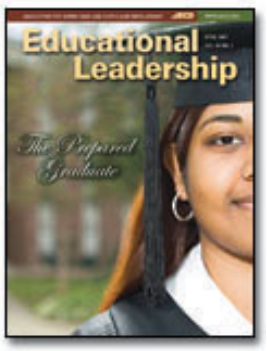
Educational Leadership

April 2007 | Volume **64** | Number **7**
The Prepared Graduate Pages 53-56



April 2007

A World-Class Curriculum for All

Does encouraging more students to take International Baccalaureate classes force teachers to lower their standards? Not when students have the right preparation and support.

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Researchers increasingly recognize that students who take challenging high school courses are better prepared for college study and thus more likely to earn a degree (Adelman, 2006). Unfortunately, many high schools limit enrollment in these courses to the schools' highest-achieving students. Some school leaders believe that allowing lower-achieving students to take rigorous courses will force teachers to water down their curriculum (Klopfenstein, 2003). But is this assumption true? What would happen if all students were encouraged to enroll in the most rigorous classes available?

Opening the Doors

The suburban school district of Rockville Centre, New York, serves approximately 3,500 students. Nearly 75 percent of the students are white, approximately 12 percent are Latino, 8 percent are black, and 2 percent are Asian American. Most of the district's black and Latino students are socioeconomically disadvantaged.

In 1981, South Side High School, the only high school in the district, introduced the International Baccalaureate (IB) diploma program to serve its gifted and talented 11th and 12th graders. The IB diploma program encompasses all curriculum subjects. Criterion-referenced assessments graded by international examiners measure student learning across the years and across member schools (International Baccalaureate Organization, 2004). Students earn college credit for IB coursework; universities across the globe recognize the rigor of the program and honor the credits earned.

In its early years, the district's IB program stayed small. Although more than 90 percent of South Side's graduates went on to college, only 20 percent took an IB course. District Superintendent William H. Johnson attributed the low enrollment to the district's tracking system.

To prepare more students for the IB program, the district moved from a tracking system with

three or more tiers to a two-track system that allowed any student to take honors classes in grades 9 and 10 and IB courses in grades 11 and 12 (Garrity, 2004). More students began to participate in the IB program. The graduating class of 1988 had nine IB diploma candidates, with five students earning the diploma. Ten years later, the class of 1998 had 49 diploma candidates, with 43 students achieving that goal. This was a definite improvement, but many students planning to attend college still didn't take IB classes.

Preparing All Students

Even though any student could enroll in IB courses in grades 11 and 12, students made decisions early in their schooling that effectively, if unintentionally, excluded them from the IB program. Many students—disproportionately black and Latino students—were not taking high-track mathematics and science classes in middle school and therefore were not prepared for IB courses. Eliminating the last vestiges of tracking at the middle school yielded higher achievement scores and set the stage for successful reform at the high school (Burris, Heubert, & Levin, 2006).

Building on this successful 9th grade reform, the high school's English and social studies teachers transformed the 10th grade English and social studies curriculums into pre-IB curriculums for heterogeneous classes. In 10th grade English classes, teachers used the IB "Commentary" (a detailed, coherent literary interpretation of a brief passage). Social studies teachers integrated the beginnings of the IB "Historical Investigation" (an annotated bibliography based on a student-generated research question). Writing portfolios and individual conferences became essential practices in English and social studies. Tenth grade English language arts support classes helped struggling students with the content all students were learning in English classes.

Beginning in the 2005 school year, almost all 10th graders were enrolled in a heterogeneously grouped course in advanced algebra, trigonometry, and precalculus typically taught only to 11th graders and accelerated 10th graders. Beginning in September 2006, South Side detracked its 10th grade chemistry classes.

As the high school detracked 9th and 10th grades, enrollment in 11th and 12th grade IB courses grew. Although the class of 2004 had already benefited from the earlier years of the detracking reform, the additional push had a clear payoff. Forty-five percent of students in the class of 2006, the first class to study a pre-IB curriculum in the 10th grade, were IB diploma candidates, compared with 35 percent in 2004. Only 13 percent of the school's 2004 black or Latino graduates were IB diploma candidates; this number nearly tripled to 38 percent for the class of 2006. And although not all students were willing to commit to the full IB program, by 2006, more than 70 percent were taking IB English and IB mathematics.

Encouraging Diversity

Detracking and open enrollment are not enough to create IB classes that reflect a school's socioeconomic and ethnic diversity. Cultural and institutional barriers can discourage minority students from taking high-level classes (Lucas, 1999; Yonezawa, Wells, & Serna, 2002). South Side High School's initial experiences with choice confirmed these findings; if South Side's IB

classes were to represent the diversity of the school, its educators had more work to do.

First, school leaders provided a safety net to encourage more students to take the risk of signing up for the rigorous IB classes. Students in IB classes who found the work too difficult could transfer to the less demanding Regents class any time during the year. Students who initially struggled knew that they had time to seek support and redouble their effort before deciding to leave the class. If students did leave the IB class, their grade was weighted by a factor of 1.1; the IB English grade of 70 would become a Regents English grade of 77. Students knew that their extra efforts in the IB classes would not go to waste if they transferred to Regents, and, in the end, few students chose to transfer.

Second, educators appealed to students' interests and strengths to bring underrepresented students into the IB program. When Latino students enrolled in IB Spanish, counselors encouraged them to take additional IB courses. When art teachers realized that many talented black students had not taken the prerequisite courses for IB Art, the department relaxed the prerequisite requirements. As the arts programs grew, students developed different pathways to the IB diploma, eventually enrolling in IB English, mathematics, history, and science to meet the diploma requirements.

As more students enrolled, the principal began to review class rosters during the summer to make sure that all classes included students with varying levels of prior achievement. Also, responding to minority students' discomfort at being the only black or Latino student in a class, administrators ensured that each class had multiple minority students. Thereafter, more minority students stayed in IB classes.

Finally, the IB coordinator began holding a 45-minute work session with every 10th grader. By working with the IB coordinator, many 10th graders realized that they could fulfill the IB diploma requirements simply by enrolling in the logical sequence of courses that they would have taken anyway. Students became much more likely to ask themselves, "Why *wouldn't* I do the full diploma?"

A Focus on Instruction

As students with lower prior achievement joined the classes, teachers worried that IB scores would go down. Expressing this concern, an IB physics teacher asked the principal early in the reform whether it would be better to teach so that high achievers could get 6s and 7s on the IB exam (7 is the maximum score) or so that all students could get 4s. Upon thinking about it, the principal encouraged the teacher to keep standards high, and they began thoughtfully discussing strategies to meet all students' needs, a discussion that soon expanded to include the entire faculty.

Teacher duties changed, giving teachers more time to focus on instructional responsibilities. Fewer teachers were assigned such duties as following up on absent students to ensure that they weren't cutting class. Instead, more teachers were given resource duty so that they could provide extra help to students during the day.

The IB coordinator scheduled regular IB teacher meetings during which teachers shared

strategies to use in their classrooms, such as breaking long-term assignments into component parts. The IB teachers also worked together to coordinate assignment deadlines, which enabled students to better manage their workloads. Materials changed, too—now focusing on depth over breadth. For example, instead of requiring students to read numerous supplementary texts in their entirety for IB History, teachers identified and assigned the most crucial excerpts from the texts. The scaffolding materials and rubrics that teachers created helped students produce high-quality work.

To help teachers implement instructional changes, two teachers and the principal spent time during summer 2005 developing a 20-hour course in differentiating instruction. In 2005–06, all faculty members were trained in these skills in small groups that met after school. In 2006–07, teachers again worked in groups of two to four to develop differentiated lessons and teach classes using new techniques as their colleagues watched and later critiqued.

Student Achievement

Figure 1 shows that, despite dramatic increases in the number of students taking these courses, mean IB scores have remained stable and similar to the mean scores around the world. But did including lower achievers hold the high achievers back?

FIGURE 1. Mean scores of South Side students compared with world mean scores

Year of Graduation	IB English			IB Math Studies		
	Number of test takers	School mean score	World mean score	Number of test takers	School mean score	World mean score
1998	66	4.58	4.83	26	4.58	4.95
1999	72	5.14	4.81	29	4.57	4.76
2000	91	4.46	4.82	47	4.88	4.65
2001	83	4.54	5.04	31	4.46	4.52
2002	123	4.57	4.83	53	5.15	4.59

2003	131	4.56	4.92	63	4.84	4.73
2004	140	4.67	4.87	152	4.74	4.58
2005	152	4.42	4.85	99	4.69	4.72
2006	185	4.54	4.80	152	4.74	4.52

We examined the IB English and IB Math Studies scores of South Side students with the highest scores on the verbal and mathematics sections of the PSAT. Remarkably, these students' mean scores on the IB exam increased as the classes became more heterogeneous. The average IB English score for the top 20 percent increased from 5.17 to 5.43, while the average score for the top 10 percent increased from 5.44 to 5.92. Likewise, the average IB Math Studies score for the top 20 percent increased from 4.96 to 5.50, and for the top 10 percent, from 5.00 to 6.33. World mean scores were stable during this time, indicating that the difficulty level of the IB tests did not change.

Do IB Classes Matter?

Perhaps the most important question is whether rigorous IB courses increase students' success in college. To answer that question, we conducted a telephone survey of the class of 2002, a group of students who began graduating with their college degrees in May 2006. This class was also the first in which all students took accelerated mathematics and in which more than 40 percent of the class took at least one IB course. Of the 86 percent who were contacted, 90 percent of students who took IB English and IB math graduated from college in four years, compared with 34 percent of those who did not take either course.

But if the students taking IB courses were higher achievers, might their higher college-completion rate be due to their aptitude, rather than the preparation they received in IB classes? To determine whether this was the case, we created two groups of graduates with matching PSAT scores. The 25 graduates in one group took IB classes, and those in the other group did not. Among these graduates, taking IB English and IB math was strongly associated with completing college in four years: 88 percent of the students who took IB English and mathematics graduated college in four years, while only 32 percent of those who did take either IB course finished in four years. Although other factors, such as student motivation, could contribute to this gap, the results are dramatic.

Achieving the Goal

In 2005, governors from across the United State met at the National Education Summit on High Schools. Their concluding report, *An Action Agenda for Improving America's High Schools*, states that "all students need to learn the rigorous content usually reserved for college-bound

students, particularly in math and English" (Conklin & Curran, 2005, p. 11). South Side High School's success demonstrates the feasibility of this goal.

South Side's underlying strategies—heterogeneous grouping, accelerated curriculum, support for teachers and struggling learners, and high expectations for all students—are likely to benefit students in any schools that offer rigorous classes to prepare students for college. All students deserve to study the best curriculum available, and all students can succeed with the proper teaching and support.

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