

What Is a Cohort?

A *cohort* is a group of people studied over time. The individuals in the group have at least one statistical factor — such as when they started college — in common.

The Achieving the Dream 2002 student cohort, for example, is the group of credential-seeking students that attended Achieving the Dream institutions for the first time in fall 2002.

Tracking a cohort over time makes it possible to compare the progress and outcomes of different groups of students (e.g., groups defined by race, age or other demographic characteristics) and to determine if there are gaps in achievement among groups of interest.

Outcome Differences by Developmental Status and Gender

Developmental education is an important part of the community college mission. According to the U.S. Department of Education, 98 percent of public two-year institutions offered at least one developmental reading, writing, or mathematics course in 2000.¹ In 2004, 61 percent of students attending public two-year institutions completed at least one developmental course.²

The longitudinal data from Achieving the Dream colleges suggest that male and female students experience developmental education differently. A previous issue of *Data Notes* found that females in Achieving the Dream colleges were referred to developmental education at a higher frequency than males, and that 64 percent of female students were referred to some type of developmental education,

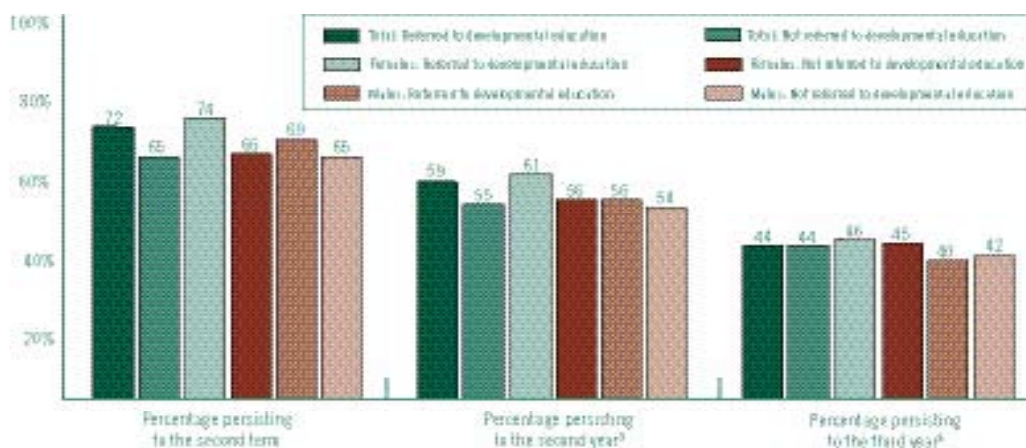
compared with 61 percent of male students.³ However, females who enrolled full-time accumulated more credits, completed a larger percentage of the credits they attempted, and attained higher GPAs than male students.

Because there has been such a large increase in the number of female undergraduates, the difference in developmental needs and outcomes between male and female students has become increasingly important. The number of female students enrolling in higher education increased 208 percent between 1969–1970 and 2005–06, compared with 57 percent for male students.⁴ Nationally, females comprise 59 percent of community college enrollment, compared with just under 42 percent for males.⁵

The increase in female student enrollment and the large share of students requiring developmental education leads to the question of the

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Figure 1. Percentage of Rounds 1 and 2 Achieving the Dream students¹ persisting², by developmental referral status and gender



¹ Includes: Rounds 1 and 2, 2002 and 2003 cohorts.

² Persistors are those who completed, transferred or were still enrolled.

³ Second or third year persistors are those that enrolled, completed or transferred any time during the academic year.

¹ Remedial Education at Degree-Granting Postsecondary Institutions in Fall 2000 (November 2003). U.S. Department of Education, National Center for Education Statistics (NCES), Postsecondary Education Quick Information System (PEQIS), NCES 2004010. Available at: <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2004010>

² Condition of Education 2008. U.S. Department of Education, Institute for Education Sciences (IES), National Center for Education Statistics (NCES), Student Effort and Educational Progress: Postsecondary Persistence and Progress – Indicator 18. Available at: <http://nces.ed.gov/programs/coe/2004/section3/indicator18.asp>

³ Clery, S. "Minority Males: Race/Ethnicity, Gender and Student Outcomes," *Data Notes: Keeping Informed about Achieving the Dream Data*. Vol. 3, No. 1. January/February 2008. Available at: http://www.achievingthedream.org/_pdfs/datanotes/DataNotes-JanFeb-2008.pdf

⁴ U.S. Department of Education, National Center for Education Statistics (NCES), *Digest of Education Statistics: 2007*, Table 178. Historical summary of faculty, students, degrees, and finances in degree-granting institutions: Selected years, 1869–70 through 2005–06.

⁵ *Digest of Education Statistics: 2007*. U.S. Department of Education, National Center for Education Statistics (NCES). Available at: http://nces.ed.gov/programs/digest/d07/tables/dt07_184.asp?referrer=list.

degree to which academic outcomes differ by gender if developmental needs are held constant. And if this is the case, to what extent do the differences occur? The results suggest that males and females proceed differently even when developmental education needs are taken into consideration. The following analysis shows that persistence and academic progress of males are different from those of females for both those referred to developmental courses and those who were not referred. This analysis includes students in baseline years one and two at Rounds 1 and 2 Achieving the Dream colleges, which allowed for analysis through the third year.

Developmental Education Referral and Persistence

Overall, 70 percent of first-term students persisted into the second term.⁶ Interestingly, students referred to developmental education persisted at a higher rate than students not referred—72 percent compared with 65 percent (Figure 1). Fifty-nine percent of students referred to developmental education persisted into the second year, compared with 55 percent of non-referred students. By the third year, rates of persistence were not significantly different between those referred and not referred to developmental education, dropping to 44 percent for both groups.

It is noteworthy that females persisted at higher rates than males, regardless of developmental referral status. Although 67 percent of females were referred to developmental education compared with 64 percent of males, 61 percent of referred female students persisted to the second year, compared with 56 percent of referred male students. Additionally, 46 percent of referred female students and 40 percent of referred male students persisted to the third year.

“Female students are doing better in developmental courses and persisting at higher rates than male students.”

Female students are doing better in developmental courses and persisting at higher rates than male students. Seventy-four percent of females referred to developmental education persisted to the second year, and 61 percent to the third year. That compares to a second-year persistence rate of 69 percent for males referred to developmental education, and 56 percent that persisted to the third year. The data appear to indicate that female students are more receptive to developmental education or more determined to stay in community college after referral than their male counterparts. Further research is needed to determine why female students out-persist male students.

For students not referred to developmental education, the gap was slightly smaller, but females continued to persist at higher rates: 66 percent of females persisted to the second year and 56 percent to the third year, while 65 percent of the males persisted to the second year and 54 percent to the third year.

GPA and Accumulated Credits

Not only did females referred and not referred to developmental education persist at higher rates than males in the comparable groups, but other measures of academic achievement were better as well: Females both referred and not referred to developmental education achieved higher cumulative grade point averages (GPAs) and completed, on average, a larger percentage of credits attempted than their male counterparts.

Overall, females had a higher average GPA (2.76) at the end of the second year than did males (2.58) (Figure 2). The same was true at the end of the third year, though the gap is much narrower, with males earning an average GPA (2.90) within one-tenth of a point of the average GPA earned by female students (2.99). Referred female students achieved higher GPAs than did referred male students at the end of the second (2.67 and 2.48, respectively) and third years (2.92 and 2.80, respectively).

“Referred females successfully completed a slightly higher percentage of credits attempted than their male counterparts.”

Interestingly, in both year two and year three, males and females referred to developmental education attempted similar numbers of credits; however, referred females successfully completed a slightly higher percentage of credits than did their male counterparts. Females completed 77 percent of the credits they attempted by the end of year two, compared with 72 percent for males. In year three, the percentages were 78 for females and 74 for males (Figure 2).

It is noteworthy that the pattern of accumulated credits for students not referred to developmental education differs by gender: Males not referred attempted more credits than females, but they completed approximately the same number. Thus, the percentage of credits attempted that were completed differed: Referred males completed 78 percent of credits attempted through the second year, and 79 percent in the third. This compares with 83 and 84 percent, respectively, for referred females.

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⁶ This number is not referenced in Figure 1 and is an overall percentage based on our analysis.

Figure 2. Cumulative GPA and credits attempted and completed by Rounds 1 and 2 Achieving the Dream students¹, by academic year, developmental referral status and gender

	SECOND YEAR				THIRD YEAR			
	Cumulative GPA	Number of credits attempted	Number of credits completed	Percentage of credits completed	Cumulative GPA	Number of credits attempted	Number of credits completed	Percentage of credits completed
TOTAL, ALL STUDENTS	2.69	41.7	32.9	76.5	2.96	55.7	44.6	78.0
Referred to developmental education	2.60	42.8	33.2	74.8	2.87	58.4	46.1	76.3
Not referred to developmental education	2.92	39.2	32.2	80.3	3.15	50.0	41.5	81.5
FEMALES	2.76	41.6	33.3	78.3	2.99	55.8	45.4	79.5
Referred to developmental education	2.67	42.9	33.8	76.5	2.92	58.7	47.0	77.8
Not referred to developmental education	3.00	38.4	32.3	82.5	3.17	49.0	41.7	83.5
MALES	2.58	41.9	32.2	74.0	2.90	55.7	43.6	75.7
Referred to developmental education	2.48	42.6	32.2	72.2	2.80	58.1	44.8	74.0
Not referred to developmental education	2.81	40.2	32.2	77.6	3.12	51.1	41.3	79.0

Note: The reported average percentages are actual averages of the percentages reported for each student, rather than computed from components reported in the figure.

¹ Includes: Rounds 1 and 2, 2002 and 2003 cohorts.

What Does this Mean?

Female students who were referred to developmental education were much more likely to persist and to outperform their male counterparts. Females earned higher grade point averages and completed more of the credits they attempted than did their male counterparts. The extra academic and social support received by referred students may play an important part in their higher persistence rates, especially for female students. Further research needs to be conducted to determine why male students referred to developmental education are completing fewer of the courses they attempt, and earning lower grades in the courses they complete, than are female referred students. Although outside the scope of this report, disaggregating the data by race/ethnicity and financial need would also be useful in order to determine how consistent these differences are along race and income lines.

The gender differences of students with developmental needs, as they are coupled with persistence and other outcomes, should be considered while developing interventions and programs to help students succeed. While considering how male and female students experience developmental education classes, as they are related to persistence and outcomes, colleges should consider the following:

- Is the combination of gender and developmental education needs related to persistence and outcomes at your institution?
- Are the early warning signs of impending dropouts the same for male and female students needing developmental education? What about those who were not referred to developmental education?
- What programs are in place at your institution that target either male or female students with developmental needs? Are different types of programs needed?

Data Notes is a bimonthly publication that examines data to illuminate the challenges facing Achieving the Dream colleges and to chart their progress over time.

Achieving the Dream is a multiyear national initiative to help more community college students succeed. The initiative is particularly concerned about student groups that traditionally have faced significant barriers to success, including students of color and low-income students. The initiative aims to help participating colleges identify at-risk student groups in their student populations and then design and implement intervention strategies that will increase the success of these at-risk groups.

This issue of *Data Notes* was written by Amy Topper, research associate, JBL Associates, Inc., edited by Will Sutton of Achieving the Dream at MDC, Inc. and designed by Rachel Goodwin.

If you have questions regarding this issue, or if there is a topic you would like to see addressed in *Data Notes*, please contact Sue Clery at sclery@jblassoc.com.

This report uses the April 2008 version of the Achieving the Dream database. Institutions are identified by the year they started work with the initiative.