Journal of Advanced Academics
jaa
Volume 18 ✣ Number 2 ✣ Winter 2007 ✣ pp. 172–215

Advanced Placement and International Baccalaureate Programs:

Optimal Learning Environments for Talented Minorities?

Robin M. Kyburg

Holly Hertberg-Davis

Carolyn M. Callahan
University of Virginia

Advanced Placement (AP) and International Baccalaureate (IB) programs are increasingly being used as the pathway to college. It is widely believed that these programs open the doors of higher education to the diverse students found in contemporary classrooms. To date, however, there is scant research into how young people—in particular, those from poor, urban areas—fare in these programs. This article presents a study that examined how schools, teachers, and students in high-poverty urban environments responded to offerings of the AP and IB programs, and the extent to which optimal learning environments were created for highly able learners from multicultural backgrounds. Using a subset of data from a larger study that investigated the more general question of whether AP and IB programs meet the needs of gifted learners, this investigation narrowed the focus to

Summary

The racial, ethnic, linguistic, and economic diversity within urban areas necessitates the creation of scholastic environments that are responsive to the varying academic and social needs of the student population. This qualitative study investigates ways in which teacher and administrator behavior and the school environment contribute to the successes or frustrations of minority students in AP and IB courses. Classroom observations and interviews with 9 administrators, 4 counselors, 43 teachers, and 75 students in 3 urban high schools revealed that consistent, broad-based support scaffolds learning experiences for students, enabling them to experience success and to develop confidence in taking on new challenges in college.

Two key factors seemed to be integral to creating environments that nurture the growth of academic talent among students of diverse backgrounds: (a) a pervasive and consistent belief that these students could succeed, which resulted in instructional and group support; and (b) scaffolding to support and challenge able students (e.g., extracurricular help, lunchtime discussion forums, subsidized college visits). Teachers found ways to flexibly tailor their support and expectations to individual student needs in terms of product and performance expectations and the kind of help that was provided.

Kyburg, R. M., Hertberg-Davis, H., & Callahan, C. M. (2007). Advanced Placement and International Baccalaureate programs: Optimal learning environments for talented minorities? *Journal of Advanced Academics, 18*, 172–215.

talented minority students in three urban high schools in areas low in income and high in ethnic and cultural diversity.

This research comes at a critical juncture as three disparate trends converge: (a) Significant demographic shifts in metropolitan areas have resulted in "minority-majority" schools where student bodies have become multiracial, multiethnic, multilingual, and multicultural (Frey & Fielding, 1995; Nationalatlas.gov, 2005; U.S. Department of Education, National Center for Education Statistics, 2004); (b) the number of AP and IB programs is rapidly increasing and have in some cases even been used as indicators of school quality with corresponding efforts to increase minority participation in AP and IB classes (College Board, 1999, 2001, 2005a, 2006a, 2006c; Mathews, 2005); and (c) federal and state government initiatives, such as No Child Left Behind, have commanded public attention and directed funding toward increasing minority participation in programs such as AP and IB as means for closing the achievement gap and developing America's talent (e.g., Massachusetts State Department of Education, 2002; U.S. Department of Education Press Releases, 1998, 2001, 2003, 2004, 2005, 2006).

An examination of how urban schools, teachers, and students are negotiating these new environments is warranted. With so much potentially at stake, how do schools ensure that learners who enter such programs less academically prepared and with fewer support networks nevertheless enjoy an equal opportunity to succeed? How successful are AP and IB programs in educating students from a variety of backgrounds? To what degree do they create a milieu in which students face failure and disillusionment with the learning process?

Two research questions framed this study:

1. Do teachers and the environments created by AP and IB classrooms in high-poverty urban schools provide appropriate educational opportunities for gifted students from racially, ethnically, and socioeconomically diverse backgrounds, and gifted English language learners?
2. What modifications to curriculum, instruction, and scaffolding in high-poverty urban schools allow students

to experience a sense of success and develop a readiness to take on new challenges in college?

The remainder of this paper elucidates the context of these questions; describes how people active in AP courses and the IB program in urban schools experience those programs; interprets those findings against a backdrop of current recommended practice for developing high-end learning; and finally, suggests areas that warrant further investigation.

Context of Talent Development for Urban Students

Changing Demographics

American cities continue to undergo dramatic demographic shifts. Growing diversity, coupled with an increasing number of immigrants, has exerted pressures on urban schools. These changes, set against an unfortunate historic backdrop of racial and income polarization, have had a significant impact on learning opportunities for students in urban schools (Frey & Fielding, 1995). Although educators have endeavored to keep abreast with the differing needs of their increasingly diverse students, a report recently released by the Metropolitan Center for Urban Education (2005) suggested that this quest has been largely unsuccessful, concluding that ". . . our nation's K–12 education system remains unequal and increasingly segregated by race and income" (p. 6). There are pronounced differences in educational opportunities for rich versus poor students; many minority children must attend classes taught by underqualified teachers in classrooms that lack access to adequate resources (Oakes, 2004). Addressing these inequalities is particularly important given the critical link between quality instruction and academic achievement (Darling-Hammond, 2004).

Growth of AP and IB

The changes seen in metropolitan areas in the United States have coincided with a dramatic growth in AP courses and the IB program offerings and student enrollment. First conceived as a response to an innovative program introduced by the Ford Foundation that provided college scholarships to highly able secondary school sophomores, AP courses were introduced in the mid-1950s as a means to retain bright students in their home high schools (Callahan, 2003). In the 1955–1956 school year, 1,229 seniors from 104 participating schools took 2,199 exams. At that time, 130 colleges were listed as accepting AP credit. Intended initially for 5% of high school seniors, AP courses soon became available to wider groups of students (often 10–20% in many schools), to juniors as course options increased, and eventually to even younger students (Rothschild, 1995). By May 2006, more than 2.3 million exams were administered to more than 1.3 million students, an increase in total of approximately 105,066% (College Board, 2006b). No national data are available on the number of students taking part in AP coursework at some point in their high school career.

The IB, in contrast to the AP's collection of individual courses, is a pre-university program of study. Originating in Europe, its goal was to standardize secondary programs across international school settings producing a set of examinations and qualifications that could be taken, and would be recognized, in any part of the world. Unlike AP students, IB students are expected to complete a course of study following specific requirements that include study in both the humanities and sciences. This more holistic approach to secondary studies includes an emphasis on more metacognitive aspects of learning such as "learning how to learn, how to analyze, and how to reach considered conclusions about people, their languages and literature, their ways in society, and the scientific forces of the environment" (International Baccalaureate North America, 1986, p. 1).

Although the Advanced Placement courses stand as individual educational pursuits, the aim of the IB is to transcend

achievement of particular content-related goals in specific subject areas to achieve the more comprehensive goal of developing "to their fullest potential the powers of each individual to understand, to modify and to enjoy his or her environment, both inner and outer, in its physical, social, oral, aesthetic, and spiritual aspects" (International Baccalaureate Organization, 2004, p. 4). To ensure program integrity, a school must be approved through formal application and a review process to participate in the IB program. The school must offer all of the courses in the program that lead to the diploma. The IB program is fashioned after the European model of secondary studies, whereby high school spans an additional year and is typically followed by just 3 years of undergraduate study at the university level.

As with AP, participation in the IB program has increased dramatically since its inception. IB was first available in 1971 in only 20 schools. Currently, the IB Diploma Program is available in 520 United States high schools, an increase of approximately 2,500% (International Baccalaureate Organization, 2007). As a way of providing context, the total number of public high schools in the United States in the 2003–2004 school year was reported to be roughly 18,000 (Hoffman & Sable, 2006). In May 2004, nearly 38,000 candidates took more than 100,000 exams (International Baccalaureate North America, 2004, p. 2).

Factors Contributing to Growth—Perceived Benefits

Readily Available Curricula. The growth of the AP and IB programs has been attributed to a number of factors. First, both alternatives offer readily available curricula. Second, the curricular frameworks are accompanied by opportunities for teacher training in implementation. Often, high schools do not have a coordinator to address the needs of college-bound students or they rely upon just one person to advocate for all talented students at the secondary level. When personnel and resources are scarce, prepackaged curricula for advanced coursework such as AP and IB programs are attractive frameworks. The appeal of AP and IB classes is further enhanced by the lack of other cur-

ricular and programming options offering equally high levels of challenge for able high school students. AP and IB programs have become increasingly endorsed by federal and state education policy and are often highly recommended by state officials and school leaders. For example, recommendations in the journals for secondary school principals encourage the development of AP and IB programs for highly able secondary learners (Cox, 1983; Cox & Daniel, 1985; Daniel & Cox, 1992; Marnholtz, 1994; Pyryt, Masharov, & Feng, 1993).

Less Time/Less Cost in College. One of the oft-cited potential benefits of completing AP courses and the IB program is the opportunity to complete the bachelor's degree in shorter time, thus saving money on tuition. Eric Smith, former Superintendent of Schools for Arundel County, MD, asserted, "Many of these students will enter college as sophomores and have enough money saved from eliminating their freshman requirements to allow them to plan for graduate studies" (College Entrance Examination Board and Educational Testing Service, 1999, p. 26). Although there are many anecdotal reports of students who have managed to save a year of college tuition through this route, no research base exists to verify the percentage of AP or IB students who actually complete college in less than the traditional 4 years. Further, there currently appears to be a movement among certain elite universities to revise their AP credit policies with respect to allowing undergraduates to be exempt from certain introductory courses (Lichten, 2007).

Better Prepared for College. Another perceived benefit of taking college-level courses in high school is the belief that one will develop study skills necessary to successfully complete college, especially for students who might become the first family member to attend college or among peer groups who do not consider education a promising option for the future (Paige & Marcus, 2004). As Paige and Marcus explained,

> Many state systems have . . . embarked on integrating and expanding advanced courses into curricular reform

> efforts, based on the common-sense observation that students who have taken challenging courses are going to be better prepared for college than those who have not. (p. 5)

Research to support this common-sense notion is, as yet, scant. Nevertheless, the National Center for Educational Accountability reported that, based on data from Texas schools, even students who scored less than 3 on AP examinations in high school were twice as likely to graduate from college in 5 years as students who had not taken an AP course (Mathews, 2004). These results confirmed earlier findings by Adelman (1999) of a relationship between AP course taking and bachelor's degree completion. Other researchers, however, have questioned the link between taking AP courses and preparedness for college. In a study based on a sample of 81,445 freshmen entering the University of California between 1998 and 2001, Geiser and Santelices (2004) found that "controlling for other academic and socioeconomic factors, the number of AP and honors courses taken in high school bears little or no relationship to students' later performance in college" (p. 1). Although exploring this controversy in depth is beyond the scope of this article, the reader is encouraged to read Camara and Michaelides' (2005) review of the important reports on this issue, as well as descriptions of other investigations in Texas as they become publicly available (e.g., Keng & Dodd [in press] and Hargrove, Godin, & Dodd [in press] as described in College Board, 2007).

Unintended Consequences?

Measures of Student and School Worth. The more the Federal government has exerted pressure to increase the availability of AP courses in secondary schools, the more AP exams results, and to a lesser extent, IB results, have become a measure of a school's or a student's worth. *Washington Post* columnist Jay Mathews devised the Challenge Index (the number of a specific school's AP tests given divided by the number of its graduates) as a method of rat-

ing high schools: The higher the number, the better the assumed quality of the school (Mathews, 2003).

Advantages in the College Admissions Process. As College Board (2005a) promotional material suggests, it is assumed that college admissions officials use participation in AP and IB as indication of potential to succeed at the college level. As a result, AP courses and the IB program have come to be regarded as a proxy for accomplishment at the high school level. As students, teachers, and policymakers increasingly accept AP courses (and the IB) as indicators of school and student quality, programming options for high-potential secondary learners have become synonymous with the offerings of the College Board. This trend has resulted in a reduction in the number of alternative options for meeting the academic needs of talented students at the secondary level. These pressures, combined with Federal government assertions that AP courses can help reduce the achievement gap, suggest an urgent need to examine whether students with high potential from diverse backgrounds are, in fact, well served by these AP and IB programs.

Changing Education Funding

Increased Diversity

The increasing diversity present in the U.S. population has drawn growing attention from the federal government. In response, $3 million in fiscal year 1998 and $4 million in fiscal year 1999 were allocated to increase minority participation in AP courses and to cover costs of AP examination fees for low-income students. In announcing the availability of grants to states to pay for test fees, then Secretary of Education Riley stated, "I want everyone to know that college is possible. The funds will be available if you do the work and prepare for college level courses" (U.S. Department of Education Press Releases, 1998). The critical importance of this access route to college was

later endorsed by the subsequent Secretary of Education, Rod Paige, when he proclaimed, "College entrance exams reveal that young people who take challenging classes, such as Advanced Placement courses, perform better than their peers regardless of their family or financial background" (U.S. Department of Education Press Releases, 2001, p. 1).

Continued Federal Impact

Federal initiatives continue to play an increasingly important role in the adoption of AP courses as a model of rigorous curriculum for high school learners. In 2002, Secretary Paige established the AP Incentives Program as a component of the No Child Left Behind Act (NCLB; 2001) to make competitive grant awards to promising programs that increase the number of students who take and succeed in advanced courses. Current Secretary of Education Margaret Spellings applauded the 2005 AP results, declaring, "I am especially encouraged to see more minority students taking advantage of these courses" (U.S. Department of Education Press Releases, 2005, p. 1). The current Bush Administration's belief that student achievement can be accelerated via AP and IB has been confirmed with President Bush's proposal that $52 million in the FY 2006 budget be allocated to AP and IB programs as authorized in the No Child Left Behind Act (White House Press Release, 2005, p. 1).

Ramifications

Increased Minority Participation in AP. In the 5-year period between 1998–2002, minority student participation in AP classes increased by 77% and low-income student participation increased by 110%, both well ahead of the 48% increase in overall participation in AP classes (Casement, 2003). In 1997, the number of exams taken by African American students totaled 34,514 (College Board, 1997). By 2006, this number increased to 120,684, an increase of approximately 250% (College Board, 2006b). What remains unknown is the extent teachers modified

these courses, if at all, to accommodate the different learning styles or cultural backgrounds of these new student populations with the goal of increasing success rates.

Minorities Remain Underrepresented Among the Successful. Dramatic increases in minority participation, however, have not been matched by dramatic increases in successful performance: 72% of the AP exams taken by African American students in 2006, for example, were assigned a score less than 3 (College Board, 2006b) compared to 64% in 1997 (College Board, 1997). The College Board suggests scores ranging from 3 to 5 mean that a student is *qualified* to *extremely well qualified* in terms of a student's abilities and achievements (College Board, 2005b). In contrast, just 36% of White students were assigned scores less than 3 in 2006, up from just 1% in 1997 (College Board, 1997, 2006b). The increases in the number of students who are assigned scores less than 3 on AP exams seen between 1997 and 2006 confirm a prediction made by Andrews (2003); namely, that as more students take AP courses, the passing rates typically decrease. It appears that just getting minority students into advanced level classes is not enough to enable them to thrive (Lichten, 2007). The College Board (2007) cautions, ". . . poor AP Exam results indicate that often these teachers and [traditionally underrepresented] students are not receiving adequate preparation for the rigors of an AP course" (p. 10). Such results raise the question: Are the curricula and the instructional strategies of AP and IB typically flexible enough to accommodate the differing readiness levels, cultural backgrounds, learning styles, and aptitudes of all talented students, and do they adequately prepare the students for the assessments and subsequent college work?

In conclusion, the history of AP courses and the IB program makes clear that both programs have experienced astonishing growth, particularly in the past 5 years, as more and more state governments and the federal government have endorsed these offerings as a means of raising standards and providing

rigorous curricula. For a more in-depth account, see Callahan (2003). Further, the ubiquity of these programs seems to have rendered them the gold standard by which the accomplishments of students, teachers, and schools are measured. In the same 5-year period (1998–2002) that the number of AP students in general rose by 48%, underrepresented minorities and low-income students' participation increased even more, by 77% and 101% respectively. Commensurate statistics on underrepresented minority students in IB were not available. Because little focus was directed at incorporating the different needs of typically underserved students when these programs were originally designed, an investigation of the degree to which the courses adequately address the characteristics and learning needs of these students is warranted.

High-Ability Minority Students in Urban Areas

Unique Educational Needs

That high-ability minority students have distinct cognitive, educational, and social and emotional developmental needs has been the subject of much research, particularly in the last decade (e.g., Baldwin, 2004; Becker & Luthar, 2002; Bonner, 2001; Burton, Whitman, Yepes-Baraya, Cline, & Kim, 2002; Callahan, 2005; Council for Exceptional Children, 2003; Davis et al., 2004; Davis-Bond, 2004; Ford, Moore, & Milner, 2005; Gándara, 2006; Geiser & Caspary, 2005; Gordon & Bridglall, 2005; Hébert & Reis, 1999; Klopfenstein, 2003; Ladson-Billings, 2000; Ndura, Robinson, & Ochs, 2003; Reis & Diaz, 1999; Reis & McCoach, 2002; Worrell, 2000). Although nonmainstream students face many of the same challenges in the U.S. schools regardless of ethnicity and cultures of origin, Ogbu (1994) made the distinction between "voluntary" and "involuntary" immigrant populations, suggesting that each of these groups is confronted by certain unique obstacles. African Americans, for example, whose ances-

tors were brought to this country against their will, may deliberately retain distinguishing characteristics of their own ethnicity as symbols of resistance to domination by a mainstream culture regarded as alien. This opposition may manifest itself in a refusal to conform to mainstream educational and cultural dictates for fear of being seen as "Acting White" (see e.g., Ford & Harris, 1999; Fordham & Ogbu, 1986; Ogbu, 2003, 2004). In contrast, Ogbu theorized that voluntary immigrant populations, although a very heterogeneous group comprising individuals from countries located in areas such as East Asia, Southeast Asia, the Philippines and the Pacific Islands, and South Asia, are more likely to strive to adopt the pathways to success of their new cultures without losing their own sense of identity. Even though Latinos can be considered a voluntary immigrant population who occupy an increasingly large proportion of the population of the United States, they nevertheless face significant barriers to participation in mainstream American culture, and their school success rates do not mirror those of other voluntary immigrant populations. Puerto Ricans, for example, have the highest rate of poverty and unemployment of any group in the United States (Diaz, 1998); Latinos have the highest dropout rate (Hébert, 1996) and are considered by some to be the most segregated of all ethnic groups in the United States, not just in terms of race and ethnicity, but also poverty (Nieto, 2002).

Similar Barriers to Achievement

Although individual groups of minority students each face unique challenges, certain common threats to obtaining appropriately tailored and enriched educational services can be identified.

Poverty. Given the broad-spectrum stresses of poverty characteristic of urban environments, minority populations may face barriers accessing enriching educational experiences (Borland & Wright, 1994). In addition, urban schools are often in bad repair, lack resources due to reduced per-capita spending bud-

gets when compared to their wealthier suburban counterparts, and they employ teachers who are frequently less qualified or are otherwise ill-prepared to tackle the educational and social demands of their multiethnic student populations (Darling-Hammond, 2004; Kozol, 1991; Oakes, 2004). The importance of addressing the school funding inequalities is perhaps most notably addressed in the case of *Williams v. State of California*.[1] As a result of this landmark case brought by nearly 100 students who alleged they were denied equal access to quality education, the California Department of Education was ordered to allocate funding to provide "all students with equal access to instructional materials, safe school facilities and quality teachers" (California Department of Education, 2004, p. 1). Access to challenging curricula and appropriate instruction is a key element to academic preparation for higher education. However, minority and low-income students in urban areas also face the additional challenge of a lack of familiarity with the mechanics of getting admitted into college. These students may be unfamiliar with the prerequisites that allow one to enroll in top-level courses in high school, when to take SAT exams, and how to apply for financial aid (Arellano & Padilla, 1996; Gándara, 2006; Hébert, 1996; Worrell, Szarko, & Gabelko, 2001).

Absence of Cultural Capital. Minority students, particularly those whose families have only recently arrived in the United States or who come from low socioeconomic backgrounds, are often the first in their families to have a chance to go to college, and thus may face additional challenges. The concepts of *cultural capital* or *social capital* have long histories in the research literature. DiMaggio (1982), for example, used the term cultural capital to refer to the arts and symbols of wealth in society. The concept of social capital was developed by Coleman (1988) to distinguish the impact of familial relationships from other components that influence a child's intellectual growth. Borrowing from these long histories, we use this term to refer more specifically to the kinds of knowledge students need to proceed along the path to higher education. Arellano and Padilla (1996), for

example, examined factors contributing to academic success of 30 undergraduate Latino students enrolled in a highly selective university. They found that students who came from families where neither parent had completed college were more likely to lack the "cultural capital," making them more vulnerable to the negative consequences of educational risk. Cultural capital was defined in this study as educational background, resources, and information networks, the types of "how-to" prerequisite knowledge students need in order to navigate the academic pathways to higher education. This challenge may be particularly acute for Latino students who perceive that in order to succeed in school they must relinquish their home culture and language (Gándara, 1995; Gibson, 1995).

A number of other researchers have suggested the possibility that certain minorities may be at a substantial disadvantage in the schooling process because they have not yet become familiar with many functional and navigational skills that others take for granted (Abi-Nader, 1990; Ford & Harris, 1999; Kao, 2000; Worrell et al., 2001). According to Worrell et al., for example, children who have grown up in families with a history of educational success have already learned many lessons such as how to access resources, how to use a library, or how to apply to college. School personnel assume these lessons are already known, and thus make no provision to teach them. "Educated parents not only pass down economic resources to their children, they pass down expectations, habits, knowledge and cognitive abilities" (Brooks, 2005, p. 2). Ford (1994) referred to learning such skills, including study and time management, as "pre-placement educational experiences" (p. 11). In a broad analysis of high-achieving Latino students, Gándara (2006) affirmed that Latino students not only begin school far behind their non-Latino peers, but also are more likely to be assigned to less academically rigorous classes. Other contributing factors that contributed to students' academic success included having parents who placed a high value on education, who set high expectations for achievement, and who instilled a sense that the child's ability was worth developing.

Developing talent to its fullest often requires access to higher education. An important component of this pathway to college includes highly competitive standardized exams such as the Scholastic Aptitude Test (SAT). In a qualitative study of urban African American and Latino high school youth (*N* = 227), Walpole et al. (2005) found that the participants perceived themselves at a disadvantage in comparison to their White and Asian peers with respect to these key elements of the college admissions process. "Many of these college-bound students . . . lacked significant specific knowledge regarding the tests they were required to take" (p. 333), forcing them to rely on ill-prepared and generally unhelpful high school personnel.

Although theories abound regarding success of minority students and some research has explored the educational needs of minority students, there remains a gap in the literature regarding if and how these needs are compatible with the demands of set curricula within the AP or IB classroom. Because underserved poor, minority students tend to be found in urban areas, we have selected three large, minority-majority secondary schools from a data set for a larger study regarding the appropriateness of *fit* of AP and IB programs for gifted learners (Hertberg-Davis, Callahan, & Kyburg, 2006). The present investigation examined whether the environment created in these classrooms and by these teachers provided appropriate opportunities for able minority learners. Specifically, we sought evidence of modifications to curriculum, instruction, and scaffolding that allowed students to experience a sense of success and developed a readiness to take on new challenges in higher education.

Methodology

Data collection and analysis followed the Grounded Theory technique described by Glaser and Strauss (1967) and Strauss and Corbin (1998). Data collection and data analysis were thus iterative; as preliminary themes emerged, more data were collected to provide confirming or disconfirming evidence. Through

a process of rigorous coding of the resulting data, a tentative theory was developed. Finally, further data were then collected to confirm the grounded theory.

Sampling Framework

Three urban high schools from two mid-Atlantic states, one with state mandates for gifted services and one without such a mandate, were selected from a larger study involving 23 high schools from 7 states. Each of the chosen schools was representative of a large urban school district, the majority of each school's student population was composed of minority students, and each school had a percentage of students eligible for free or reduced-price lunch that was higher than that state's average[2] (see Table 1). Two schools offered only AP; the third school offered both AP courses and the IB program. Forty-three teachers, 75 students, 9 administrators, and 4 counselors from these schools participated in focus group or individual interviews and observations. One district-level gifted coordinator was interviewed. Participation was predominantly based on scheduling availability. A contact person at each site arranged the interview and observation schedules. This person was instructed to select a representative sample of AP (and/or IB) teachers, students, and classrooms. Apart from the instructions expressed to the contact person at each school to select participants reflecting the diversity in AP and/or IB offerings, it is not possible to assess definitively the degree to which these instructions were followed, although the contact persons assured the data collectors that they had attempted to faithfully carry out the researchers' instructions. Participation was voluntary and the number of students who may have refused participation is not known, although there was no reason to believe that a significant number of students refused to participate.

Data Collection

Researchers visited each school at least twice during the course of an academic year. These visits were arranged to cor-

Table 1

Comparison of School Demographic Statistics

	Clayton		Sageville		Riverside	
Grades	9–12		9–12		9–12	
Enrollment	≈ 1,200		≈ 2,000		≈ 2,000	
Students per Teacher	9		11		19	
School Type	Public		Public		Public	
Student Ethnicity	This School	State Average	This School	State Average	This School	State Average
African American	**83%**	26%	**24%**	26%	**38%**	36%
American Indian	0%	< 1%	< 1%	< 1%	< 1%	< 1%
Asian	3%	3%	11%	3%	**21%**	4%
Hispanic	1%	4%	**48%**	4%	**18%**	4%
White	13%	66%	17%	66%	23%	56%
% Students Receiving Free and Reduced Lunch	**55%**	23%	**43%**	23%	**21%**	19%

respond with the first third of the school year, the second third of the school year, and in one case, after the AP exams were administered. The staggered visits were designed to increase the credibility in the findings by persistently observing the sites over time, to allow for probing of emerging themes, and to determine a pattern of curricular, instructional, and assessment practices in relation to the spring administration of AP and IB exams.

During each visit, researchers observed participating teachers' classrooms for at least one complete class period, approximately 90 minutes. Teachers were notified in advance of the visits but were not asked to modify their plans for the observers. The researchers used semi-structured protocols to guide the recording of notes during these observations. General areas of emphasis included types of instructional approaches observed, teacher-student interactions, instructional resources used, and degree of challenge/rigor evidenced. These data were recorded as researchers' field notes. Post-visit discussions provided opportunities to begin analyzing the data. As themes emerged, researchers sought confirming or disconfirming evidence of these themes in subsequent observations. Whenever possible, verbatim quotes from teachers/students were recorded to enhance the validity of the findings and to reduce bias from the observer. Other strategies to increase the validity of findings included triangulation of data sources, the use of multiple data collectors, and the use of multiple data analysts.

Interviews with participating teachers occurred directly preceding or directly after classroom observations. Teachers were interviewed in focus groups of approximately three to five members when class schedules did not permit individual interviews. Student interviews were conducted mainly through small focus groups (composed of three to five students per session). Students who were eligible but not participating in AP and/or IB programs were usually interviewed individually to increase the opportunity to uncover their unique experiences, to identify reasons why they chose not to participate or ceased to participate, and, in the case of those who had once been participants, to solicit their unique perceptions as "drop-outs" from the classes. Administrators and

coordinators were interviewed individually, sometimes on multiple occasions. In each case, semi-structured interview protocols guided the interview process and were enhanced by further questioning designed to elicit information-rich responses or to follow up on questions from the classroom observations or themes emerging during data analysis. Documents such as teachers' planning documents, instructional materials used in class, student artifacts, and district-specific program literature were collected and analyzed. Researchers wrote detailed field notes from each classroom observation and after each individual or focus group interview. Interviews were audiotaped (when possible) and later transcribed verbatim.

Data Analysis

A team of researchers then analyzed the data in three distinct phases. In the first phase, two researchers analyzed the first portion of data using a variation of the Scriven (1972) team approach to evaluation. Aimed at reducing the occurrence of researcher bias, this approach employs two analysts. One researcher examined the data using a deductive method, investigating the study's research questions by comparing the data's themes to those questions. A second researcher followed an inductive method, seeking prominent themes, patterns, and concepts from within the data. Upon completion of the two analyses, the two researchers compared and contrasted their findings. During year 2, additional data were collected and analyzed for confirming and disconfirming evidence of emerging themes and to resolve discrepancies between data analysts' interpretations.

In the second phase of data analysis, a second set of researchers compared the additional data to the initial findings. Where necessary, the preliminary findings were adjusted to accommodate new evidence and themes. A tentative theory was developed and tested against data from further data collection. Finally, in the third phase of data analysis, the tentative theory was tested

against data from an additional visit to the site. From this phase of data analysis, a grounded theory was developed.

Findings

Data analysis yielded findings regarding the nature of the environment in AP and IB classrooms in high-poverty urban schools and the extent to which appropriate educational opportunities were provided for able students from racially, ethnically, and socioeconomically diverse backgrounds, and English language learners. These findings revealed that the classroom and school experiences for students result from a complex web of interdependent relationships and factors. These interactions dynamically influenced one another and the environment that students and educators encounter on a daily basis. They occurred at four general levels: (a) the superintendent/district level, (b) the coordinator/central office administrative level, (c) the building administrator level, and (d) the teacher-student classroom level (see Figure 1). The interactions among these levels are dynamic in the sense that each exerts an influence on the others and vice versa. Although intricately interwoven, key factors emerged from the data that appeared to have a direct impact on the nature and appropriateness of the educational environments talented minority students encountered in the schools we investigated. Levels one, two, and three (the outer three rings in the diagram) set the stage for the interactions that transpired in the core of the illustration, between teacher and student. As such, comparisons among the three chosen schools at these levels precede an analysis of the three schools with respect to modifications in curriculum, instruction, and scaffolding present at the innermost core of the interactions.

The Superintendent / Community Level

Two of the schools, Sageville and Riverside[3], were set in locations that have undergone major demographic shifts in

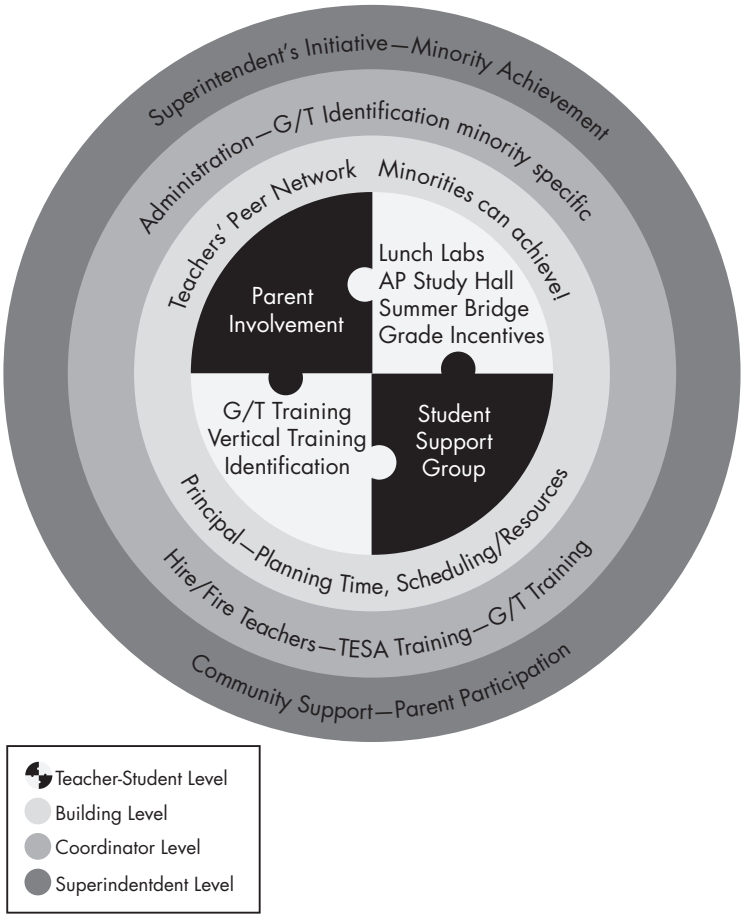

Figure 1. Interweaving factors that support minority students in advanced classes.

This model represents the interplaying factors contributing to improvement in increasing minority student participation in Advanced Placement classes. The innermost core of puzzle pieces depicts four major components of the interaction among teachers and students. Each is important, although none is sufficient in and of itself to account for increased minority involvement and success in rigorous, advanced-level classes. Rather, the pieces interweave dynamically as they establish a base of support both for teachers and students. Similarly, the teacher-student level of interaction occurs within a building environment, where other staff and the principal espouse the philosophy that minority students can achieve provided they have access to attentive support when needed. Similarly, the efficacy of building-level support and teacher-student scaffolding is only possible within the context of a greater administrative structure that endorses initiatives compatible with the core mission of meeting the academic and socioemotional needs of talented students, with special attention focused on identifying and appropriately serving talented minority students. Finally, the overall goal of enabling minority students to experience academic success and develop confidence to take on further challenges would falter were it not for the broad-based, longstanding support within the school community to adopt the superintendent's minority achievement initiative.

recent years. In the last 7 years, for example, the percentages of Caucasians, Asians, and African Americans in Sageville's student population have decreased, whereas the percentage of Latinos has increased by nearly 30%. Similarly, 20 years ago Riverside's student populations was 90% Caucasian; now only 24% of its student body is Caucasian. Currently, 37% of the student population at Riverside is African American, 21% is Asian American, and 18% is Latino. Clayton, in contrast, has been and continues to be an historically African American school. See Table 1 for a complete breakdown of the ethnic compositions of each school.

These demographic shifts had an impact on the types of initiatives spearheaded at the superintendent level. Sageville's superintendent, for example, launched a strategic plan to close the achievement gap. "We're going to raise achievement for all" (district gifted coordinator interview, April 30, 2004). He charged each school in the district with the task of setting up study groups to read and discuss current pertinent literature, to analyze achievement data in their setting, and to brainstorm proposals to increase achievement in general. This philosophical beacon acted as a directive for the expenditures and programs down to the classroom level. Members of the community, too, supplied financial support for programs to support students. There was a Citizen Advisory committee, for example, that one administrator characterized as another element in the web of components that helped to promote the superintendent's minority achievement initiative: "We're very responsive to our parent community . . . it's called the Sageville Way . . . our Citizens Advisory Committee is the most powerful committee in the school system" (district gifted coordinator interview, April 30, 2004).

In Riverside High School, the student population comprised students from 86 different nationalities. Riverside had responded to its changing demographics by choosing the theme of "Information Technology in a Global Society" as its leitmotiv, allowing students to focus on one or more of the theme areas: Information Technology, Global Society, and the International Baccalaureate Diploma Program. No evidence of a community-based effort to support minority achievement at the superinten-

dent or community levels was available from data collected from the third school.

Coordinator/Administrator Level

In Sageville, the philosophical orientation emphasizing minority achievement articulated at the superintendent level filtered down and was reflected at the coordinator/administrative level and in the actual implementation of minority achievement policies. Specifically, the gifted and talented coordinator had promoted an identification process based on multiple criteria, including available test information, student products and/or performance, academic achievement, teacher judgment of learning and behavioral characteristics, and parent/community judgment of learning characteristics and potential. Regular workshops and training in gifted and talented identification and instructional strategies were provided for gifted resource and classroom teachers; participation in these workshops was a condition of employment. In addition, the gifted coordinator for the district had advocated for the allocation of funds to support Teachers' Expectations for Student Achievement (TESA) training. The district coordinator for gifted services described what TESA entailed:

> It's [professional development regarding] strategies that you can use to really make a difference in students' lives; it talks about making a connection with kids. It's everything from wait time, the basic "providing wait time," to physical contact with kids. . . . So they go and they watch and they observe and they have checklists and then they discuss with each other, "You know, you really weren't as open with that kid and that kid" or "You really didn't provide wait time; you asked the question and then you just kept going!" or "You answered it before anyone could ask it"; really telling them about how, with minority students, how important all these strategies are. (district gifted coordinator interview, April 30, 2004)

This district coordinator's efforts were rewarded with a county commitment to provide TESA training to about 300 teachers a year. The impact of this minority achievement orientation was not simply limited to the sorts of mandatory professional development experiences that were made available to teachers; it also extended to decisions about whom to employ. The district gifted coordinator described the process of a recent hiring decision:

> Even though she has 13 years of gifted teaching experience and all that, my recommendation is that we're not going to hire her. Not going to hire her! Yet, the one from yesterday had a master's in gifted that she got in '92 and has never used, but when we started talking about strategies, she started talking, "Well, I set up . . . I have centers for the kids and I do this and these kids go here and these kids go there and when I teach reading. . . ." And I was like [great] . . . she's living and breathing it! And on top of that, she's concerned that there's not enough diversity! I was like, "Oh! Hire her!" and we didn't hire the other one! I feel that's my responsibility: to find the right people. (district gifted coordinator interview, April 30, 2004)

In summary, hiring teachers who not only espouse gifted education theory but also have experience implementing it in practice, embrace diversity, and share a general orientation toward increasing achievement for all demonstrates how Sageville's superintendent's Minority Achievement Initiative was reflected in policy further down the administrative chain. In Sageville, the district coordinator saw it as her responsibility to ensure that people with demonstrated sensitivity of this nature were hired, and also to make sure that professional development training was available. District expectations regarding high level of achievement for all were articulated during an orientation process for new teachers and were followed through via subsequent classroom observations. A new teacher mentor program promoted the strategic goals of the Minority Achievement Initiative.

Building Level

It was at the building level that the superintendent and district coordinators' efforts were translated to an individual school's policy and practice. In the case of Sageville, the Minority Achievement leitmotiv served as a mandate to focus hiring/firing decisions, professional development, and curricular and extracurricular program options. Sageville's principal gave the impression of being a very "hands-on" leader, directly involved with counselors, teachers, students, and parents and supportive of the mission to improve minority achievement. "The most important thing is the systematic belief that minority kids can achieve" (principal interview, April 27, 2004). She continued:

> Paramount, paramount, it is a message: Walk the walk, talk the talk. I have to do both. First, I believe it; two, I need to continually let staff and students and parents know that not only do I believe it, but that's my mission. This is a minority-majority school; I shouldn't be here if I didn't believe all these kids are capable of learning and doing better. (principal interview, April 27, 2004)

This attitude of responsible leadership was reflected throughout the data collected at Sageville. The principal appeared to have enacted these attitudes in the hiring decisions she had made, the professional development opportunities offered to teachers, and in the support provided for teachers' innovative programs, such as creating a building network of AP teachers. Further, the principal endorsed the development of a special summer program to help students hone their basic study skills and habits, as well as create a unique discussion group run by a school psychologist, a guidance counselor, and the gifted resource coordinator to help male minority students participate in AP courses. Sageville's principal demonstrated support for these initiatives through the allocation of funds, the arrangement of planning schedules, and the hiring of teachers and staff who embraced diversity and shared in the school philosophy.

Teacher/Student Level

Although the philosophy was articulated at the district level, its implementation was the result of creative initiatives of the policy's implementers. In the case of Riverside, for example, a strong, veteran core of teachers provided the necessary leadership to support initiatives such as study groups to help students. "There is a genuine permeating and penetrating feeling of permanence. . . . It is like a cultural community" (teacher focus group interview, November 15, 2001). The provision of some form of support group seemed to supply additional help to students. One of the benefits of such a group was the opportunity to learn code-switching or to become more adept at determining appropriate timing in the use of different vocabulary and grammatical constructions.

> As far as my vocabulary and my conversations with my friends, I can still get down on my friends' level and talk how we talk to each other, but then, when I want to hold a nice, mature conversation with someone professional, I can do it. (student focus group interview, April 29, 2004)

In this fashion, students seemed to develop the metacognitive ability to utilize context-appropriate language. There was another benefit of support groups that targeted minority students. In discussions with other talented peers, students found help to overcome barriers to academic achievement such as the perception that, "It's not cool to be smart" (district gifted coordinator interview, April 30, 2004).

The data revealed that modifications to instruction and other support structures helped students in urban areas experience a sense of success and develop a readiness to take on new challenges in college. Teacher focus groups and individual interviews revealed genuine concern for students and their progress. This general attitude was confirmed by actions witnessed in classrooms. For example, in a classroom observation, a researcher

noted the teacher's explanation to the class, "He says he gets up a 3:00 am to grade labs. He feels great pressure to grade the labs carefully and says he wants to do well by his students and also because he is graded by IB on how he grades" (classroom observation, December 13, 2001). This sort of dedication to practice was noted frequently in classroom observations, field notes, and in teacher and student interviews.

Many teachers seemed to recognize the importance of demonstrating an exemplary level of commitment to their practice. There was also evidence in the data that many understood that supplemental scaffolding was necessary for students in their classes who enter less well-prepared for the rigors of advanced study. Teachers maintained high academic standards, for example, but recognized that some students might require more and different kinds of support,

> We're not "dumbing down"; what we are doing is giving support in order to make sure they can maybe believe that not all kids develop in the same way and access different intelligences in order to make them work together. (teacher focus group interview, April 29, 2004)

Teachers adopted strategies to nurture achievement. One coordinator explained that one way of achieving this goal was to ". . . chase kids down at lunchtime, not give up on them, and have very strict policies" (gifted coordinator interview, April 29, 2004). Another teacher described her approach to providing support for students, "I stay after school every single day. I spend a lot of time helping kids . . . going through their essays with them and talking to them one-on-one" (teacher interview, December 12, 2001). This directed scaffolding was matched by high expectations for student performance and timely feedback, "I put up their grades about every 2 weeks" (teacher interview, December 12, 2001). Not only did such action encourage greater accountability among students, this kind of immediate feedback allowed students and teachers to take corrective actions before students fell behind and/or became disengaged from the learn-

ing process. Although teachers were careful to provide scaffolding, they were also careful to treat students as *adults*, a highly valued factor noted frequently in student interviews, "He'd talk to you like a grown-up" (student focus group, April 29, 2004).

Other examples of special teacher support activities included extra study hall periods, a summer course focused on developing study skills, and subsidized college tours. Many teachers indicated that they were engaging in culturally sensitive teaching practices where possible, such as opting to teach world history instead of European history, thinking that the subject material might be more accessible to their predominantly minority student population (teacher interview, April 28, 2004). Importantly, teachers seemed to also appreciate that their students' intellectual grasp of material may differ substantially from their level of study skills, a phenomenon especially common among youths fluent in more than one language. "They need extra help for missing skills, such as paragraph writing, writing an argumentative essay, note-taking skills, and speaking in front of classmates" (teacher interview, April 28, 2004). Other instruction provided for students included acquiring skills in how to use the library, developing strategies for overcoming fear of high-level classes, and learning how to get help.

Incentives to participate in AP or IB classes at the teacher/student level included offering grade incentives (grades in AP classes are weighted favorably in the calculation of grade point averages) and providing students with opportunities for practical experiences such as internships at nearby research institutions. Support for continuing in the courses was complemented by the strong commitment to parental involvement. Parental involvement was welcomed and even solicited by teachers. Invitations to Parent Nights were sent home in English and in Spanish, and teachers described instances of telephoning parents when necessary.

Frustrations/Inhibitors

Major Assignments Due at the Same Time. Even in the most responsive settings, however, the data revealed factors that frus-

trated or inhibited academic achievement. Students complained that there was a lack of coordination among teachers regarding due dates for assignments.

> The teachers don't always coordinate together and we don't mind necessarily the work because . . . most of it isn't busy work . . . but it's annoying if we have, like, three big papers due on the same day . . . it forces us to . . . cut back in one area or another area. (student focus group, December 12, 2001)

Ironically, teachers also lamented that too many assignments were due at the same time.

Inappropriate Level of Curricular Challenge. The data revealed a number of examples that sometimes the curricula, although almost universally regarded as "challenging," was also seen as being inappropriately targeted at lower levels of Bloom's taxonomy: "This is sooo simple!" (classroom observation, May 23, 2001). Focus on low levels of the curriculum was associated with frustration at the rigidity of the courses.

> There's not a lot of room for creativity. They're [AP classes] mostly focused on content, and I find myself doing better when I can add a little creativity in there. But . . . that doesn't really leave as much room for you to add insight to your thoughts. It's just sometimes, it's just regurgitating information. And it's not very fun, because you're not really learning it. (student focus group, December 13, 2001)

Another student explained that there was a very fixed way products must be constructed:

> What I don't like is that everything is according to our rubric or our structure. And it's like a set of rules, and "You have to do things this way," or "The IB doesn't like

> this." You have to do things that the IB likes. "IB likes to see this on your paper." (student focus group, December 13, 2001)

Variation in Culturally Sensitive Teaching and Lack of Support for Learners Lacking in Cultural Capital. Although the data revealed many examples of instruction and classroom environments finely tuned to the needs of multicultural, multiethnic, and multilingual students, there was also great variation. Some students believed that it was their responsibility to meet the needs of the program, not the other way around, "I think [the IB is] pretty uniform. I don't think she really changes anything to fit students' needs. . . . So Ms. Blakely expects us to fit the certain mold" (student focus group, December 13, 2001).

Some teachers' comments to their students revealed their low expectations. For example, one observer wrote, "I noted that many of her comments to the students were somewhat harsh and/or demeaning" (classroom observation, January 15, 2002).

Summary

This paper described a study that examined the AP and/IB classrooms of 43 teachers in 3 different urban schools whose students were primarily from typically underserved populations of gifted and talented learners as evidenced by their higher than state average numbers of students eligible for free or reduced-price lunch. Schools were visited at least twice, at different times in the school year in order to improve the validity of the data. Thus, data were triangulated across schools. Further credibility was lent to the findings by triangulating data across sources. Classroom observations were compared to data generated from interviews of key informants, such as teachers and students. Finally, the use of multiple data collectors and analysts increased the validity of the study. Although the generalizability of the findings of qualitative research are limited, these data provide a rich description of three schools typical of those found in urban

areas with minority-majority student populations. Further, using research methods that triangulated researchers' findings enhanced the trustworthiness of the descriptions of these particular schools. Whereas the applicability of conclusions drawn from this study is limited, these cases can provide insights for future research or inform the development of AP and IB programs in similar demographic areas.

Do teachers and the environments created by AP and IB classrooms in high-poverty urban schools provide appropriate educational opportunities for gifted students from racially, ethnically, and socioeconomically diverse backgrounds, and gifted English language learners? Classroom observations and teacher and student interview data indicated that educational opportunity tended to be extended to traditionally underserved 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. Teachers with these orientations demonstrated an ability to modify their instructional strategies to accommodate varying learning styles, interests, and levels of preexisting knowledge. These results confirm findings by Darling-Hammond (2004) concerning the critical impact of quality teaching.

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. Similar to the concept of a "College-Going Culture" (Solorzano & Ornelas, 2004), these data provide evidence that 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. In these learning environments, administrators and teachers dynamically responded to the changing needs of their students to create an atmosphere that encouraged a significant proportion of traditionally underrepresented minority students to remain in AP classes. Within these environments, students were able to articulate ways they

felt teachers and counselors helped them plan for their futures as learners.

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 programs. Students tended to be viewed less as individuals in these environments, and more as homogeneous groups, leading teachers to design curriculum and instruction in accordance with their expectations of the class as a whole. When this one-size-fits-all instruction did not fit all students in the class, both students and teachers tended to view the subsequent mismatch between an individual learner's needs and the offered curriculum and instruction as a failure on the part of the student.

What modifications to curriculum, instruction, and scaffolding in high-poverty urban schools allow students from urban areas to experience a sense of success and develop a readiness to take on new challenges in college? Two key factors were integral to creating environments that nurture the growth of academic talent among students of diverse backgrounds: (a) a pervasive and consistent belief that these students could succeed, which resulted in instructional and group support; and (b) scaffolding to support and challenge able students (e.g., extracurricular help, lunchtime discussion forums, subsidized college visits). Data provided evidence that some teachers made extra support available for students with study-skill and knowledge deficits. Some classrooms were characterized by environments where student cultural diversity was not only acknowledged and accommodated, but also welcomed and celebrated through the selection of course content perceived to be relevant to students' interests. Teachers found ways to flexibly tailor their support and expectations to individual student needs in terms of product and performance expectations and the kind of help that was provided. Other modifications to curricula included selection of coursework or texts that might especially appeal to minority students' interests.

Programs less successful in creating learning environments responsive to increasing diversity in urban populations tended

to be characterized by a rigid adherence to a one-size-fits-all approach to the AP/IB curriculum. Students who had dropped out of AP and IB programs revealed how ineffective such an approach can be. These students—many of whom were minority students or students from impoverished backgrounds—made their decisions to leave the programs precisely because they believed that the curriculum, instruction, and environment of the classes were inappropriate for their individual needs.

It is clear that in the best-case scenarios students feel a sense of comfort and acceptance in their classes. They trust their teachers will help them to succeed. There is a palpable sense that these students feel acknowledged and known by their teachers at a personal level. Further, students are confident that their teachers possess expert knowledge in their fields. Students convey their excitement and joy as they witness their teachers bringing the curricular material to life. The Theory of Knowledge course seems to be the one component of the IB program that especially encourages students to challenge conventional ways of approaching problems or thinking about things, and the required extended essay is one area where students have more latitude to choose topics of personal interest.

Significance

As racial, ethnic, and linguistic diversity continues to characterize urban populations, educators will be challenged to ensure equity and excellence in educational opportunities. Isolating factors that contribute to creating learning environments that are responsive to advanced learners thus becomes imperative. Because AP and IB programs have become the primary, and, in many cases, only service option for advanced students in high schools, researchers and educators must focus their attention on discovering pathways for greater success of nontypically served students. Data from this study indicate that environments that are flexible and attuned to the varying and individual needs of

these culturally, linguistically, social, and economically diverse students are ones in which learners can experience success.

However, this study also indicated some areas of concern related to AP and IB programs. Data revealed several mismatches between diverse students' needs and the curriculum and instruction offered in these programs, indicating a need for the provision of a broader range of services for students on the secondary level in urban environments. Additionally, because the curriculum and instruction in AP and IB courses tended to offer the biggest mismatch for students of color and students from impoverished backgrounds, the heavy reliance upon AP and IB programs without appropriate attention to the learning needs of the students often excludes these learners from participation in advanced high school courses, thereby threatening equity.

This research, along with the larger study (Hertberg-Davis et al., 2006), suggests that when consistent and widely endorsed support structures are in place over a lengthy period of time, talented students of diverse backgrounds can overcome deficits in requisite study skills, background knowledge, and language, enabling them to derive a sense of success and accomplishment within standardized AP and IB experiences in preparation for future advanced courses of study. To ensure that all capable students can successfully participate in AP and IB courses, these curricular options should be situated within a broader, unified school culture focused on high expectations, coupled with a rigorous commitment to providing scaffolding and support to enable all talented learners, regardless of background experiences, culture, ethnicity, or socioeconomic status, to succeed. To resolve achievement gaps between White and minority learners, stakeholders within a school culture must be committed to recognizing the importance of holding high expectations for all learners, while at the same time providing requisite support structures. Recognizing, responding to, and supporting talent in all populations of learners must begin at the very early years of schooling and continue throughout secondary school. This requires communication, a common vision, and a unified plan across grade

levels for fostering and encouraging excellence in all populations of learners.

Although AP and IB courses are an important component of a challenging high school course of study, providing for the broad range of needs of all populations of talented secondary learners may require additional, flexible programming options and more diverse instructional strategies within AP and IB. Mentorship opportunities, internships, independent studies, enrichment programs, and dual-enrollment are many of the available options for meeting talented learners' needs for cognitive challenge. These other programming options provide opportunities for developing and expanding areas of interest, investigating potential college and career options, and exploring social issues and concerns (Callahan & Kyburg, 2005; Renzulli & Reis, 1997; VanTassel-Baska, 2007). Significantly, this study confirms a finding described in a recent report produced by ACT and the Education Trust (Schmeiser & Haycock, 2005) on the importance of providing students with extra support outside of the classroom.

References

Abi-Nader, J. (1990). "A house for my mother": Motivating Hispanic high school students. *Anthropology & Education Quarterly, 21*, 41–58.

Adelman, C. (1999). Answers in the tool box: Academic intensity, attendance patterns, and bachelor's degree attainment. Retrieved March 28, 2005, from http://www.ed.gov/pubs/Toolbox/toolbox.html

Andrews, H. (2003). *Progress in Advanced Placement and International Baccalaureate in SREB states.* Atlanta, GA: Southern Regional Education Board.

Arellano, A. R., & Padilla, A. M. (1996). Academic invulnerability among a select group of Latino university students. *Hispanic Journal of Behavioral Sciences, 18*, 485–508.

Baldwin, A. Y. (2004). Introduction to culturally diverse and underserved populations of gifted students. In A. Y. Baldwin (Ed.),

Culturally diverse and underserved populations of gifted students (pp. xxiii–xxxi). Thousand Oaks, CA: Corwin Press.

Becker, B. E., & Luthar, S. S. (2002). Social-emotional factors affecting achievement outcomes among disadvantaged students: Closing the achievement gap. *Educational Psychologist, 37*, 197–214.

Bonner, F. A. (2001). *Gifted African American male college students: A phenomenological study* (Research Monograph 01148). Storrs, CT: National Research Center on the Gifted and Talented, University of Connecticut.

Borland, J. H., & Wright, L. (1994). Identifying young, potentially gifted, economically disadvantaged students. *Gifted Child Quarterly, 38*, 164–171.

Brooks, D. (2005, September 25). The education gap. *The New York Times,* p. 11.

Burton, N. W., Whitman, N. B., Yepes-Baraya, M., Cline, F., & Kim, R. M. (2002). *Minority student success—the role of teachers in Advanced Placement courses*. Retrieved September 22, 2004, from http://apcentral.collegeboard.com

California Department of Education. (2004). *Williams case history*. Retrieved October 10, 2006, from http://www.cde.ca.gov/eo/ce/wc/wmslawsuit.asp

Callahan, C. M. (2003). *Advanced Placement and International Baccalaureate programs for talented students in American high schools: A focus on science and math* (Research Monograph 03276). Storrs, CT: National Research Center on the Gifted and Talented, University of Connecticut.

Callahan, C. M. (2005). Identifying gifted students from underrepresented populations. *Theory Into Practice, 44*, 98–104.

Callahan, C. M., & Kyburg, R. M. (2005). Talented and gifted youth. In D. L. Dubois & M. J. Karcher (Eds.), *Handbook of youth mentoring* (pp. 424–439). Thousand Oaks, CA: Sage.

Camara, W., & Michaelides, M. (2005). *AP use in admissions: A response to Geiser and Santelices*. New York: College Board.

Casement, W. (2003). Declining credibility for the AP program. *Academic Questions, 16*(4), 11–25.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94*, S95–S120.

College Board. (1997). *National summary reports 1997* [Electronic version]. Retrieved February 15, 2007, from http://www.collegeboard.com/student/testing/ap/exgrd_sum/1997.html

College Board. (1999). *Reaching the top*. New York: Author.

College Board. (2001). *Access to excellence*. New York: Author.

College Board. (2005a). *Advanced Placement report to the nation*. Retrieved February 8, 2005, from http://apcentral.collegeboard.com/article/0,3045,149-0-0-41919,00.html

College Board. (2005b). *Exam scoring: What an AP grade means*. Retrieved August 2, 2005, from http://apcentral.collegeboard.com/article/0,3045,152-167-0-1994,00.html

College Board. (2006a). *Advanced Placement: Report to the nation*. New York: Author.

College Board. (2006b). *National summary reports 2006* [Electronic version]. Retrieved February 15, 2007, from http://www.collegeboard.com/student/testing/ap/exgrd_sum/2006.html

College Board. (2006c). *Participation in AP: Minority students*. Retrieved February 4, 2006, from http://apcentral.collegeboard.com/article/0,3045,150-156-0-2058,00.html

College Board. (2007). *Advanced Placement: Report to the nation*. New York: Author.

College Entrance Examination Board and Educational Testing Service. (1999). *Advanced Placement program: 1999 yearbook*. New York: Author.

Council for Exceptional Children. (2003). *GT-minority identification*. Retrieved October 6, 2005, from http://ericec.org/faq/gt-minor.html

Cox, J. (1983). Advanced Placement: An exemplary honors model. *G/C/T, 26*, 47–51.

Cox, J., & Daniel, N. (1985). Providing options for superior students in secondary schools. *NASSP Bulletin, 69*, 25–30.

Daniel, N., & Cox, J. (1992). International education for high-ability students: An avenue to excellence. *NASSP Bulletin, 76*, 87–94.

Darling-Hammond, L. (2004). Inequality and the right to learn: Access to qualified teachers in California's public schools. *Teachers College Record, 106*, 1936–1966.

Davis, M., Dias-Bowie, Y., Greenberg, K., Klukken, G., Pollio, H. R., Thomas, S. P., et al. (2004, July/August). "A fly in the buttermilk": Descriptions of University life by successful Black undergraduate students at a predominately White southeastern University. *Journal of Higher Education, 75*, 420–445.

Davis-Bond, T. (2004). *African American high school students' academic success: Factors influencing their performance.* Claremont, CA: The Claremont Graduate University.

Diaz, E. I. (1998). Portraits of Puerto Rican gifted females who achieve and underachieve. In K. Arnold, K. D. Noble & R. Subotnik (Eds.), *Remarkable women: Perspectives on female talent development* (pp. 225–241). Cresskill, NJ: Hampton.

DiMaggio, P. (1982). Cultural capital and school success: The impact of status culture participation on the grades of U.S. high school students. *American Sociological Review, 47*, 189–210.

Ford, D. Y. (1994). Nurturing resilience in gifted Black youth. *Roeper Review, 17*, 80–85.

Ford, D. Y., & Harris, J. J. (1999). *Multicultural gifted education*. New York: Teachers College Press.

Ford, D. Y., Moore, J. L., & Milner, H. R. (2005). Beyond culture-blindness: A model of culture with implications for gifted education. *Roeper Review, 27*, 97–103.

Fordham, S., & Ogbu, J. U. (1986). Black students' school success: Coping with the "burden of 'acting White.'" *The Urban Review, 18*, 176–206.

Frey, W. H., & Fielding, E. L. (1995). Changing urban populations: Regional restructuring, racial polarization, and poverty concentration. *Cityscape: A Journal of Policy Development and Research, 1*(2), 1–66.

Gándara, P. (1995). *Over the ivy walls*. Albany: State University of New York Press.

Gándara, P. (2006). Strengthening the academic pipeline leading to careers in math, science, and technology for Latino students. *Journal of Hispanic Higher Education, 5*, 222–237.

Geiser, S., & Caspary, K. (2005). "No show" study: College destinations of University of California applicants and admits who did not enroll, 1977–2002. *Educational Policy, 19*, 396–417.

Geiser, S., & Santelices, V. (2004). *The role of Advanced Placement and honors courses in college admissions*. Berkeley, CA: Center for Studies in Higher Education.

Gibson, M. A. (1995). Additive acculturation as a strategy for school improvement. In R. G. Rumbaut & W. A. Cornelius (Eds.), *California's immigrant children: Theory, research and implication for educational policy* (pp. 77–105). La Jolla, CA: Center for U.S.-Mexican Studies, University of California.

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

Gordon, E. W., & Bridglall, B. L. (2005). The challenge, context, and preconditions of academic development at high levels. In E. W.

Gordon, B. L. Bridglall, & A. S. Meroe (Eds.), *Supplementary education: The hidden curriculum of high academic achievement* (pp. 10–34). Lanham, MD: Rowman & Littlefield.

Hébert, T. P. (1996). Portraits of resilience: The urban life experience of gifted Latino young men. *Roeper Review, 19*, 82–90.

Hébert, T. P., & Reis, S. M. (1999). Culturally diverse high-achieving students in an urban high school. *Urban Education, 34*, 428–457.

Hertberg-Davis, H., Callahan, C. M., & Kyburg, R. M. (2006). *Advanced Placement and International Baccalaureate programs: A "fit" for gifted learners?* (Research Monograph RM06222). Storrs, CT: National Research Center on the Gifted and Talented, University of Connecticut.

Hoffman, L., & Sable, J. (2006). *Public elementary and secondary students, staff, schools, and school districts: School year 2003–04* [NCES 2006-307]. Washington, DC: National Center for Education Statistics.

International Baccalaureate North America. (1986). *International Baccalaureate*. New York: Author. (ERIC Document Reproduction Service No. ED285450)

International Baccalaureate North America. (2004). *May 2004 data summary report: A profile of Diploma Programme test takers*. New York: Author.

International Baccalaureate Organization. (2004). *Diploma Programme* [Brochure]. Retrieved August 2, 2005, from http://www.ibo.org/ibo/index.cfm?contentid=000226E2-A4D7-1DE4-8E1280C12645FD37&method=display&language=EN

International Baccalaureate Organization. (2007). *Country information for United States* [Electronic version]. Retrieved January 3, 2007, from http://www.ibo.org/country/US/index.cfm

Kao, G. (2000). Group images and possible selves among adolescents: Linking stereotypes to expectations by race and ethnicity. *Sociological Forum, 15*, 407–430.

Klopfenstein, K. (2003). Recommendations for maintaining the quality of Advanced Placement programs. *American Secondary Education, 32*(1), 39–48.

Kozol, J. (1991). *Savage inequalities*. New York: HarperCollins.

Ladson-Billings, G. (2000). Racialized discourses and ethnic epistemologies. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 257–278). Thousand Oaks, CA: Sage.

Lichten, W. (2007). *Equity and excellence in the College Board Advanced Placement program* [Electronic version]. Retrieved January 24, 2007, from http://www.tcrecord.org/Content.asp?ContentID=12928

Marnholtz, M. E. (1994). Wausau East High School's International Baccalaureate program: A world-class education in your own back yard. In J. M. Jenkins, K. S. Louis, H. J. Wilber, & J. W. Keefe (Eds.), *World class schools: An evolving concept* (pp. 62–68). Reston, VA: National Association of Secondary School Principals.

Massachusetts State Department of Education. (2002). *Promoting high achievement: Policies and programs for academically advanced students in Massachusetts*. Malden, MA: Center for Teaching and Learning.

Mathews, J. (2003, June 2). The 100 best high schools in America. *Newsweek, 141,* 48–54.

Mathews, J. (2004, December 9). In AP-vs.-IB debate, a win for the students. *Washington Post,* p. VA20.

Mathews, J. (2005, August 17). Schools see IB degree as way to boost minority achievement. *Washington Post,* p. B01.

Metropolitan Center for Urban Education. (2005). *"With deliberate speed": Achievement, citizenship and diversity in American education*. Retrieved January 25, 2006, from http://education.nyu.edu/metrocenter/brownplus/reports.pdf

Nationalatlas.gov. (2005). *National atlas of the United States*. Retrieved February 4, 2006, from http://nationalatlas.gov/articles/people/a_popchange.html

Ndura, E., Robinson, M., & Ochs, G. (2003). Minority students in high school Advanced Placement courses: Opportunity and equity denied. *American Secondary Education, 32*(1), 21–38.

Nieto, S. M. (2002). Profoundly multicultural questions. *Educational Leadership, 60*(4), 6–10.

No Child Left Behind Act, 20 U.S.C. §6301 (2001).

Oakes, J. (2004). Investigating the claims in Williams v. State of California: An unconstitutional denial of education's basic tools? *Teachers College Record, 106*, 1889–1906.

O'Connell, J., & Swofford, S. W. (2005). *Change in certificated assignment monitoring and data reporting in education code section 44258.9 as a result of the Williams lawsuit settlement* [Electronic Version]. Sacramento, CA: California Department of Education. Retrieved March 20, 2007, from http://www.cde.ca.gov/eo/ce/wc/index.asp

Ogbu, J. U. (1994). Understanding cultural diversity and learning. *Journal for the Education of the Gifted, 17*, 354–384.

Ogbu, J. U. (2003). *Black American students in an affluent suburb: A study of academic disengagement*. Mahwah, NJ: Lawrence Erlbaum Associates.

Ogbu, J. U. (2004). Collective identity and the burden of "acting White" in Black history, community, and education. *The Urban Review, 36*(1), 1–35.

Paige, R., & Marcus, K. L. (2004). *Achieving diversity: Race-neutral alternatives in American education*. Washington, DC: U.S. Department of Education, Office for Civil Rights.

Pyryt, M. C., Masharov, Y. P., & Feng, C. (1993). Programs and strategies for nurturing talents/gifts in science and technology. In K. A. Heller, F. J. Mönks, & A. H. Passow (Eds.), *International handbook of research and development of giftedness and talent* (pp. 453–471). Oxford: Pergamon.

Reis, S., & Diaz, E. (1999). Economically disadvantaged urban female students who achieve in schools. *The Urban Review, 31*, 31–54.

Reis, S. M., & McCoach, D. B. (2002). Underachievement in gifted and talented students with special needs. *Exceptionality, 10*, 113–125.

Renzulli, J. S., & Reis, S. M. (1997). *The Schoolwide Enrichment Model: A how-to guide for educational excellence*. Mansfield, CT: Creative Learning Press.

Rothschild, E. (1995). Aspiration, performance, reward: The Advanced Placement program at 40. *College Board Review, 176–177*, 24–32.

Schmeiser, C., & Haycock, K. (2005). *On course for success: A close look at selected high school courses that prepare all students for college*. Iowa City, IA: ACT—The Education Trust.

Scriven, M. (1972). Pros and cons about goal-free evaluation. *Evaluation Comment, 3*, 1–4.

Solorzano, D. G., & Ornelas, A. (2004). A critical race analysis of Latina/o and African American Advanced Placement enrollment in public high schools. *The High School Journal, 87*(3), 15–26.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage.

U.S. Department of Education, National Center for Education Statistics. (2004). *Concentration of enrollment by race/ethnicity and poverty*. Retrieved March 31, 2005, from http://nces.ed.gov/programs/coe/2004/section1/indicator05.asp

U.S. Department of Education Press Releases. (1998). *U.S. Education Department to provide state grants to pay Advanced Placement test fees*

for low-income students. Retrieved March 27, 2005, from http://www.ed.gov./PressReleases/05-1998/appr.html

U.S. Department of Education Press Releases. (2001). *Education Department supports Advanced Placement courses for low-income students with award that pays test fees*. Retrieved March 27, 2005, from http://www.ed.gov/news/pressreleases/2001/10/10012001b.html

U.S. Department of Education Press Releases. (2003). *$11 million in grants awarded to raise the number of low-income students succeeding in advanced courses*. Retrieved March 27, 2005, from http://www.ed.gov/news/pressreleases/2003/10/10102003a.html

U.S. Department of Education Press Releases. (2004). *Little Rock students to benefit from education grant*. Retrieved March 27, 2005, from http://www.ed.gov/news/pressreleases/2004/04/04122004.html

U.S. Department of Education Press Releases. (2005). *Statement from Secretary Spellings on the 2005 Advanced Placement results*. Retrieved March 28, 2005, from http://www.ed.gov/news/pressreleases/2005/01/01252005.html

U.S. Department of Education Press Releases. (2006). *Expanding the Advanced Placement incentive program*. Retrieved February 3, 2006, from http://www.ed.gov/about/inits/ed/competitiveness/expanding-apip.pdf

VanTassel-Baska, J. L. (Ed.). (2007). *Serving gifted learners beyond the traditional classroom: A guide to alternative programs and services*. Waco, TX: Prufrock Press.

Walpole, M., McDonough, P. M., Bauer, C. J., Gibson, C., Kanyi, K., & Toliver, R. (2005). This test is unfair: Urban African American and Latino high school students' perspectives of standardized college admission tests. *Urban Education, 40*, 321–349.

White House Press Release. (2005). *No child left behind: High-quality, high school initiatives* [Electronic version]. Retrieved February 15, 2007, from http://www.whitehouse.gov/news/releases/2005/01/20050112-3.html

Worrell, F. C. (2000). A validity study of scores on the Multigroup Ethnic Identity Measure based on a sample of academically talented adolescents. *Educational and Psychological Measurement, 60*, 439–447.

Worrell, F. C., Szarko, J. E., & Gabelko, N. H. (2001). Multi-year persistence of nontraditional students in an academic talent development program. *Journal of Secondary Gifted Education, 12*, 80–89.

End Notes

1 *Williams et al. vs. State of California et al.* was filed as a class action in 2000. The basis of the lawsuit was that state agencies had failed to provide public school students with equal access to instructional materials, safe and decent school facilities, and qualified teachers. The case was settled in August 2004 and five bills implementing the settlement were enacted in September 2004: Senate Bill (SB) 6 (Chapter 899, Statutes of 2004) and SB 550 (Chapter 900, Statutes of 2004), Assembly Bill (AB) 1550 (Chapter 901, Statutes of 2004), AB 2727 (Chapter 903, Statutes of 2004), and AB 3001 (Chapter 902, Statutes of 2004). In July 2005, AB 831 (Chapter 118, Statutes of 2005) was enacted (O'Connell & Swofford, 2005, p. 1).

2 "Eligibility for the free or reduced-price lunch program provides a proxy measure of low-income family status" (U.S. Department of Education, National Center for Education Statistics, 2004, p. 34).

3 Data were collected under the promise of confidentiality. As a result, all names herein are fictitious, and any resemblance to actual places or people is purely coincidental.