology, Music, and Art—but can also identify areas where improvement is needed, such as English, Spanish, and History.

TABLE 4. South Side and Global Averages on IB Exams

Subject	Students	School Average	Global Average
<i>Higher Level Exams</i>			
English	195	4.18	4.70
Spanish	16	4.00	5.46
History	195	3.97	4.37
Biology	28	4.43	4.18
Physics	26	4.12	4.63
Chemistry	27	3.15	4.40
Film	35	3.21	4.57
Music	9	4.75	4.68
Theatre	7	4.57	4.4
Art	61	4.9	4.86
<i>Standard Level Exams</i>			
Spanish	115	4.33	4.86
French	38	2.87	4.72

⁹⁰ An IB exam score of “4” suggests proficiency in the exam area

Subject	Students	School Average	Global Average
Psychology	32	4.24	4.36
Physics	80	4.6	4.09
Environmental Systems	87	3.91	4.01
SL Math/Methods	79	4.82	4.45
Math Studies	134	4.72	4.61
Music	1	5.00	4.42

Source: Reproduced from South Side High School,
<http://rockville.ny.schoolwebpages.com/education/components/docmgr/download.php?sectiondetailid=6815&fileitem=2316&catfilter=307>

The school's report concluded that the International Baccalaureate programme improves student success at South Side High School for at least three reasons. First, IB is grounded in a student-centered philosophy that emphasizes individuality and allows students to demonstrate what they know (as opposed to what they do not know) in the subject areas that interest them. Second, success is defined and evaluated in a number of ways. Students seeking the full IB diploma, for example, must demonstrate proficiency in multiple subject areas on a series of objective examinations, but they must also be able to show that they are capable and thoughtful writers (through the writing component), that they can translate classroom theory into real-world practice (by passing the epistemological course), and that they are engaged citizens, broadly construed (by completing the CAP portfolio). Third, the International Baccalaureate programme accommodates students with special learning needs. The chart below shows that, in many cases, special needs students scored higher than the general population at South Side.

TABLE 5. Special Needs Student Performance on IB Exams

Subject	Special Needs Students	Special Needs Students Average	School Average
English	15	4.07	4.18
Math Studies	14	4.86	4.72
Spanish	9	3.70	3.93
French	3	2.5	2.87
History	14	4.5	3.97
Environmental Systems	7	3.80	3.91
Psychology	2	4.50	4.24
Biology	2	5.00	4.43
Art	5	4.80	4.90
Film	2	3.00	3.21
Physics	2	5.00	4.60

Source: Reproduced from South Side High School,
<http://rockville.ny.schoolwebpages.com/education/components/docmgr/download.php?sectiondetailid=6815&fileitem=2316&catfilter=307>

An extensive search revealed that **Cherry Hill Public Schools** (Cherry Hill, New Jersey) phased out the International Baccalaureate Diploma Programme at West High School beginning in 2007 and concluded the winding down process in the spring of 2008. Seventy percent of voting staff members at three elementary schools (Bret Harte, Thomas Paine International, and Joseph Sharp) and one middle school (Rosa International) elected to continue their IB programmes, however.⁹¹ Our research shows that these schools (and the district at large) have not completed systematic assessments of their respective International Baccalaureate programmes.⁹²

Pinellas County Schools (Largo, Florida) operates three International Baccalaureate programmes. The district's sole International Baccalaureate Primary Years Programme World School is located at the James B. Sanderlin Elementary School. In addition, the district features two IB Diploma programmes. One, the first IB programme in the state of Florida, was launched in 1984 at St. Petersburg High, and the second was inaugurated with the opening of Palm Harbor University High in 2006.⁹³ These schools (and the district at large) have not completed systematic assessments of their respective International Baccalaureate programmes.⁹⁴

Our research also demonstrates that the **Philadelphia School District** (Philadelphia, Pennsylvania), cited by District XYZ as a district of interest, has not assessed the trajectory of its International Baccalaureate programmes. The district does have a number of IB programmes—particularly IB Diploma programmes—at the Philadelphia High School for Girls (a silver medal school in U.S. News and World Report's 2010 high school rankings) and the Bodine High School for International Affairs, which has received considerable press attention from educational groups in the past.⁹⁵

An IB success story can be found in **Columbus Alternative High School** (Columbus, Ohio), which was the only International Baccalaureate school in Ohio to receive recognition in the 2010 iteration of the U.S. News and World Report "Best High Schools" ranking.⁹⁶ The International Baccalaureate Diploma Programme

⁹¹ Cherry Hill Public Schools, <http://www.cherryhill.k12.nj.us/boe/agenda-minutes/files/agenda/02272007.pdf>

⁹² Websites for IB schools in the district are as follows: Bret Harte Elementary IB Primary Years Programme, <http://harteweb.chclc.org/ib.html>; Thomas Paine International, <http://paine.cherryhill.k12.nj.us/>; Joseph Sharp, http://sharp.cherryhill.k12.nj.us/IB_PYP%20_ParentPresentation.pdf; Rosa International Middle School, <http://rosaweb.chclc.org/>

⁹³ Pinellas County Schools, "History," <http://www.pinellas.k12.fl.us/Magnet/history.html>

⁹⁴ More information on the IB Diploma programmes at Pinellas County high schools can be found at the following websites: Palm Harbor University High, <http://www.pcsb.org/choice/magnet/PalmHarborUnivHighIB.pdf>; St. Petersburg High, <http://www.pcsb.org/choice/magnet/StPeteHighIB.pdf>; <http://it.pinellas.k12.fl.us/schools/stpete-hs/IB/IBHome.html>

⁹⁵ For example, see World Affairs Council, "William W. Bodine High School for International Affairs," <http://www.wacphila.org/education/bodine.html>

⁹⁶ Columbus City Schools, "U.S. News and World Report Ranks 12 Columbus City Schools High Schools as Among Best in the Nation,"

launched at Columbus Alternative HS with a cohort of 20 students in 2004. Since then, dozens of students have taken part of the school's growing IB programme and have "[gone on] to many of the nation's top universities, often with large or full scholarships."⁹⁷ The success of Columbus Alternative High School has prompted district officials to extend International Baccalaureate programming to the elementary and middle school levels. In 2010, every elementary school student in the Columbus City Schools system will be eligible for a "magnet school choice" programme that enables them, by lottery, to attend one of five themed magnet schools, including the Sale International Studies Magnet School (an IB programme).⁹⁸

Some of the country's most difficult educational challenges can be found in Washington, D.C., and the area's suburbs in Northern Virginia and Maryland, where dozens of stakeholders work to create educational opportunities in the midst of sharp class distinctions, language barriers, and crime. In recent years, superintendents of Northern Virginia public school districts have made a concerted effort to push schools and students to take more Advanced Placement and International Baccalaureate classes.⁹⁹ **Alexandria City Schools** (Alexandria, Virginia) recently began implementation of a multi-year plan to make the International Baccalaureate programme central to the educational mission of the district at virtually all levels of instruction. Last May, ACS's superintendent, Morton Sherman, issued a widely-publicized recommendation that the district replace its two middle schools with five new autonomous academies to be "programmatically constructed with the International Baccalaureate (IB) Middle Years Programme."¹⁰⁰ Dr. Sherman argued that the ambitious overhaul, designed to upend the current arrangement without requiring additional taxpayer dollars, should be phased in over three years and is designed to meet the academic as well as social, emotional, physical, creative, and political developmental needs of early adolescent learners...The programme is about supporting the development of the whole child."¹⁰¹ The superintendent's plan for radical change was announced in the wake of years of systematic failure. The Alexandria City School System, with slightly more than 11,300, is one of the smallest districts in Northern Virginia, but also one of the worst performing—the annual

http://www.columbus.k12.oh.us/website.nsf/%28ccs_pages%29/US%20News%202010%20Ranks%2012%20Columbus%20Schools?opendocument?OpenForm&parented=yes

⁹⁷ Columbus Alternative High School, <http://cahs.info/programmes/ib/>

⁹⁸ Columbus Municipal School District, "Magnet School Choice,"

<http://www.columbuscityschools.org/ParentalChoice.html>

⁹⁹ Jay Matthews, "Northern Virginia: Movement to AP and IB Continues," *Washington Post*, 11 December 2008, <http://www.washingtonpost.com/wp-dyn/content/article/2008/12/10/AR2008121001223.html>

¹⁰⁰ Morton Sherman, "Proposal for a New Middle School Model," 27 May 2009,

<http://www.acps.k12.va.us/middle-schools/20090604-proposal.pdf>; Theresa Vargas, "Superintendent Thinks Small in Plan to Revamp Middle Schools," <http://www.washingtonpost.com/wp-dyn/content/article/2009/04/16/AR2009041603943.html>

¹⁰¹ Ibid.

drop-out rate is in excess of 11 percent, and nearly one in four enrolled Latino students does not receive a high school diploma.¹⁰²

Last month, the expansion of International Baccalaureate programmes in the Alexandria area continued. The ACS superintendent informed parents in February 2010 that Jefferson-Houston Elementary School, which was recently given “accreditation with warning” after unsatisfactory standardized test score performance, would be a designated experiment site for PYP and MYP IB Programmes.¹⁰³ The experiment in International Baccalaureate education will test the belief that rigorous, college-level work will improve the performance of impoverished minority schools. 73.6 percent of the students at Jefferson-Houston Elementary are African American; 13.0 percent are Hispanic. More than 85 percent of the students currently enrolled qualify for free or reduced lunch.¹⁰⁴

Jefferson-Houston Elementary (Alexandria City Schools-VA)

Racial Profile

African American, 73.6%
Hispanic, 13.0%
White, 10.5%
Other, 2.9%

Socioeconomic Profile

85% receive reduced or free lunch

Status

Did not meet benchmarks in 2007;
currently under shared governance with
BOE. School board voted to create PYP
and MYP IB Programmes in February
2010

Source: ACPS, “JHAA Corrective Action Plan,”
<http://www.acps.k12.va.us/titleone/school-improvement/school-improvement-plan-jhaa.pdf>

¹⁰² Theresa Vargas, “Superintendent Thinks Small in Plan to Revamp Middle Schools,”

<http://www.washingtonpost.com/wp-dyn/content/article/2009/04/16/AR2009041603943.html>

¹⁰³ Alexandria City Public Schools, “Jefferson-Houston School for the Arts and Academics Corrective Plan,” 27 October 2007, <http://www.acps.k12.va.us/titleone/school-improvement/school-improvement-plan-jhaa.pdf>;

Alexandria City Public Schools, “Letter from Dr. Sherman to Jefferson-Houston Community,” 26 February 2010, <http://www.acps.k12.va.us/news2010/nr2010022603.php>

¹⁰⁴ Alexandria City Public Schools, “JHAA Corrective Action Plan,” 23 October 2007, <http://www.acps.k12.va.us/titleone/school-improvement/school-improvement-plan-jhaa.pdf>

Conclusion

The body of research reviewed in this report strongly suggests that participants in IB programmes are characterized by high levels of academic achievement and are more frequently admitted into postsecondary institutions than their peers. However, it appears to be unclear if the programme itself is the direct cause of these results, as many studies indicate that the gifted students selected for IB programmes are inherently inclined toward greater achievement than their peers. The literature indicates that students participating in an IB programme are more likely to move on and succeed in postsecondary education, and are able to use the skills they learned throughout the IB programme in their future learning and career endeavors. Perhaps one of the strongest recommendations for the programme; 90 percent of past IB participants would encourage their children to enroll in IB programmes.¹⁰⁵

Participants in IB programmes are characterized by high levels of academic achievement and are more frequently admitted into postsecondary institutions than their peers. However, it appears to be unclear if the programme itself is the direct cause of these results, as many studies indicate that the gifted students selected for IB programmes are inherently inclined toward greater achievement than their peers.

The perceptions of the IB programme at a national and international level seem to complement the literature, noting the improvements in student performance and achievement as a result of the programme. Most teachers, students, and increasingly, universities, are adopting favorable views towards the IB programme and its rigorous curriculum. At the same time, educators in the United States also acknowledge the fact that the IB programme is more rigid in structure than Advanced Placement programs, and may give teachers less leeway in deciding what their students will learn. Additionally, the heavy workload and high levels of stress for students in IB programmes were common criticisms noted in research studies, while one study worried that the breadth of the subjects in the programme result in potentially shallow learning experiences.

Unfortunately, there does not appear to be a wealth of research regarding the efficacy of IB programmes for underrepresented and minority students. One study did note, however, that a community-wide and school-wide support network for students in the IB programme was particularly important for under-represented and minority populations. Interestingly, this emphasis on the importance of support networks and scaffolding for minority students was replicated in our analysis of case studies of IB programmes at the PYP, MYP, and DP levels. For instance, the involvement of parents, the use of the schools as “social safety nets,” partnerships with other

¹⁰⁵ Duevel, Op. Cit.

community organizations, concerted minority and underrepresented outreach and recruitment efforts, and other support networks appeared to be vital to the success of the IB programme at the schools examined in this report.

Overall, our case studies indicate that the introduction of IB programming at all levels can have positive transformative effects on schools and the academic success of their students. While many of these case studies are put forth by the IBO itself, our research suggests that IB programmes generally result in positive outcomes for participants.

APPENDIX 1. List of Profiled School Districts

- ❖ Academy School District Twenty
Colorado Springs, Colorado
<http://www.asd20.org/education/district/district.php?sectionid=1>
- ❖ Broad River Elementary School
Beaufort, South Carolina
<http://web.beaufort.k12.sc.us/education/school/school.php?sectionid=12>
- ❖ King/Robinson Interdistrict Magnet School
New Haven, Connecticut
<http://www.nhps.net/King>
- ❖ Cassingham Elementary School
Bexley, Ohio
http://www.bexleyschools.org/school_home.aspx?schoolid=3
- ❖ Semillas Community Schools
California
<http://www.dignidad.org/>
- ❖ Chicago Public Schools
Chicago, Illinois
<http://www.cps.edu/Pages/home.aspx>
- ❖ Lamar Academy
McAllen, Texas
<http://lamar.mcallenisd.org/>
- ❖ Hillsborough High School
Tampa, Florida
<http://www.sdhc.k12.fl.us/~hillsborough.high/>
- ❖ Firestone High School
Akron, Ohio
<http://www.akron.k12.oh.us/schools/445/>
- ❖ South Side High School
Rockville Centre, New York
<http://rockville.ny.schoolwebpages.com/education/school/school.php?sectionid=8>

- ❖ Philadelphia City Schools
Philadelphia, PA
<http://www.phila.k12.pa.us/>
- ❖ Cherry Hill Public School District
Cherry Hill, NJ
<http://west.cherryhill.k12.nj.us/>
- ❖ Pinellas County Public Schools
Pinellas, FL
<http://www.pinellas.k12.fl.us/>
- ❖ Alexandria City Public Schools
Alexandria, VA
<http://www.acps.k12.va.us/>
- ❖ Columbus Alternative High School
Columbus, OH
<http://cahs.info/>

APPENDIX 2: Lessons from IB Diploma Programmes at Lamar Academy and Hillsborough High School¹⁰⁶

Lesson	Recommended Actions
Expand programme availability	<ul style="list-style-type: none"> ❖ Locating Diploma Programmes in diverse school districts, such as those that are host to the case study schools, is a first step towards ensuring access for students who are traditionally underrepresented in IB programmes. ❖ School and district leaders might consider structuring their IB programmes as magnets with the explicit intention of increasing accessibility to students across the district or locating programmes in schools serving underrepresented students and encouraging these students to enroll. ❖ In working with schools and districts, IB should be sure to communicate that motivated students entering the programme performing at, and even below, grade level have been successful in completing Diploma Programmes and that many such students have earned the full IB Diploma.
Focus on early preparation	<ul style="list-style-type: none"> ❖ Initiatives aimed at raising overall student achievement by increasing rigor in elementary and middle schools may help prepare larger numbers of underrepresented students for the academic rigor of the Diploma Programme. ❖ Structuring the Diploma Programme as part of a 4-year course of study, with students entering in 9th grade and receiving 2 years of aligned curriculum and supports prior to formally beginning Diploma Programme coursework at the beginning of 11th grade, provides early preparation that appears to contribute to student success.
Engage in targeted student outreach and recruitment	<ul style="list-style-type: none"> ❖ Districts and schools seeking to expand the reach of their IB programmes should consider engaging in strategic efforts to inform prospective applicants from underrepresented groups of the programme's value, explain the qualities that programme staff are looking for, and dispel any misconceptions. ❖ Diploma Programme staff and district leaders should work with teachers and counselors of students in the prospective applicant pool to increase programme awareness and encourage high-potential students to participate, perhaps nominating such students to programme leaders. ❖ IB leaders might consider creating recruitment tools and training administrators regarding effective recruitment strategies.
Consider the balance between selectivity and student persistence	<ul style="list-style-type: none"> ❖ School and district leaders who seek to expand access to underrepresented students while providing sufficient preparation for success should reflect on the tradeoffs related to selectivity and expectations regarding student persistence and attainment of the Diploma. ❖ In particular, in expanding access, programme staff should evaluate their capacity to support incoming students who may struggle with the rigor of the IB curriculum.
Monitor student progress and ensure the availability of academic assistance	<ul style="list-style-type: none"> ❖ Schools and districts should carefully monitor student progress and develop early warning systems to identify students at risk of getting off track. ❖ Schools and districts should assess the adequacy of their support systems and consider additional strategies for bolstering student support. Ample student support is especially important for schools with relatively open admission policies. ❖ IB should support networking among affiliate schools to enable sharing of best practices in the areas of monitoring progress and student supports.

¹⁰⁶ Bland, J. and Woodworth, K. "Case Studies of Participation and Performance in the IB Diploma Programme." SRI International, Center for Education Policy. 2009. 9.
policyweb.sri.com/cep/publications/ParticipationPerformance-IBDiplomaProgramme.pdf

Lesson	Recommended Actions
Ensure adequate district support for the Diploma Programme	<ul style="list-style-type: none"> ❖ District leaders have the capacity to substantially influence school-level IB programme quality along several dimensions, including programme design, staffing, funding, and teacher professional development. Districts considering adopting the Diploma Programme should be prepared to provide the supports necessary for student success. ❖ IB leaders are encouraged to promote the sharing of best practices among district leaders.
Encourage state entities to adopt policies that incentivize IB participation and the establishment of additional IB programmes	<ul style="list-style-type: none"> ❖ IB should continue to encourage schools and districts to form or work with existing state or regional organizations to advocate for supportive policies at the state level. ❖ Likewise, schools and districts should work together to increase awareness of the value of the Diploma Programme among state policymakers.

APPENDIX 3. IB Programme Rankings by U.S. News (2010)

School Name	Location	Rank	IB Participation (%) ¹⁰⁷	IB Exam Passing Rate (%)
International Academy	Bloomfield Hills, MI	Gold #2	100.0	95.3
Baccalaureate School for Global Education	Long Island City, NY	Gold #35	100.0	58.5
City Honors School at Fosdick-Masten Park	Buffalo, NY	Gold #90	97.3	76.7
Sturgis Charter Public School	Hyannis, MA	Honorable Mention	95.3	58.4
Yonkers High School	Yonkers, NY	Gold #41	94.1	72.7
Sumner Academy of Arts and Science	Kansas City, KS	Gold #62	92.6	54.7
South Side High School	Rockville Centre, NY	Gold #46	83.0	68.9
Metro Academic and Classical High School	St Louis, MO	Gold #92	82.0	63.2
School of International Studies San Diego High School	San Diego, CA	Gold #44	80.6	74.0
Mystic Valley Regional Charter School	Malden, MA	Honorable Mention	78.8	61.2
George Mason High School	Falls Church, VA	Honorable Mention	73.2	87.6
Suncoast Community High School	Riviera Beach, FL	Gold #60	65.3	92.7
Lincoln College Preparatory Academy	Kansas City, MO	Silver	63.9	59.8
George C. Marshall High School	Falls Church, VA	Silver	63.8	81.0
Rufus King High School	Milwaukee, WI	Silver	54.6	56.9
Louisiana State University Laboratory School	Baton Rouge, LA	Silver	50.5	77.5
Bergen Academies Hackensack	Hackensack, NJ	Gold #39	48.1	95.1
Fort Myers High School	Fort Myers, FL	Silver	46.2	86.6
Galileo Magnet High School	Danville, VA	Silver	46.0	90.5
Stanton College Preparatory School	Jacksonville, FL	Gold #17	45.9	89.1
North Hills Preparatory	Irving, TX	Honorable Mention	45.6	93.1
Lincoln High School	Portland, OR	Silver	42.0	89.9
Baltimore City College	Baltimore, MD	Silver	41.9	47.9
South Eugene High School	Eugene, OR	Silver	41.5	82.7
Patrick Henry High School	Minneapolis, MN	Silver	37.6	44.8
Cocoa Beach Junior/Senior High School	Cocoa Beach, FL	Silver	36.4	85.7
Signature School	Evansville, IN	Gold #53	33.3	82.0
Troy High School	Fullerton, CA	Silver	30.0	97.2
Central High School	St. Paul, MN	Silver	27.8	78.7
Niwot High School	Niwot, CO	Silver	27.0	88.7
Richard Montgomery High School	Rockville, MD	Honorable Mention	26.3	99.0
Central High School	Springfield, MO	Silver	25.7	84.8
Inglemoor High School	Kenmore, WA	Silver	24.7	88.5

¹⁰⁷ Percentage of 12th graders that took at least one IB exam

School Name	Location	Rank	IB Participation (%) ¹⁰⁷	IB Exam Passing Rate (%)
Westchester Academy for International Studies	Houston, TX	Silver	22.7	53.5
Upper Saint Clair High School	Pittsburgh, PA	Silver	22.4	87.5
Lakewood High School	Lakewood, CO	Silver	21.5	95.2
Interlake High School	Bellevue, WA	Silver	21.4	72.4
Benjamin Banneker Academic High School	District Of Columbia, DC	Silver	20.5	65.6
Coral Reef Senior High School	Miami, FL	Gold #95	19.1	85.7
Lincoln Park High School	Chicago, IL	Silver	18.2	86.1
Norcross High School	Norcross, GA	Silver	16.9	84.6
Palm Harbor University High School	Palm Harbor, FL	Silver	16.0	97.6
Paxon School for Advanced Studies	Jacksonville, FL	Gold #42	15.8	91.0
North Hagerstown High School	Hagerstown, MD	Silver	14.1	72.0
Columbus Alternative High School	Columbus, OH	Silver	13.7	75.2
Harriton High School	Rosemont, PA	Silver	13.5	88.5
Laguna Hills High School	Laguna Hills, CA	Silver	12.9	81.5
H. H. Dow High School	Midland, MI	Silver	11.9	83.7
Westwood High School	Austin, TX	Silver	11.3	96.0
Philadelphia High School for Girls	Philadelphia, PA	Silver	10.8	67.2
Desert Mountain High School	Scottsdale, AZ	Silver	10.2	93.5
Sunny Hills High School	Fullerton, CA	Silver	9.9	68.8
Walnut High School	Walnut, CA	Silver	9.3	95.2
Central High School	Philadelphia, PA	Silver	8.9	60.9
Calhoun High School	Calhoun, GA	Silver	8.4	54.7
Lindbergh High School	St Louis, MO	Silver	7.5	88.4
Nogales High School	Nogales, AZ	Silver	7.5	64.4
Skyline High School	Salt Lake City, UT	Silver	4.9	65.3
Foothill High School	Santa Ana, CA	Silver	4.8	96.4
Northwestern Regional High School	Indianapolis, IN	Silver	4.2	82.6
Diamond Bar High School	Diamond Bar, CA	Silver	3.6	92.7
William Fremd High School	Carmel, IN	Silver	1.7	87.8

Source: U.S. News and World Report, "America's Best High Schools,"

<http://www.usnews.com/articles/education/high-schools/2009/12/09/americas-best-high-schools-top-international-baccalaureate-schools.html>

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