

Chapter Two: Review of Related Literature

Introduction

This study focuses on perceptions of parents of students in an urban middle school as influenced by the introduction of the college readiness program AVID. Much has been written about the unique challenges facing middle school students in general, and urban students in particular. The first section of the literature review will address writings that focus on this unique period of human development (middle school age), the challenges attendant to it, and the arising need for programs that assist students in overcoming the particular challenges of this time. The second section of the literature review will examine the AVID program in detail. The third section will focus on assessment of AVID.

Need for College Readiness Programs

One of the most difficult challenges in human development is the period of early adolescence. From the time students approach puberty until they mature beyond that stage, physical, emotional, and intellectual aspects of their lives change to an extent that it often produces discomfort. “The onset of puberty corresponds to a skeletal (biological) age of [approximately] 11 [years] in girls and 13 [years] in boys” (Rogol et al., 2000) and completes by approximately age 15 for girls and 17 for boys (Rogol et al., 2000). Middle school students generally fall directly into this age and development group. Middle school usually encompasses “grades 4, 5, or 6 to 6, 7, or 8” (Snyder & Hoffman, 2001, p. 42), depending upon the school district, and in the United States, has replaced the junior high construct (grades 7-9) by over 22% in recent years (Snyder & Hoffman, 2001, p. 42). Therefore, students in middle school will, on average, be between 9-14 years of age (Snyder & Hoffman, 2001).

The middle school years offer challenges in almost every area of development for students: “the biological changes associated with puberty, important changes in relations with family and peers, and the social and educational changes related to transition from elementary to middle school” (Wigfield et al., 2005, p. 112). Biologically, puberty is a dynamic period wherein sexual organs mature due to hormonal functioning, and growth tends to increase markedly in both height and weight gains (Rogol et

al., 2000). Girls begin menstruation, experience hair growth in the pubis and other regions, while their breasts enlarge. Boys experience an overall increase in body hair and begin to experience erections that produce ejaculation. This growth and sexual development results in personality and behavioral responses (Wigfield et al., 2005) which can complicate interaction at home and at school, and impact educational processes.

Cognitive changes also occur during this age period. These include the ability to “engage in abstract thinking, consider the hypothetical as well as the real, engage in more sophisticated and elaborate information-processing strategies, and reflect on oneself and complicated problems” (Wigfield et al., 2005, p. 113). Wigfield also notes that “reasoning skills and decision-making abilities also increase, but [the students] are more likely to engage in risky behaviors than are young adults” (2005, p. 113). Some of this reordered thinking may be the result of changes in brain functioning due to a “reorganization of synaptic processes,” as well as changes in the “levels of different neurotransmitters in the areas of the brain that control emotional functioning, which could relate to the emotional swings many adolescents experience” (Wigfield et al., 2005, p. 113). This increased and varied cognitive development, due to physical maturation and brain development, exposes middle school students to new, complicated thought processes that may affect the outcomes of choices they must make. The tendency toward risk-taking, enhanced by susceptibility to peer pressure, also adds to the challenges faced by these students in an emerging state between childhood and adulthood.

If that were not enough, major transformation in the areas of self-concept, self-esteem and identity occurs during this age period (Harter, 1999). Self-concept involves the student’s beliefs and ideations about relationships, specifically involving themselves. Their self-esteem directly relates to whether students feel positive or negative about how their self-concept is being expressed. Identity encompasses a more generalized view of their attitudes about themselves in relationship to others and their environment. According to Wigfield, “identity formation involves the successful negotiation of a variety of activities and relationships during adolescence, including school achievement, social

relations with others, and development of career interests and choices” (2005, p. 113). As a result, this time of biological and cognitive change is also intertwined with emotional and psychological reassessment of one’s personality, beliefs, self-worth, and position in relationships, community and society. This constitutes a rough emotional terrain to navigate for anyone, but in particular for students in transition. This can be a time of emerging self-doubt and decreasing motivation to learn and study (Wigfield et al., 2005, p. 114).

Peer relationships often assume great importance during this time period, and interaction with peers may be valued beyond other interests or potential activities. Peer concern or pressure can be positive, but it can also result in negative consequences for particular students within this development stage.

Fighting increases during the middle school years, and more students are bullied in middle school than in either elementary or high school...Being bullied is associated with many negative developmental outcomes, including loneliness, depression, and social anxiety, as well as lower school performance...Victimization occurs at the individual level but can also include groups of children; some low status groups of children (e.g., those whom other adolescents perceive as “nerds”) are at risk of being rejected and victimized at school during the middle school years (Wigfield et al., 2005, p. 115).

It is not difficult to imagine which middle school students, in this contextual setting of change and development, may respond negatively to stimuli and direction of all sorts, including academic. Specific behaviors with deleterious impacts on education surface during these time periods; these behaviors include drug and alcohol use, and misuse, sexual experimentation leading to teen pregnancies, and absenteeism and truancy eventually resulting in dropout from school altogether. Indeed, it was in response to the difficulties associated with this period of growth, development, and struggle that the construct of middle school emerged in the first place.

The movement toward middle school is largely attributed to the work of Charles W. Eliot in the early 1900s. He developed a philosophy supporting differentiated curriculum which embraces educational practices that “tailor teaching environments and practices to create appropriately different learning experiences for different students” (Farmer, 1996, p. 1). Given the challenges faced by

students in the age range now serviced by middle schools, the structure was put in place to provide an educational transition or bridge through the difficult prepubescent and puberty years, almost like a buffer, before entering high school. According to some, however, Eliot’s work was predicated on the climate of his era, hence reflecting a social philosophy which assumed that minorities would not deviate from the lowest rung of the socioeconomic status in America (Preskill, 1989).

Studies show that the potential adverse behaviors affect children of different ethnic/racial backgrounds in varying degrees. For example, drug and alcohol use by pubescent students is shown to be more prevalent among Caucasian students than other racial groups:

Substance	Total ¹	White	Black	Hispanic	Asian ²	American Indian/ Alaska Native	More than one race
Alcohol	17.6	19.9	9.8	18.0	9.4	18.5	18.2
Cigarettes	11.9	14.4	6.0	9.1	5.4!	17.9!	13.5
Marijuana	7.6	8.2	6.4	6.7	4.3!	16.7!	10.1
Cocaine	0.5	0.5	#	0.9!	‡	2.0!	0.4!
Hallucinogen ³	0.8	1.0	0.4!	0.6!	‡	‡	0.5!
Inhalant ⁴	1.2	1.3	0.6!	1.4!	0.9!	‡	1.6!
Nonmedical psychotherapeutic ⁵	3.6	3.8	2.6	3.9	2.4!	6.8!	4.6!

Figure 1. Pubescent Substance Use by Race (NCES, 2008, p. 98).

Although individually Caucasians scored the highest for abuse of all substances, collectively they were in the minority. For example, in the case of alcohol use, Whites accounted for nearly 20% of usage, the highest individual usage by race, but well behind the cumulative 80% of other groups when combined.

In the matter of teen pregnancy, quite disparate results were found:

Year	Total	White	Black	Hispanic	Asian/ Pacific Islander	American Indian/Alaska Native
1980	53.0	45.4	97.8	—	26.2	82.2
1985	51.0	43.3	95.4	—	23.8	79.2
1990	59.9	50.8	112.8	100.3	26.4	81.1
1991	61.8	52.6	114.8	104.6	27.3	84.1
1992	60.3	51.4	111.3	103.3	26.5	82.4
1993	59.0	50.6	107.3	101.8	26.5	79.8
1994	58.2	50.5	102.9	101.3	26.6	76.4
1995	56.0	49.5	94.4	99.3	25.5	72.9
1996	53.5	47.5	89.6	94.6	23.5	68.2
1997	51.3	45.5	86.3	89.6	22.3	65.2
1998	50.3	44.9	83.5	87.9	22.2	64.7
1999	48.8	44.0	79.1	86.8	21.4	59.9
2000	47.7	43.2	77.4	87.3	20.5	58.3
2001	45.3	41.2	71.8	86.4	19.8	56.3
2002	43.0	39.4	66.6	83.4	18.3	53.8
2003	41.6	38.3	63.8	82.3	17.4	53.1
2004	41.1	37.7	63.3	82.6	17.3	52.5

— Not available.

Figure 2. Teen Pregnancy by Race (NCES, 2008, p. 102).

Statistically, occurrence of teen pregnancy was significantly higher in Black and Hispanic girls, and well over 50% among American Indian/Alaska natives. White teen pregnancy rate hovered close to 50% until the late 1990s, when it began to drop. Asian/Pacific Islander teen pregnancy rate has traditionally been low, with current figures under 20%.

Likewise, dropout rates impact races disparately. Hispanics and Indian/Alaska natives are more likely to drop out than their counterparts, in some years nearly twice as likely to do so. Dropout rates among Black students have been decreasing but are still higher than among Whites.

Year	Total	White	Black	Hispanic	Asian/ Pacific Islander	American Indian/Alaska Native
1989	12.6	9.4	14.0	33.0	7.5!	21.6!
1990	12.1	9.0	13.4	32.4	4.9!	16.4!
1991	12.5	8.9	13.6	35.3	3.5!	18.7!
1992	11.0	7.7	13.7	29.5	5.7!	17.5!
1993	11.0	7.9	13.5	27.5	5.8!	14.6!
1994	11.4	7.7	12.6	30.0	5.8!	10.2!
1995	12.0	8.6	12.1	30.0	3.9!	13.4!
1996	11.1	7.3	13.0	29.4	5.3	13.0!
1997	11.0	7.6	13.4	25.3	6.9	14.5!
1998	11.8	7.7	13.8	29.5	4.1!	11.8!
2000	10.9	6.9	13.1	27.8	3.8!	14.0!
2001	10.7	7.3	10.9	27.0	3.6!	13.1!
2002	10.5	6.5	11.3	25.7	3.9	16.8!
2003	9.9 ¹	6.3	10.9	23.5	3.9!	15.0!
2004	10.3 ¹	6.8	11.8	23.8	3.6!	17.0!
2005	9.4 ¹	6.0	10.4	22.4	2.9!	14.0!

¹ Interpret data with caution

Figure 3. Dropout Figures by Race (NCES, 2008, p. 88).

So while middle school can be difficult for all students, it was not designed with the interest of minorities in mind. The challenges that face all students may be exacerbated for those already marginalized due to economic, ethnic, racial, and cultural status or language barriers. As shown by the above charts, problematic behavior manifests itself at more pronounced rates among minorities. This has translated to an achievement gap between White and Asian students versus other groups and minorities, and is borne out by measurements of academic performance, particularly across ethnic/racial lines.

Overall, Caucasian and Asian students outperform all other ethnic or racial groups on the National Assessment of Educational Progress (NAEP) tests in both language and mathematical skill, as demonstrated by the charts and discussions below.

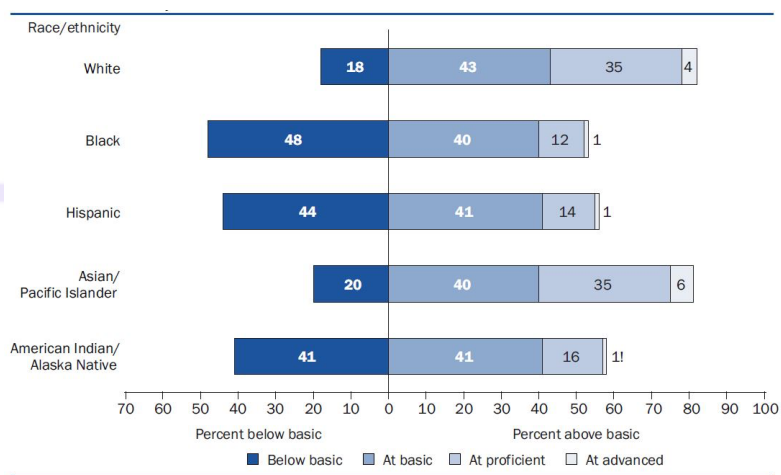


Figure 4. 8th Grade Performance on NAEP Reading Tests (NCES, 2008, p. 56).

While overall Asians/Pacific Islanders scored better in the highest two categories than any other group, Blacks had the largest number in the “below basic” performance category; while Blacks, Hispanics, and American Indian/Alaska natives were overrepresented in the lower two categories by far proportionally. Similar results were observed for mathematics test score, with Asians scoring twice as high over Caucasians at the top level (“advanced”) and Blacks with a scoring 58% scoring at below basic level.

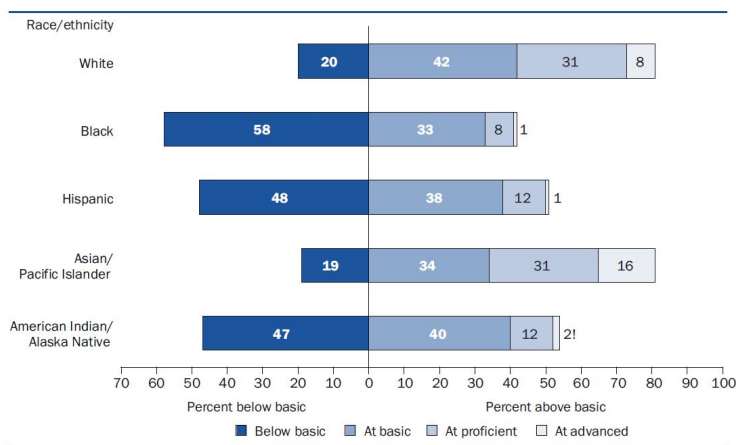


Figure 5. 8th Grade Performance on NAEP Mathematics Tests (NCES, 2008, p. 60).

“Additionally, students native to this country scored higher than those who were first-generation or non-native,” presumably in part due to deficiency in English language skills (NCES, 2008, p. 45). Not surprisingly, English as a Second Language (ESL) students from minority racial groups are also more likely to score lower than natives:

Race/ethnicity and subgroup	Number who spoke language other than English at home	Percentage of population who spoke a language other than English at home	Percentage of population who spoke English with difficulty
Total¹	10,770,000	20.4	5.3
White	1,770,000	5.7	1.3
Black	445,000	5.6	1.4
Hispanic	6,939,000	69.8	19.1
Mexican	4,833,000	72.3	21.3
Puerto Rican	480,000	52.3	10.1
Dominican	240,000	88.4	22.7
Central American	526,000	86.0	23.6
South American	313,000	79.7	16.4
Other Hispanic or Latino	546,000	51.2	10.3
Asian	1,323,000	65.3	17.8
Asian Indian	232,000	65.3	10.7
Chinese	316,000	74.4	21.1
Filipino	129,000	36.3	10.0
Japanese	33,000	47.3	19.4
Korean	150,000	72.7	23.3
Vietnamese	206,000	79.5	26.3
Other Asian	257,000	72.3	18.9
Native Hawaiian/Pacific Islander	22,000	32.8	6.1
American Indian/Alaska Native	78,000	17.5	2.8
More than one race	112,000	8.9	1.7

Figure 6. Non-English Speakers by Race (NCES, 2008, p. 44).

The same trend of lower achievement scores for minority and ESL students over Whites has been consistent in the results of pre-college standardized tests such as the Scholastic Aptitude Test (SAT) and the American College Testing (ACT) test, both of which purport to indicate readiness for college-level studies (NCES, 2008, p. 45).

Subject and year	Total ¹	White	Black	Mexican American	Puerto Rican	Other Hispanic/Latino	Asian/Pacific Islander	American Indian/Alaska Native
Verbal								
1996	505	526	434	455	452	465	496	483
1997	505	526	434	451	454	466	496	475
1998	505	526	434	453	452	461	498	480
1999	505	527	434	453	455	463	498	484
2000	505	528	434	453	456	461	499	482
2001	506	529	433	451	457	460	501	481
2002	504	527	430	446	455	458	501	479
2003	507	529	431	448	456	457	508	480
2004	508	528	430	451	457	461	507	483
2005	508	532	433	453	460	463	511	489
2006	503	527	434	454	459	458	510	487
Mathematics								
1996	508	523	422	459	445	466	558	477
1997	511	526	423	458	447	468	560	475
1998	512	528	426	460	447	466	562	483
1999	511	528	422	456	448	464	560	481
2000	514	530	426	460	451	467	565	481
2001	514	531	426	458	451	465	566	479
2002	516	533	427	457	451	464	569	483
2003	519	534	426	457	453	464	575	482
2004	518	531	427	458	452	465	577	488
2005	520	536	431	463	457	469	580	493
2006	518	536	429	465	456	463	578	494

Figure 7. SAT Scores by Race; Score Range 200-800 (NCES, 2008, p. 77).

Blacks performed most poorly according to score, almost 100 points lower than Whites on both verbal and math components of the SAT. The scale is smaller for the ACT, so the point spread is not as great, but statistically, Blacks still scored the lowest of any racially-identified groups, and well behind both Asians and Whites:

Subject and year	Total ¹	White	Black	Mexican American	Puerto Rican/Other Hispanic	Asian/Pacific Islander	American Indian/Alaska Native
English							
1997	20.3	21.2	16.4	17.8	18.1	20.4	18.0
1998	20.4	21.2	16.4	17.5	18.7	20.5	18.1
1999	20.5	21.3	16.4	17.6	18.8	20.5	18.1
2000	20.5	21.3	16.4	17.6	18.7	20.5	18.0
2001	20.5	21.3	16.2	17.5	18.6	20.7	17.8
2002	20.2	21.2	16.2	17.1	17.9	20.5	17.6
2003	20.3	21.3	16.2	17.2	18.1	20.7	17.7
2004	20.4	21.4	16.3	17.3	17.9	21.0	17.8
2005	20.4	21.5	16.2	17.3	18.0	21.3	17.6
Mathematics							
1997	20.6	21.2	16.9	18.9	19.1	23.3	18.5
1998	20.8	21.4	16.9	18.6	19.7	23.4	18.6
1999	20.7	21.3	16.9	18.7	19.6	23.1	18.5
2000	20.7	21.3	16.8	18.7	19.5	23.2	18.5
2001	20.7	21.3	16.8	18.7	19.4	23.1	18.4
2002	20.6	21.3	16.7	18.4	18.9	22.9	18.4
2003	20.6	21.3	16.7	18.3	18.9	22.9	18.3
2004	20.7	21.4	16.9	18.5	18.9	23.0	18.6
2005	20.7	21.5	16.8	18.6	19.0	23.1	18.4

Figure 8. ACT Score by Race; Highest Score = 36 (NCES, 2008, p. 81).

These tests are indicators of college readiness and factor into college admissions decisions to a large extent. Another opportunity for students to indicate their ability to succeed in college is by enrolling in specific courses during high school, either through a college program (dual enrollment) or by taking Advanced Placement (AP) courses. Again, minorities have gotten short shrift in the many

predominantly minority schools, which have not until recently even offered AP classes, and when they do, Black Americans still test significantly lower than Asian Americans or Whites on such tests:

Subject and race/ethnicity	Mean grade	Grade				
		5	4	3	2	1
All exams						
Total¹	2.89	13.3	20.1	26.0	23.3	17.4
White	2.99	13.8	21.8	27.9	23.2	13.5
Black	2.01	3.2	8.5	16.9	28.8	42.6
Hispanic	2.52	10.0	14.8	21.8	24.0	29.3
Asian	3.05	18.1	21.2	24.3	20.9	15.5
American Indian/Alaska Native	2.45	6.3	14.7	23.2	29.2	26.6
Calculus AB						
Total¹	2.92	20.3	19.5	17.8	16.9	25.5
White	3.03	21.6	20.9	18.6	17.0	21.9
Black	1.95	6.0	9.9	12.4	15.9	55.7
Hispanic	2.18	9.3	11.5	14.7	17.3	47.3
Asian	3.11	24.5	20.4	17.5	16.3	21.3
American Indian/Alaska Native	2.40	11.5	15.1	15.4	18.0	39.9
English literature and composition						
Total¹	2.90	8.0	20.1	33.8	29.7	8.4
White	3.06	9.2	22.8	36.8	26.9	4.3
Black	2.04	1.4	6.1	18.7	42.4	31.4
Hispanic	2.28	2.6	9.2	24.5	41.4	22.4
Asian	2.95	9.5	20.6	33.1	29.5	7.3
American Indian/Alaska Native	2.44	3.1	12.8	26.9	39.0	18.1
U.S. history						
Total¹	2.66	9.2	19.8	21.4	27.4	22.2
White	2.80	10.0	21.8	23.3	28.2	16.8
Black	1.87	2.2	8.3	13.3	26.1	50.1
Hispanic	1.98	3.6	9.9	14.0	25.9	46.7
Asian	2.85	12.3	22.6	21.4	24.9	18.8
American Indian/Alaska Native	2.27	4.4	14.4	17.9	30.0	33.2

Figure 9. AP Scores by Race (NCES, 2008, p. 74).

Of students taking AP courses in high school, “Asians had the highest mean AP exam score, while Blacks had the lowest” (NCES, 2008, p. 45), with the latter placing in the lowest percentages for the three highest grade outcomes (3 through 5) in overall exams, calculus, English and history. Indeed, the disparity is so marked that minority students often have no opportunity (through lack of availability or discouragement by teachers and administration) to take high-track or advance level classes at all. The following figure demonstrates the disparity in enrollment in higher level mathematics courses, with Whites and Asian/Pacific Islanders dominating enrollment, and Black Americans, Hispanic and American Indian/Alaska natives at the low end of the spectrum.

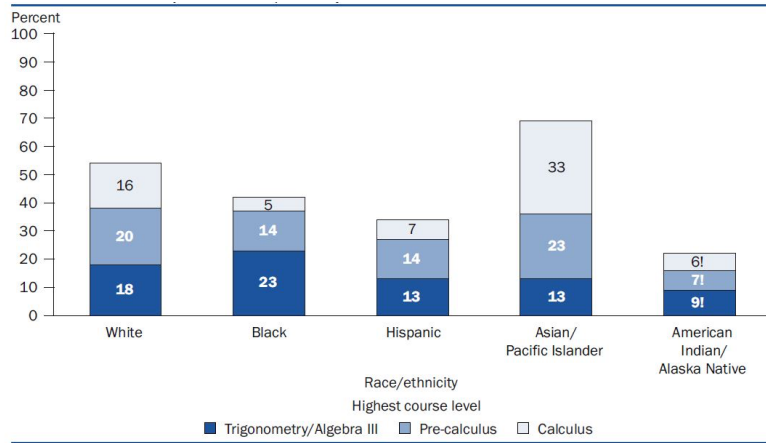


Figure 10. Enrollment in Advanced Math Classes by Race (NCES, 2008, p. 65).

The upshot of this academic disparity has been that, other than for Asians, college enrollment and opportunities have been disproportionate for minorities and ESL students than would be expected due to their representation within the general population (Casselmann, 2014). Indeed, at one point educational institutions attempted to remedy inherent inequalities in admission through affirmative action and quota systems for minorities, but these have been consistently struck down by courts, again as recently as this year in a case involving the University of Michigan. At present, the system presents obstacles for marginalized or minority students with the exception of Asians. Indeed, one commentator notes:

[B]lacks and Latinos lose ground at every step of the educational process. They are less likely to finish high school, less likely to attend college and less likely to graduate when they get there. All of that adds up to a big gap in the number that ultimately matters most: “educational attainment,” or the amount of school a person completes. In 2013, about 40 percent of Whites between the ages of 25 and 29 had a bachelor’s degree or more, compared to about 20 percent of Blacks, 15 percent of Hispanics and 58 percent of Asians, according to data from the Current Population Survey. The gap hasn’t narrowed significantly in recent years (Casselmann, 2014).

As can be expected, statistics support this disproportionate enrollment:

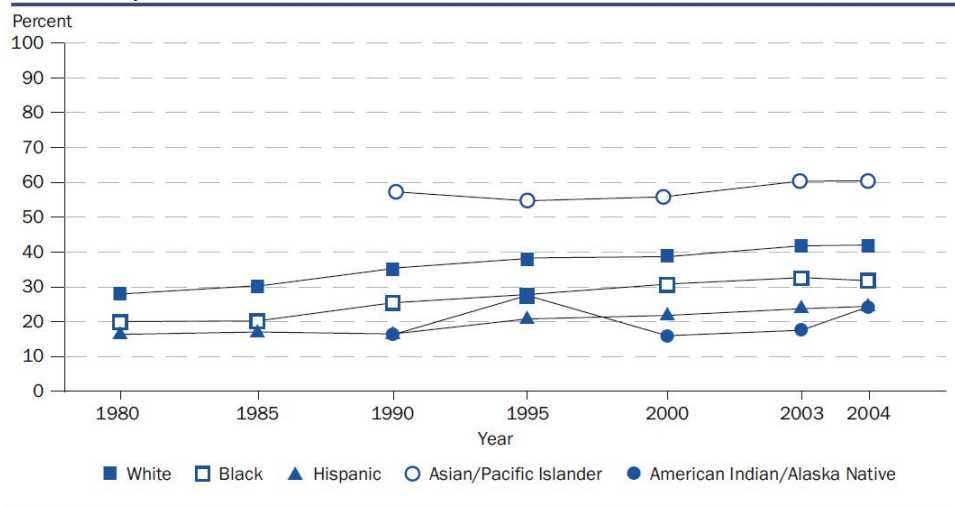


Figure 11. College Enrollment by Race (NCES, 2008, p. 113).

Clearly, there have been some advances and increases in enrollment by minorities, whether due to more active recruitment by colleges, better informed high school counseling departments, more awareness on the part of the students themselves, participation in college readiness programs, or any combination thereof. Regardless, the figures are still disappointing in that Asian/Pacific Islanders and Whites continue to dominate college enrollment today, as they have for the last forty years. In addition, schools in urban settings not only have a larger minority composition, they face challenges such as old and dilapidated facilities, urban blight, increased crime, and other problems associated with urban settings in general. In fact, the Urban Institute identified the following as major social issues that need to be addressed in urban areas: “economic development, poverty, family support and social welfare, housing, land use and transportation, education, drug abuse, racial discrimination and segregation, and intergovernmental financial arrangements” (Galster et al., 1994).

From this analysis, several facts are clear:

- Middle school age is a time of challenge for all students due to biological, physiological, psychological, hormonal and emotional changes occurring due to natural maturation processes.
- These changes can result in negative behaviors, and can be exacerbated in an urban setting.

- Educators have tried to address the challenges and behaviors through such actions as restricting the entire educational system to include middle schools, designed to help the transition from elementary school to high school, and from childhood to adulthood.
- The middle school philosophy, including curriculum differentiation, was based on a socioeconomic reality wherein minorities were ranked at the lower echelons and were not expected to advance. Hence, there may be built-in disparities in the efficiency of middle school structures in regard to minority youth.
- Statistics support that minority youth are more prone to engaging in many problematic behaviors than their peers.
- Statistics also support that there is a distinct achievement gap between nonminority and minority students, which limits opportunities such as college enrollment.

As a result, educators have sought remedies or solutions to attempt to put minority and other marginalized youth on a somewhat equal footing when it comes to experiences that would allow them greater access to college and postsecondary opportunities. One of the frequent but often decried solutions has been to spend more money on education through increased teacher salaries, improved facilities, and per capita spending per student. Although statistical correlations do exist between spending and academic results, politicians often decry such methods through rhetoric. Examples of such statements are as follows:

The former Governor of Florida Rick Scott, in justifying his cuts to the state's education budget, remarked, "We're spending a lot of money on education, and when you look at the results, it's not great." In his 2011 "State of the State" address, New York Governor Andrew Cuomo declared, "Not only do we spend too much, but we get too little in return. We spend more money on education than any state in the nation and we are number 34 in terms of results."

And in an interview with the former Governor of New Jersey Chris Christie, the Wall Street Journal reported, "According to Mr. Christie, New Jersey taxpayers are spending \$22,000 per student in the Newark school system, yet less than a third of these students graduate, proving that more money isn't the answer to better performance." (Baker, 2012, pp. 1-2).

Whether spending goes up or down, the fact remains that certain students do not have equal access to college or postsecondary opportunities, so other avenues must be approached.

State and federal governmental agencies have looked for ways to assure success of all students, through such legislation as the “No Child Left Behind Act of 2001” (Pub. Law 110-117, 2002) and the “Individuals with Disabilities Education Act of 2004” (20 U.S.C. § 1400 et seq. 2004), both aimed at responsiveness to the needs and inclusion of marginalized or other out-of-the-mainstream students. Private organizations formed with similar intents, including “Teach for America” (TFA, 2014), “Math for America” (MFA, 2014), and “City Year” (City Year, 2014). These approaches vary from instituting and enforcing minimum standards of achievement and teacher accountability to hiring and sending teachers and tutors to work with disadvantaged students nationwide. One such response, that had its genesis in perceived inequality of opportunity for minorities, ESL students and others facing unique circumstances, has been the development of the Advancement Via Individual Determination (AVID) program, designed specifically to facilitate and enhance college readiness.