datanotes
Keeping Informed about Achieving the Dream Data
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Achieving the Dream

Achieving the Dream: Community Colleges Count is a bold national effort to help more community college students succeed, with a special focus on students of color and low-income students. The initiative proceeds from the premise that success begets success, using a student-centered model of institutional improvement to create a culture of evidence in which data and inquiry drive broad-based institutional efforts to close achievement gaps and improve student outcomes overall.

Gender and Outcomes

If the Achieving the Dream initiative had been launched in the 1960s, one of the likely goals would have been to improve women's success in higher education institutions. However, over the past 50 years, the imbalance in higher education outcomes by gender have reversed. Today, females achieve greater overall success in postsecondary education than do males, and now, concern is more focused on the academic outcomes of males, especially those in certain economic and racial/ethnic groups. In 2007, females represented 58 percent of the enrollment in community colleges and 63 percent of the associate degrees awarded; this trend is consistent across all sectors of postsecondary education.[1] Further, males received only 42 percent of four-year degrees, and lag behind females on almost all indicators of college preparation.

Previous research using the Achieving the Dream national database reports on specific student groups—such as males, older students, African American students, part-time students, and students in vocational programs—found that males were less likely to progress through their full developmental education sequences than were their female counterparts.[2] Furthermore, the majority of the research on the struggle of males in community colleges addresses the academic success problems of minority males. The success inequities for minority males have become so prominent that the American Association of Community Colleges recently posted a directory of Minority Male Student Success Programs on their website.[3]

The problem goes beyond minority males: analysis in a previous issue of *Data Notes* found that female students who were referred to developmental education persisted at higher rates and outperformed their male counterparts on nearly every measure of progress, regardless of race/ethnicity.[4] Females earned higher grade point averages and completed more of the credits they attempted than did their male counterparts through their second term and into their second and third academic years.

This issue of *Data Notes* extends the previous analysis to determine at what point females' outcomes diverge from those of males. Developmental math and English outcomes are provided separately for males and females during their first two years, followed by consecutive completion of the gateway class[5] in the respective discipline by the end of the second or third year. Results are provided for males and females by race/ethnicity to identify any concomitant relationships that exist.[6] Students' academic progression was analyzed according to the number of levels to which they were referred in each developmental education subject—1, 2, or 3 or more.

Developmental Education Referrals

More than half of students were referred to developmental math, with female students being more likely to be referred than male students (Figure 1). A smaller percentage of students were referred to developmental English, with only one percentage point difference in the likelihood of being referred between male and female students, 28 and 27 percent, respectively.

Developmental Education Completion

Larger differences in developmental education success rates existed between genders than in the percentages referred. Females referred to developmental math were more likely than males to complete any or all levels referred to; a 10 percentage-point gap exists between females and males completing any developmental math coursework (Figure 2). The percentage of females that finish all developmental math requirements within two years is only 4 percentage points

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[1] U.S. Department of Education, National Center for Education Statistics (2010). *Digest of education statistics: 2009* (NCES 2010–013). Washington, DC.

[2] Bailey, T., Jeong, D., & Cho, S. (2010). Referral, enrollment, and completion in developmental education sequences in community colleges. Economics of Education Review, v29, pp. 255–270.

[3] http://www.aacc.nche.edu/Resources/aaccprograms/accessinclusion/MinMaleStuSuccessProgs/Pages/Default.aspx

[4] Topper, A. (2008). Outcome differences by developmental status and gender. *Data Notes: Keeping Informed about Achieving the Dream Data*, v3, n6.

[5] Consecutive completion of the gateway class is limited to students who completed all developmental education levels they were referred to by the institution. Students who choose not to complete all of their developmental education requirements and enroll directly into gateway courses were not included in this study.

[6] The baseline cohorts for each Round; three academic years of data will be included for each cohort (cohort 2002 for Rounds 1 and 2; cohort 2003 for Round 3; cohort 2004 for Round 4; and 2006 for Cohort 2009).

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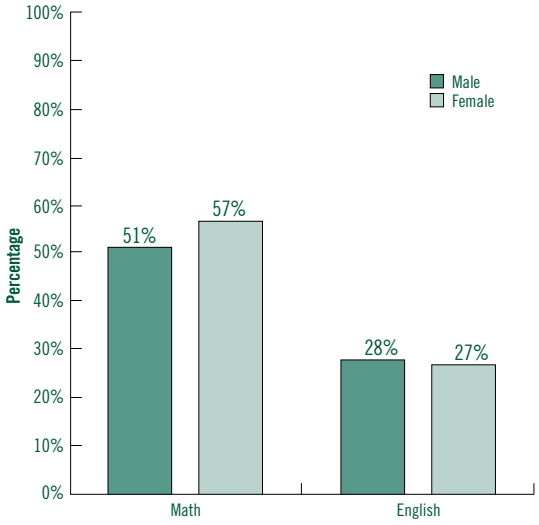
What Is a Cohort?

A cohort is a group of people studied during a period of 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 makes it possible to compare 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.

Figure 1. Percentage of Achieving the Dream students referred to developmental math and English, by gender



Note: The first baseline cohort at each Achieving the Dream college was included in this analysis (2002 Cohort for Rounds 1 and 2; 2003 Cohort for Round 3; 2004 Cohort for Round 4; 2006 Cohort for 2009 Colleges).

higher than that of males, 24 percent versus 20 percent. Although females consistently outperform males as they progress through the developmental education-gateway coursework pipeline, the difference in the percentage of

> *"Females referred to developmental math were more likely than males to complete any or all levels referred to…"*

developmental education students who complete gateway math by the end of their third year narrows to three percentage points. For those not referred to developmental math, no difference exists in gateway math pass rates by gender.

Female students continued to have the advantage in developmental English as well, and were more likely to persist through developmental coursework and into gateway coursework than were their male counterparts. However, the closure of the achievement gap seen in math is not seen in English. Further, females not referred to developmental English were also more likely than males to complete gateway English coursework within three years.

Referral Level

More than half, 53 percent, of female student—regardless of the number of levels below college students are referred to—completed at least one developmental math class within their first two years, compared with 43 percent of male students (Figure 3). When disaggregated by referral level, the percentage of male students who completed any developmental math within two years decreased slightly, which suggests that having greater developmental education needs does not dissuade students from attempting at least the first class.

Differences in developmental math completion rates become more pronounced when level of need is measured for those who complete all development math requirements within two years. Males with developmental math needs succeeded at lower rates compared with females, at each developmental referral level. Further, not only did a larger proportion of females successfully complete gateway math after three years for each comparative level of developmental math referral, but the gap between the completion rates increased with depth of developmental need. It is noteworthy that females referred to one level of developmental math were more likely to complete gateway math within three years of enrolling than those not referred to

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Figure 2. Cumulative percentage of students who completed developmental education and gateway coursework by subject area and gender

	Referred to developmental education				
	Completed any developmental course in respective subject within 2 years	Completed all developmental coursework in respective subject within 2 years	Completed gateway course in respective subject by end of 2nd year	Completed gateway course in respective subject by end of 3rd year	Non-referred: completed gateway course in respective subject by end of 3rd year
MATH					
Total, all students	**49**	**22**	**14**	**18**	**23**
Females	53	24	15	19	23
Males	43	20	13	16	23
ENGLISH					
Total, all students	**49**	**34**	**28**	**32**	**37**
Females	53	37	31	34	38
Males	45	30	25	28	35

Note: The first baseline cohort at each Achieving the Dream college was included in this analysis (2002 Cohort for Rounds 1 and 2; 2003 Cohort for Round 3; 2004 Cohort for Round 4; 2006 Cohort for 2009 Colleges).

Figure 3. Cumulative percentage of students who completed developmental education and gateway coursework by subject area, number of levels referred to and gender

	Referred to developmental education				
	Completed any developmental course in respective subject within 2 years	Completed all developmental coursework in respective subject within 2 years	Completed gateway course in respective subject by end of 2nd year	Completed gateway course in respective subject by end of 3rd year	Non-referred: completed gateway course in respective subject by end of 3rd year
MATH					
Total, all students	**49**	**22**	**14**	**18**	**23**
Females	53	24	15	19	23
1 level	53	42	24	27	N/A
2 levels	53	20	14	18	N/A
3 levels	53	8	7	11	N/A
Males	43	20	13	16	23
1 level	44	35	20	23	N/A
2 levels	43	14	11	14	N/A
3 levels	42	5	5	7	N/A
ENGLISH					
Total, all students	**49**	**34**	**28**	**32**	**37**
Females	53	37	31	34	38
1 level	52	47	36	39	N/A
2 levels	55	22	23	27	N/A
3 levels	43	3	21	27	N/A
Males	45	30	25	28	38
1 level	46	41	30	33	N/A
2 levels	44	16	18	20	N/A
3 levels	37	2	16	20	N/A

Note: The first baseline cohort at each Achieving the Dream college was included in this analysis (2002 Cohort for Rounds 1 and 2; 2003 Cohort for Round 3; 2004 Cohort for Round 4; 2006 Cohort for 2009 Colleges).

developmental math; the review of math in their developmental coursework may provide them with an advantage when they enroll in gateway math.

Overall, male and female students referred to three levels of developmental English were less likely to complete any developmental English class than those at one or two levels of need. Regardless of the depth of developmental English needs, females were more likely than males to succeed: a higher portion of females completed any and all developmental English coursework to which they were referred, and completed gateway English within both two and three years.

> *"Males with developmental math needs succeeded at lower rates compared with females, at each developmental referral level."*

Noteworthy is the fact that 3 percent of females and 2 percent of males who were referred to three levels of developmental English completed all of their developmental courses by the end of year two. Further, 21 percent of females and 16 percent of males went on to complete gateway English by year two; this may be a sign that colleges are more flexible in their gateway English requirements than in their gateway math requirements. Also, females requiring one level of developmental English were as likely to pass their gateway English class as those who were not referred to developmental English. However, the same was not true for males—33 percent of the males referred to and completing one developmental English class passed gateway English by year three, compared with 38 percent who were not referred to developmental English.

Gender and Race/Ethnicity

The relationship between race/ethnicity, gender, and developmental education is complex. For developmental or gateway course completion, females show a 2 to 14 percentage-point advantage over males (Figure 4).

Across all racial/ethnic groups, males lagged females in first developmental math class completion rates. Native American/Alaskan Native and Hispanic males fell further behind their female counterparts—where females have 12 and 11 percentage-point advantages. Female Asian/Pacific Islanders show the smallest advantage

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over their male counterparts (6 percentage point difference). In terms of completing gateway math within two years, females in all racial/ethnic groups had a 2 to 3 percentage-point advantage over males. By the end of the third year, this gap

> *"Native American/Alaskan Native and Hispanic males fell further behind their female counterparts…"*

grew to a 2 to 4 percentage point difference. In both instances, the advantage for Black, non-Hispanic females was the smalles—2 percentage points. Interestingly, for students not referred to developmental math, gateway math completion rates for females equaled or were smaller than those of males for white, Hispanic, and Asian/Pacific Islander students.

The advantage in completion rates of developmental and gateway English coursework is similar to that of math, and, across the board, the advantage to females was larger than that seen in math. At an 8 to 14 percentage point difference, the male to female disparity in completion rates of any and all developmental English coursework was greatest for Native Americans, and, as with math, the smallest for Asian/Pacific Islanders. As students move on to gateway English, again, Native Americans had the largest disparity in completion rates between males and females as compared to other racial/ethnic groups: a 10 percentage point difference by the end of year two, and 8 percentage points at the end of year three.

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Figure 4. Cumulative percentage of students who completed any and all developmental and gateway coursework by race/ethnicity and gender

	Referred to developmental education				Non-referred: Completed gateway math by end of 3rd year
	Completed any developmental math within 2 years	Completed all developmental math within 2 years	Completed gateway math by end of 2nd year	Completed gateway math by end of 3rd year	
MATH					
Total, all students	**49**	**22**	**14**	**18**	**23**
Females	53	24	15	19	23
White, non-Hispanic	54	28	18	21	24
Black, non-Hispanic	47	18	11	13	21
Hispanic	57	22	14	18	21
Asian/Pacific Islander	49	23	20	24	28
Native American/ Alaska Native	49	15	13	16	21
Males	43	20	13	16	23
White, non-Hispanic	44	23	15	17	22
Black, non-Hispanic	39	15	9	12	21
Hispanic	47	17	11	14	23
Asian/Pacific Islander	43	19	17	21	29
Native American/ Alaska Native	37	12	10	12	20
ENGLISH					
Total, all students	**49**	**34**	**28**	**32**	**37**
Females	53	37	31	34	38
White, non-Hispanic	53	41	36	38	39
Black, non-Hispanic	52	36	25	29	34
Hispanic	53	32	28	32	37
Asian/Pacific Islander	51	32	36	40	39
Native American/ Alaska Native	55	29	25	29	38
Males	45	30	25	28	35
White, non-Hispanic	46	34	29	32	36
Black, non-Hispanic	45	29	19	22	30
Hispanic	43	25	21	25	34
Asian/Pacific Islander	47	28	28	32	37
Native American/ Alaska Native	42	20	17	19	31

Note: The first baseline cohort at each Achieving the Dream college was included in this analysis (2002 Cohort for Rounds 1 and 2; 2003 Cohort for Round 3; 2004 Cohort for Round 4; 2006 Cohort for 2009 Colleges).

Worthy of note here is the fact that for the other racial/ethnic groups, females' advantage for gateway completion rates at the end of year two ranged from 7 to 8 percentage points; however, by the end of year three, this disparity closed to a difference of 2 to 4 percentage points.

What Does This Mean?

This analysis suggests that males lag females in all phases of developmental education, but some of the details warrant consideration as to what it means for practice and policy at the college level. Males who are referred to developmental math or English may require more help, incentive, or confidence to take and successfully complete the initial, required developmental class. This may ultimately reduce the gap in gateway class completion rates between males and females. However, this may be an easier task in math than in English, where males seem to struggle more than females.

These results suggest several efforts to maximize educational return on the investment:

- Are students delaying their developmental education coursework? How can your college better work with all students to ensure they enroll in developmental education classes immediately as needed? Too many students fail to start the developmental sequence, and this is where males drop behind, never to catch up.
- What steps can you take to ensure the initial developmental class is meeting the needs of all students?
- Which students are in need of the most help? Are they receiving the help they need? All students with the most profound developmental needs struggle to move ahead in their education, but this seems to be most evident in males taking developmental English.
- What subgroups of students will benefit the most from programmatic or policy improvement? Overall, success rates for males are lower than those for females. What subgroups of students will benefit the most from programmatic or policy improvement?

Achieving the Dream colleges can download the companion tables to this issue of *Data Notes*, featuring your college's data, at www.dreamwebsubmission.org. ■

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.

This issue of *Data Notes* was written by John Lee, President of JBL Associates, Inc., and edited by ATD's Director of Strategic Communications & Marketing, Katie Loovis. Newsletter production by Linda Marcetti, Asterisk & Image.

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Note: This issue of *Data Notes* uses the March 2010 version of the Achieving the Dream database. Institutions are identified by the year they started work with the initiative.

Data may not sum to 100 percent due to rounding.