
#### Abstract

Access

Educational aspirations and expectations, perhaps formed fairly early in life, are certainly key factors influencing access. They are, in turn, undoubtedly influenced by academic benchmarks such as achievement levels in elementary and secondary school, the type of secondary education program followed, and persistence through high school to awarding of the diploma.

Other important determinants of access arise from circumstances over which the student has had little or no control. Among these are one's background, which includes family structure as well as the expectations parents have for their children, available role models, educational opportunities, and perhaps even health. $<2>$ In addition, lifestyle choices, such as whether and when to get married and start a family (as well as some forms of pro-social or anti-social behavior), affeqostsecondary educational opportunities and decisions. Finally, becauseostsecondary education must start with the application and enrollment process, the failure to take these steps, for whatever reasons, can be viewed as obstacles to postsecondary access.


Educational expectations Early goals and images of ability level and opportunities may affect achievement throughout life. The NELS:88 data contain reports of the highest level of education students expected to attain, collected while cohort members were in the eighth grade and then four years later.

As early as eighth grade, almost two-thirds of the NELS:88 eighth grade cohort expected to attain a bachelor's degree or higher, and an additional 22 percent expected to obtain soprestsecondary education.<3> There was an overall decline between 1988 and 1992 in the percentage who expected to earn a bachelor's or higher degree (Table 1). This may reflect more realism and knowledge acquired during this four-year interim as students assess their own interests and abilities, learn more about the availability and costs of postsecondary alternatives, consider other life-style choices such as marriage, gain some employment experience, and become more aware of the potential gains from a college or advanced degree.

Considering 1992 expectations, a greater percentage of women than men, and a greater percentage of Asians than other racial/ethnic groups, reported that they expected to obtain at least a baccalaureate degree. Also, a lower percentage of Hispanic 1988 eighth graders than whites expected to earn a bachelor's degree or higher. As one moves up the socioeconomic ladder there is a pronounced increase in the percentage of 1988 eighth graders who expected in 1992 to earn at least a bachelor's degree, from 36 percent in the lowest socioeconomic quartile to 86 percent in the highest quartile. In addition, as tested achievement increases so does the percentage of cohort members with expectations for a bachelor's or higher degree: Approximately 92 percent of those in the highest test quartile in 1992 expected to complete college and/or additional postgraduate work (Table 1). Students in this latter group have likely done well in high school, and thus have probably received more positive feedback and encouragement with respect to continuing their formal learning.<4>

Table 1 Percentage of 1988 eighth graders indicating in 1988 and 1992 the highest level of education they expect to obtain, by selected background characteristics

|  | Less than <br> high school High schoo |  |  | Some college Bachelor's or vocational degree or |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Year | diploma | graduate | school | more |
| Total | 1988 | 1.5 | 10.3 | 22.4 | 65.8 |
|  | 1992 | 2.3 | 8.1 | 28.1 | 61.4 |
| Sex |  |  |  |  |  |
| Male | 1988 | 1.8 | 11.7 | 23.2 | 63.3 |
|  | 1992 | 2.8 | 8.9 | 28.6 | 59.7 |
| Female | 1988 | 1.1 | 8.9 | 21.7 | 68.2 |
|  | 1992 | 1.9 | 7.2 | 27.6 | 63.2 |
| Race/ethnicity |  |  |  |  |  |
| Asian or Pacific Islander | 1988 | 1.8 | 4.8 | 21.3 | 72.2 |
|  | 1992 | 2.7 | 4.3 | 19.2 | 73.8 |
| Hispanic regardless of race | 1988 | 2.3 | 13.1 | 29.8 | 54.8 |
|  | 1992 | 4.2 | 9.4 | 33.8 | 52.7 |
| Black not of Hispanic origin | 1988 | 2.3 | 7.5 | 25.9 | 64.3 |
|  | 1992 | 1.8 | 10.5 | 28.7 | 59.0 |
| White not of Hispanic origin | 1988 | 1.1 | 10.5 | 20.7 | 67.6 |
|  | 1992 | 2.2 | 7.4 | 27.6 | 62.8 |
| Socioeconomic status (1992) |  |  |  |  |  |
| Lowest quartile | 1988 | 3.2 | 22.2 | 32.5 | 42.2 |
|  | 1992 | 6.9 | 16.2 | 40.9 | 35.9 |
| Middle two quartiles | 1988 | 1.0 | 9.8 | 25.1 | 64.1 |
|  | 1992 | 1.4 | 7.3 | 31.5 | 59.7 |
| Highest quartile | 1988 | 0.8 | 1.4 | 8.9 | 88.9 |
|  | 1992 | 0.2 | 2.4 | 11.0 | 86.3 |
| Test quartile (1992) |  |  |  |  |  |
| Lowest quartile | 1988 | 2.7 | 22.5 | 35.7 | 39.0 |
|  | 1992 | 4.8 | 15.4 | 47.8 | 31.9 |
| Middle two quartiles | 1988 | 0.9 | 7.6 | 23.9 | 67.6 |
|  | 1992 | 1.6 | 6.3 | 31.6 | 60.5 |
| Highest quartile | 1988 | 0.3 | 1.0 | 7.5 | 91.3 |
|  | 1992 | 0.0 | 1.0 | 6.9 | 92.1 |

Source: NCES, National Education Longitudinal Study: 19884 9/25/95
Note: Rows may not sum to 100 percent due to rounding. The estimates in this tabihelude those who dropped out of school between eighth and twelfth grade.

Academic preparation Access to variouspostsecondary education options in general, and to four-year colleges and universities in particular, is affected first and foremost by academic preparation. Nearly 62 percent of all 1988 eighth graders reported being enrolled in a high school academic/college preparatory track in 1992; 38 percent were enrolled in a general or vocational program (Table 2A).<5> A significantly higher percentage of females than males were in academic/college preparatory programs. Asians had significantly higher percent representation in high school academic programs than any other racial/ethnic group except whites. Blacks and Hispanics showed lower representations than the other two racial/ethnic groups (but with no significant differences between blacks and Hispanics). Those in the middle and highest socioeconomic and test quartiles participated in academic programs in greater percentages
(Table 2A).
Among the 1988 eighth graders in the highest 1992 test quartile, only 13 percent were enrolled in vocational or general study programs in high school. In contrast to observations about the entire cohort above, there were no differences in academic program participation by sex, race/ethnicity, or socioeconomic status (Table 2B).

For the vast majority of students, attaining a high school diploma is a necessary, but not sufficient, condition for the successful attainment of a bachelor's or advanced degree. Also important are the particular high school courses taken and the level of achievement attained in them. By 1994, 81 percent of those who were eighth graders in 1988 had received a regular high school diploma, 6 percent had received a GED certificate, 0.4 percent reported that they were still working toward a high school diploma, and 5 percent were working toward a GED or certificate (Table 3A). The remainder, 7.2 percent, reported not having earned a diploma or certificate and were not continuing to pursue one.<6>

Asians were graduated at a rate higher than the other racial/ethnic subgroups, and whites had statistically higher rates than blacks or Hispanics. High school graduation rates vary directly by socioeconomic and test quartile. In the highest test quartile, almost all students had earned diplomas (Table 3B).

Table 2A Percentage of 1988 eighth graders reporting in 1992 their type of high school program at the last high school attended, by various characteristics

$$
\text { Academic } \quad \text { Vocational \& other }
$$

Total
61.9
38.1

| Sex |  |  |
| :--- | :---: | :---: |
| Male | 60.1 | 39.9 |
| Female | 63.7 | 36.3 |
| Race/ethnicity |  |  |
| Asian or Pacific Islander | 72.1 | 27.9 |
| Hispanic regardless of race | 53.0 | 47.0 |
| Black not of Hispanic origin | 53.2 | 46.8 |
| White not of Hispanic origin | 64.7 | 35.3 |
| Socioeconomic status (1992) |  |  |
| Lowest quartile | 45.1 | 54.9 |
| Middle two quartiles | 62.1 | 37.9 |
| Highest quartile | 78.5 | 21.5 |
| Test quartile (1992) |  |  |
| Lowest quartile | 44.5 | 55.5 |
| Middle two quartiles | 73.0 | 27.0 |
| Highest quartile | 86.6 | 13.4 |

Source: NCES, National Education Longitudinal Study: 19884 9/25/95
Note: Rows may not sum to 100 percent due to rounding.

Table 2B Percentage of 1988 eighth graders in the highest 1992 test quartile reporting in 1992 their type of high school program at the last high school attended, by various characteristics

|  | Academic | Vocational \& other |
| :--- | :---: | :---: |
| Total | 86.6 | 13.4 |
| Sex | 85.4 | 14.6 |
| Male | 87.8 | 12.2 |
| Female |  |  |
| Race/ethnicity | 85.7 | 14.3 |
| Asian or Pacific Islander | 81.8 | 18.2 |
| Hispanic regardless of race | 79.5 | 20.5 |
| Black not of Hispanic origin | 87.2 | 12.8 |
| White not of Hispanic origin |  |  |
| Socioeconomic status (1992) | 79.7 | 20.3 |
| Lowest quartile | 86.7 | 13.3 |
| Middle two quartiles | 87.2 | 12.8 |
| Highest quartile |  |  |

Source: NCES, National Education Longitudinal Study: 19884 9/25/95
Note: Rows may not sum to 100 percent due to rounding.
Table 3A Percentage of 1988 eighth graders in 1994 high school diploma status groups, by various characteristics

Received a Received a Workingtoward
high school GED or Enrolled in high school

|  | diploma | certificate high school | equivalence | Dropout |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Total | 81.3 | 6.2 | 0.4 | 4.9 | 7.2 |
| Sex |  |  |  |  |  |
| Male | 80.2 | 7.1 | 0.4 | 4.7 | 7.5 |
| Female | 82.4 | 5.2 | 0.4 | 5.1 | 6.9 |
| Race/ethnicity |  |  |  |  |  |
| Asian or Pacific Islander | 91.3 | 1.4 | 0.2 | 2.0 | 5.1 |
| Hispanic regardless of race | 72.7 | 5.9 | 1.4 | 5.7 | 14.3 |
| Black not of Hispanic origin | 71.8 | 10.5 | 0.5 | 8.9 | 8.4 |
| White not of Hispanic origin | 84.4 | 5.5 | 0.3 | 4.0 | 5.7 |
| Socioeconomic status (1992) |  |  |  |  |  |
| Lowest quartile | 64.8 | 7.8 | 0.9 | 4.7 | 17.8 |
| Middle two quartiles | 83.6 | 6.3 | 0.4 | 1.4 | 5.0 |
| Highest quartile | 93.6 |  | 0.1 | 0.9 |  |
| Test quartile (1992) |  |  |  | 9.3 | 12.2 |
| Lowest quartile | 72.0 | 4.6 | 0.9 | 2.0 | 2.3 |
| Middle two quartiles | 90.7 | 0.7 | 0.2 | 0.1 | 0.1 |
| Highest quartile |  |  |  |  |  |

Source: NCES, National Education Longitudinal Study: 19884 9/25/95
Note: Rows may not sum to 100 percent due to rounding.

Table 3B Percentage of 1988 eighth graders in the highest 1992 test quartile, in 1994 high school diploma status groups, by various ahacteristics Received a Received a Working toward high school GED or Enrolled in high school diploma certificate high school equivalence Dropout

| Total | 99.1 | 0.7 | 0.0 | 0.1 | 0.1 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Sex

| Male | 99.0 | 0.8 | 0.0 | 0.0 | 0.1 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Female | 99.1 | 0.6 | 0.0 | 0.2 | 0.1 |

## Race/ethnicity

| Asian or Pacific Islander | 99.9 | 0.0 | 0.0 | 0.0 | 0.1 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Hispanic regardless of race | 99.4 | 0.3 | 0.0 | 0.3 | 0.0 |
| Black not of Hispanic origin | 99.5 | 0.5 | 0.0 | 0.0 | 0.0 |
| White not of Hispanic origin | 99.0 | 0.8 | 0.0 | 0.1 | 0.1 |
| Socioeconomic status (1992) |  |  |  |  |  |
| Lowest quartile | 98.0 | 0.7 | 0.0 | 0.7 | 0.5 |
| Middle two quartiles | 98.5 | 1.3 | 0.0 | 0.1 | 0.2 |
| Highest quartile | 99.7 | 0.2 | 0.0 | 0.1 | 0.0 |

Source: NCES, National Education Longitudinal Study: 19884 9/25/95
Note: Rows may not sum to 100 percent due to rounding.

Academic performance Achievement in mathematics and reading, as measured by scores on the NELS:88/92 Second Follow-up cognitive test score composite, was used in this report as a proxy for college readiness. $<7>$ Those in the highest test quartile are a subgroup that should have experienced the fewest academic access barriers. Consistent with educational expectations, type of high school program pursued, and high school diploma status, a significantly smaller percentage of women than men scored in the lowest test quartile, and significantly more women than men scored in the middle two quartiles. There was no observed difference between men and women in the highest quartile (Table 4).

The NELS:88 data do show differences, however, across test quartiles by racial/ethnic groupings and socioeconomic status. A higher percentage of Asians and whites than blacks and Hispanics in the 1988 eighth grade cohort fall into the highest test quartile. Furthermore, a significantly higher percentage of Hispanics than blacks scored in the highest test quartile. About six percent of students from the lowest socioeconomic quartile scored in the highest test quartile, while about half of those in the highest socioeconomic quartile did so; conversely, 44 percent of students in the lowest socioeconomic group also fell into the lowest test quartile while only 7.5 percent of those in the highest socioeconomic quartile did.

Table 4 Percentage of 1988 eighth graders in 1992 tested achievement quartile groups, by various characteristics

|  | Lowest quartile | Middle two quartiles | Highest quartile <7> |
| :---: | :---: | :---: | :---: |
| Total | 23.0 | 50.1 | 26.9 |
| Sex |  |  |  |
| Male | 25.0 | 48.3 | 26.7 |
| Female | 20.9 | 52.0 | 27.1 |
| Race/ethnicity |  |  |  |
| Asian or Pacific Islander | 15.9 | 46.8 | 37.3 |
| Hispanic regardless of race | 36.5 | 50.4 | 13.1 |
| Black not of Hispanic origin | 45.0 | 47.0 | 7.9 |
| White not of Hispanic origin | 17.4 | 50.9 | 31.7 |
| Socioeconomic status (1992) |  |  |  |
| Lowest quartile | 44.2 | 49.3 | 6.5 |
| Middle two quartiles | 22.0 | 55.0 | 23.0 |
| Highest quartile | 7.5 | 42.3 | 50.3 |

Source: NCES, National Education Longitudinal Study: 19884 9/25/95
Note: Rows may not sum to 100 percent due to rounding. Refer to endnote 7 for details regarding construction of quartiles.

Applications. As noted above (Table 3A), 81 percent of 1988 eighth graders had earned a regular high school diploma by 1994 (the Third Follow-up). In the vast majority of cases this would have occurred soon after the Second Follow-up survey in 1992. In 1992, 61 percent of the eighth grade cohort expressed the expectation of obtaining at least a bachelor's degree, and an additional 28 percent expected to obtain some postsecondary education (Table 1). However, by spring of 1992 (i.e., the senior year in high school for most of these students), 40 percent of the 1988 eighth graders had not submitted a completed postsecondary application (Table 5A). This group should include at least three categories: those who fully intend to apply at some point but are delaying entry, those who intend to enroll sometime in 1992 and will apply after high school (such as to local community colleges that have multiple, as well as more flexible, application deadlines), and those who currently do not intend to enrollpostsecondary education.

Of those who had applied to apostsecondary institution by 1992, about 12 percent reported applying to only one institution, while almost 88 percent who had applied t甲astsecondary institution reported completing at least two applications (Table 5A). There was considerable variation by sex, race/ethnicity, socioeconomic status and tested ability in the application process.

A significantly greater percentage of males than females failed to file an application by the 1992 survey date, while a significantly greater percentage of females than males had filed two or more applications by that date. A higher percentage of Asians and whites than blacks and Hispanics filed at least one postsecondary application. A greater percentage of Asians also reported filing multiple applications than did any group except whites. Blacks and Hispanics did not differ from each other with regard to filing no applications.

More than twice the percentage of 1988 eighth graders in the lowest socioeconomic quartile did not file an application in comparison to those in the highest socioeconomic quartile. Furthermore, those in the lowest test quartile had nearly four times the percentage of non-filers compared to those in the highest test quartile. At the other end of the spectrum, over three-fourths of those in the highest socioeconomic quartile and 85 percent of cohort members in the highest test quartile filed two or more applications while only 31 and 29 percent in the lowest socioeconomic and test quartiles, respectively, did so (Table 5A).<8>

Whereas for the 1988 eighth grade population as a whole, 40 percent had not fileфastsecondary application by spring of 1992 , within the highest tested achievement quartile only 15 percent had not done so (Table 5B). Inasmuch as virtually all of this group, at the same point in time, expressed the expectation of extending their formal learning beyond high school, and most of that in a baccalaureate institution (92 percent), it would be reasonable to assume that this 15 percent figure represents delayed entry rather than withdrawal. If this is a valid assumption, delay may be more pronounced among the lower socioeconomic quartiles and for Hispanics in comparison to Asians and whites. (Hispanics, even when they do apply and enroll, attend two-year community-college programs in significantly greater percentages--see below.)
$\begin{array}{ll}\text { Table 5A } & \begin{array}{l}\text { Percentage of } 1988 \text { eighth graders reporting numbers posstsecondary applications } \\ \text { filed in 1992, by various characteristics }\end{array}\end{array}$ filed in 1992, by various characteristics

|  | Zero | One | Two or more |
| :--- | :---: | :---: | :---: |
| Total | 40.1 | 7.3 | 52.6 |
| Sex |  |  |  |
| Male | 45.6 | 6.8 | 47.6 |
| Female | 34.5 | 7.7 | 57.8 |
| Race/ethnicity |  |  |  |
| Asian or Pacific Islander | 32.8 | 2.2 | 65.0 |
| Hispanic regardless of race | 50.5 | 11.0 | 38.5 |
| Black not of Hispanic origin | 47.6 | 8.2 | 44.2 |
| White not of Hispanic origin | 36.9 | 6.8 | 56.4 |
| Socioeconomic status (1992) |  |  |  |
| Lowest quartile | 55.2 | 14.3 | 30.6 |
| Middle two quartiles | 42.3 | 6.7 | 51.0 |
| Highest quartile | 20.8 | 1.5 | 77.7 |
| Test quartile (1992) |  |  |  |
| Lowest quartile | 58.0 | 13.0 | 29.0 |
| Middle two quartiles | 41.6 | 2.8 | 55.6 |
| Highest quartile | 15.1 | 0.3 | 84.7 |

Source: NCES, National Education Longitudinal Study: 19884 9/25/95
Note: Rows may not sum to 100 percent due to rounding.

Table 5B Percentage of 1988 eighth graders in the highest 1992 test quartile reporting numbers of postsecondary applications filed in 1992, by various characteristics

|  | Zero | One | Two or more |
| :--- | :---: | :---: | :---: |
| ${ } }$ | 15.1 | 0.3 | 84.7 |
| Sex | 18.3 | 0.3 | 81.5 |
| Male | 11.8 | 0.2 | 88.0 |
| Female |  |  |  |
| Race/ethnicity | 8.9 | 0.0 | 91.1 |
| Asian or Pacific Islander | 28.4 | 0.0 | 71.6 |
| Hispanic regardless of race | 18.0 | 0.0 | 82.0 |
| Black not of Hispanic origin | 14.5 | 0.3 | 85.2 |
| White not of Hispanic origin |  |  |  |
| Socioeconomic status (1992) | 34.0 | 0.9 | 65.1 |
| Lowest quartile | 21.4 | 0.5 | 78.1 |
| Middle two quartiles | 7.9 | 0.0 | 92.1 |

Source: NCES, National Education Longitudinal Study: 19884 9/25/95
Note: Rows may not sum to 100 percent due to rounding.

Participation. Overall, about 63 percent of the NELS: 88 eighth grade cohort had attended some form of postsecondary education by 1994. In general, enrollment patterns followed those for applications. A greater percentage of women than men reported attending at least opeostsecondary institution.<9> In the overall 1988 eighth grade respondent population, Asians showed the greatest percentage having attended a postsecondary educational institution compared to all other racial/ethnic groups. Blacks and Hispanics had lower enrollment rates than Asians or whites.

Sizable differences were also found for test and socioeconomic groupings; a greater percentage of 1988 eighth graders in the highest and middle two socioeconomic quartiles ( 88 percent and 63 percent, respectively) reported attending at least on甲ostsecondary institution, whereas among those in the lowest quartile only 36 percent reported doing so. The enrollment percentage was much higher ( 92.7 percent) for those in the highest test quartile than in the middle two quartiles ( 69.3 percent) or in the lowest quartile ( 38.6 percent). Furthermore, a greater percentage of those in the middle test quartile than those in the lowest quartile reported having attended postsecondary institution by 1994 (Table 6A).

Similar differences in enrollment patterns as those noted above also occurred by sex among cohort members in the highest test quartile. No significant differencespostsecondary attendance by race/ethnicity were observed for the highest test quartile (Table 6B).

Table 6A $\begin{aligned} & \text { Percentage of } 1988 \text { eighth graders reporting attendance apmstsecondary institution } \\ & \text { (PSE) by 1994, by various characteristics }\end{aligned}$

|  | Did not attend a PSE | Attended at least one PSE |
| :--- | :---: | :---: |
| Total | 37.3 | 62.7 |
| Sex |  |  |
| Male | 40.4 | 59.6 |
| Female | 34.2 | 65.8 |
| Race/ethnicity |  |  |
| Asian or Pacific Islander | 48.5 | 80.5 |
| Hispanic regardless of race | 47.1 | 51.2 |
| Black not of Hispanic origin | 34.0 | 52.9 |
| White not of Hispanic origin |  | 66.0 |
| Socioeconomic status (1992) | 64.0 |  |
| Lowest quartile | 37.0 | 36.0 |
| Middle two quartiles | 11.7 | 63.0 |
| Highest quartile |  | 88.3 |
| Test quartile (1992) | 61.4 | 38.6 |
| Lowest quartile | 70.7 | 69.3 |
| Middle two quartiles | 7.3 | 92.7 |
| Highest quartile |  |  |

Source: NCES, National Education Longitudinal Study: 19884 9/25/95
Note: Rows may not sum to 100 percent due to rounding.

Table 6B Percentage of 1988 eighth graders in the highest 1992 test quartile reporting attendance at apostsecondary institution (PSE) by 1994, by various characteristics

## Did not attend a PSE Attended at least one PSE

Total
Sex
Male
9.8
4.9
3.7
12.4
6.9
7.3
$\begin{array}{lll}\text { Lowest quartile } & 23.1 & 76.9\end{array}$
11.1
$\begin{array}{lll}\text { Lowest quartile } & 23.1 & 76.9\end{array}$
Middle two quartiles
2.6

| Highest quartile | 2.6 | 97.4 |
| :--- | :--- | :--- |

Note: Rows may not sum to 100 percent due to rounding.

