

## Reality Versus Perception: Using Research to Resolve Misconceptions about Developmental Programs and Promote Credibility and Acceptance

By Bronte A. Overby

from *Inquiry*, Volume 9, Number 1, Spring 2004

© Copyright 2004 Virginia Community College System

[Return to Contents Page](#)

---

### Abstract

In this article, the author uses a comparison of various measures of success for developmental students at Patrick Henry Community College with the faculty's perceptions of these measures to break down misconceptions and stereotypes about developmental education and provide ever-needed credibility and acceptance for developmental programs.

*Last semester I ran into my colleague, Dr. White. He mentioned that he thought he had a lot of my students in his class. Pleased to hear this, and interested to know how my name had come up in his class, I asked Dr. White what gave him that idea. He replied that he assumed he had a lot of developmental students in his class because so many students had missed an easy question on his last exam.*

*Several years ago, when I first began teaching, Dr. Brown was a mentor and good friend to me. One day he told me that I should expect that students exiting my developmental math program would probably earn no higher than a "C" in his college-level courses. Later, we were talking again, and he commented on the impressive performance of his best calculus student. He was surprised to learn that this student had taken developmental math with me.*

*Last year, Dr. Green, an English faculty member, noted that a number of her students wrote poorly. She submitted a list of these poor performers to my developmental English colleague so that my colleague would be aware that students exiting the developmental English program were not performing well. My colleague looked at the list submitted to her by Dr. Green. Not a single student on that list had placed into developmental English courses.*

### How Are Developmental Programs Perceived?

Story after story just like these could be recounted where students in a developmental studies program were maligned or stereotyped. Such encounters leave developmental educators wondering why their colleagues teaching college-level courses have such a skewed perception of developmental students. It's as if the college-level faculty believe a developmental educator's role on campus is to look after a room full of academic underachievers who have been deluded into thinking they could earn a college degree. Faculty who don't teach developmental courses seem to perceive a developmental educator as a martyr on campus, one who must skillfully break the news to weak-minded, unmotivated students that they don't belong in college.

Based on literature involving developmental education, these skewed perceptions are mirrored throughout academe. Pockets of individuals on college campuses contend that ideas like an open-door policy dumb down curricula and lower standards. Such individuals believe that developmental education should not be a part of the collegiate system. California State University put a plan in place to reduce the number of developmental education classes by 90 percent by 2007 in order to create needed space for the "truly deserving" (Damashek, 1999). All around college campuses, students in remedial or developmental courses are not perceived as college material. Hull, et al (1991) examined remediation as a social construct and illustrated how inaccurate and limiting notions of developmental learners as "cognitively defective" are sometimes created and played out in the classroom. She traced a long and troubling history in American education of perceiving academic failure as deficits of character or worth. Casazza (1999) states that, historically, words like *remedial*, *underprepared*, and *developmental* often have a highly negative connotation. The term *remedial* is the most commonly used and implies that the function of developmental programs is to fix or correct a deficit. These distorted perceptions of developmental education often result from simple

ignorance. Faculty members who are not directly involved in developmental education often do not fully understand the nature and purpose of developmental education programs. Pitts and White (1996) interviewed fourteen faculty members at two southern universities to determine faculty perceptions of student underpreparedness. Concerning the role of developmental education, Pitts and White noted that respondents “generally exhibited a mood of skepticism in regard to the effectiveness of remedial programs and, aside from the remedial aspect of the field of developmental education, there was a notable lack of awareness of its broader purposes and goals.”

So, why do educators outside of developmental areas have such limited perceptions of the purpose and goal of developmental education and of the population of students that are served? McCabe (2001) states, “Few education programs are more misunderstood and less appreciated than community college developmental education.” He urges developmental programs to better inform and educate their college community regarding their role, its effectiveness, and its contribution to the institution, the workforce, and the community.

Pitts and White (1996) indicated that their study revealed little evidence of meaningful interaction of college-level faculty with developmental educators. Their “findings suggest that there was a failure to capitalize on developmental education as a specialized field which could aid faculty members in their efforts to reach students who were academically underprepared.”

At Patrick Henry Community College, where research for this article was conducted, the developmental studies program has a centralized organizational structure with teaching faculty and academic support services housed in the same unit. This centralized structure, established in 1992, used research from the National Center for Developmental Education as a guide and has served the program well – allowing greater access to support services and a unified purpose. In fact, the developmental studies program credits much of its overall success to this structure. However, despite constant work by developmental faculty and staff to integrate its activities into the organizational mainstream, and an extensive presence by developmental faculty and staff on college committees and teams, the work of the developmental studies program is still misunderstood by many on campus.

### **Why Should People Care about Developmental Education?**

In Oudenhoven’s article (2002) about pressing issues in remediation at community colleges, she examined several significant studies of remediation and remarked that “as a result of this increased study and scrutiny, many educators and researchers have reached the conclusion that remediation is one of the most important and most pressing educational, social, and economic issues in the United States today.” Although much of what developmental educators do dramatically impacts the college and the community, very few individuals on campus take interest. Most are busy with their own jobs. They prioritize other issues. They follow more glamorous or “respectable” disciplines. The following statistics illustrate how developmental education is an important issue for everyone.

- 100% of community colleges offer remediation (Oudenhoven, 2002).
- 41% of community college freshmen enroll in at least one precollegiate course (Oudenhoven, 2002).
- 38% of students coming to college need developmental English, 44% need math, and 34% need reading (Damashek, 1999).
- Only 64% of youth earn a standard high school diploma (McCabe, 2001).
- Approximately half of academically deficient students successfully complete remediation. Those who succeed do as well in standard college classes as those who began without deficiencies (McCabe, 2001).
- Ten years after beginning developmental courses, 98% (of these students) are employed and 90% are in above-minimal-level jobs. Nearly two-thirds are in new technical and office careers (McCabe, 2001).

### **The Mission**

*As I sat in a developmental studies staff meeting one day at the end of the spring semester 2001, my colleagues and I lamented how no one outside our department seemed to know that there were wonderful, interesting, smart, motivated students taking developmental courses. Despite all of the great things our program was accomplishing, there continued to be a misconception that highly motivated, academically strong students never come*

*from developmental studies. We knew that developmental students were quietly excelling all over campus, but no one seemed to notice. Perhaps our students were excelling a little too quietly.*

*That gave me an idea: Why not tell everyone on my campus about our successes? I knew how wonderful and significant my students were. I just needed to inform and educate my college-level peers about their significance. I knew that there would always be those who would cling to the myth that developmental students were sub-par to their non-developmental counterparts, but if I were able to gather enough objective data, perhaps I could dispel the myth for some (and shut the mouths, if not change the minds, of others).*

*So I set out on a mission: to collect as much data regarding measures of success on my campus as I could and investigate how many of these successes were attained by students who had taken developmental courses. I would compare the data I collected to the perceptions of my peers to see where their views agreed and differed from real results. I would then share my findings throughout the college community so that everyone would finally know that many of the wonderful, interesting, smart, motivated students at my institution came through the developmental studies program.*

I requested the following data, separated by developmental versus non-developmental students, for use in my mission:

- Retention rates of students
- Graduation rates of students
- Honors graduates
- Success rates in college-level courses
- Honorees for Who's Who Among Students in American Junior Colleges

In addition, non-developmental faculty were asked to submit the names of five or more students from their spring 2001 rolls whom they considered to be their greatest success stories. (These names were obtained under the guise of someone unaffiliated with developmental studies in order to ensure that the submissions were not skewed for or against developmental). Also, all non-developmental faculty completed a survey regarding their perceptions of the performance of students exiting the developmental program.

## Results

In all categories, developmental students performed at levels comparable to or beyond that of their non-developmental counterparts. These results did not surprise anyone on the developmental staff, but some of the data surprised the non-developmental faculty. Following is a summary of these results, along with information regarding survey responses from non-developmental faculty about their perceptions of how the data would turn out.

### Retention

Developmental students were retained at a level higher than non-developmental students. Two cohorts of students were tracked: those representing students enrolled at the institution in fall 1998 and fall 1999. The cohorts were then divided into two groups. One group was identified as developmental, meaning that they were taking a developmental course that semester or had taken a developmental course in a previous semester. The other group represented students who had never taken a developmental course. For both cohorts, the trend showed that developmental students were retained at a higher rate than non-developmental students (See Table I).

**Table I: Retention Tracking: Non-Developmental and Developmental Students**  
**Fall 1998 Cohort**

Group	Fall 1998		Spring 1999		Fall 1999		Spring 2000		Fall 2000	
	N	%	N	%	N	%	N	%	N	%
Non-Devel.	1928	100	981	50.9	640	33.2	465	24.1	298	15.4
Developmental	1086	100	784	72.2	578	53.2	503	46.3	359	33.1
Total	3014	100	1765	58.6	1218	40.4	968	32.1	657	21.8

Table I: RetentionTracking: Non-Developmental and Developmental Students

Group	Fall 1998 Cohort (continued)					
	Spring 2001		Fall 2001		Spring 2002	
	N	%	N	%	N	%
Non-Devel.	240	12.4	234	12.1	156	8.1
Developmental	322	29.7	237	21.8	212	19.5
Total	562	18.6	471	15.6	368	12.2

Table I: RetentionTracking: Non-Developmental and Developmental Students

Group	Fall 1999 Cohort											
	Fall 1999		Spring 2000		Fall 2000		Spring 2001		Fall 2001		Spring 2002	
	N	%	N	%	N	%	N	%	N	%	N	%
Non-Devel.	2144	100	932	43.5	586	27.3	484	22.6	358	16.7	219	10.2
Developmental	1180	100	862	73.1	637	54.0	548	46.4	388	32.9	347	29.4
Total	3324	100	1794	54.0	1223	36.8	1032	31.0	746	22.4	566	17.0

When asked about retention on their perception survey, only 22 percent of faculty respondents believed that developmental students were retained at a rate higher than non-developmental students. Another 22 percent believed that they were retained at a lower rate, and 56 percent believed they were about the same. When asked if they believed that a student who had taken developmental courses would be more or less likely to drop out of school, 36 percent thought developmental students would be more likely to drop out, 28 percent thought they would be less likely to drop out, and 36 percent thought they would be neither more nor less likely to drop out.

The perceptions of non-developmental faculty are quite different from the actual results for this item. In both questions regarding retention, very few faculty thought developmental students were retained at a rate *higher* than non-developmental students. In discussion of the data, the college's Assessment Coordinator said that the trend for higher retention of developmental students has existed for many years at this institution. Yet, few people outside of developmental studies knew this.

### Graduation

There was no statistical difference between the graduation rates of students who placed into developmental courses and that of non-developmental students. In addition, there was no statistical difference between the grade point average (GPA) of developmental students at graduation and those of non-developmental students at graduation. To make these comparisons, the cohorts examined were first-time, full-time, program-placed students separated into developmental and non-developmental groups. There were three cohorts representing academic years for 97/98, 98/99, and 99/00. For all cohorts, there was no statistical difference in the graduation rates or GPAs of developmental versus non-developmental students (See Table II).

Table II: Comparison of First-Time, Full-Time, Program-Placed Student Cohorts

(Developmental and Non-Developmental)

Cohort	Graduation Rates					Graduate GPA
	Summer 1999 through Spring 2000 Cohort					
	N	Still Enrolled	Graduate			
			N	%		
Developmental	178	37	70	39	3.4247	

Non-Devel.	78	6	31	40	3.5141
Total	256	43	101	39	3.4521
<b>Summer 1998 through Spring 1999 Cohort</b>					
Cohort	N	Still Enrolled	Graduate		Graduate GPA
			N	%	
Developmental	96	9	25	26	3.2917
Non-Devel.	43	5	13	30	3.2549
Total	139	14	38	27	3.2791
<b>Summer 1997 through Spring 1998 Cohort</b>					
Cohort	N	Still Enrolled	Graduate		Graduate GPA
			N	%	
Developmental	65	3	14	22	3.0014
Non-Devel.	47	1	14	30	3.0868
Total	112	4	28	25	3.0441

In another examination, it was noted that 48 percent of the honors graduates at the college (combined graduates for 2000 and 2001) took developmental courses (See Table III).

**Table III: Graduates and Honors Graduates Spring 2000 through Spring 2001**

Group	Graduates	%	Honors	%
			Graduates	
Developmental	245	50.1	136	48.1
Non-Devel.	244	49.9	147	51.9
Total	489	100	283	100

According to the perception survey, 65 percent of respondents believed that graduates who took developmental courses had about the same GPAs as graduates who were non-developmental. Regarding honors graduates, 64 percent of respondents believed that fewer than 45 percent of the college's honors graduates were developmental. Only 22 percent of respondents believed that between 45 percent and 55 percent of the honors graduates were developmental.

It was interesting to note that although respondents generally thought that there was no difference in the GPAs of developmental versus non-developmental graduates, when asked about honors graduates, whose designation is based upon GPA, respondents generally thought that fewer developmental students would be given the honors distinction.

### **College-level Course Success**

There was no statistical difference between the success rates of students enrolled in college-level courses who successfully completed the required developmental prerequisites and that of non-developmental students. Four college-level math courses and one college-level English course were examined, all with developmental prerequisites. Because the school has mandatory testing and mandatory placement, students either place directly into their college-level course based upon their placement test score, or they take (and pass) the appropriate developmental prerequisite. Students were enrolled in these courses for semesters fall 1999 through fall 2001.

These groups of students were separated into three categories: (1) students who never took the appropriate developmental prerequisite for the college-level course, (2) students who took and passed the appropriate developmental prerequisite for the college-level course, and (3) students who took the developmental prerequisite before college-level, but did not pass it. The third category of students represented a very small number for each of the comparisons and was excluded from the study. According to the statistical comparison, for all college-level courses, there was no statistical difference in the mean GPA earned by students in their college-level course for students in category (2) versus category (1) (See Table IV for an example of one of the courses examined).

**Table IV: Comparison of Developmental & Non-Developmental Student Performance**

Group	MTH 163 Fall 1999 – Fall 2001												Total	AVG GPA
	A		B		C		D		F		W			
	N	%	N	%	N	%	N	%	N	%	N	%		
Non-Devel.	98	31	107	34	58	18	22	7	17	5	14	4	316	2.8179
Devel.	31	24	41	32	25	19	10	8	10	8	13	10	130	2.6239
Dev/Non <sup>1</sup>	1	11	2	22	3	33	1	11			2	22	9	2.4286
Total	130	29	150	33	86	19	33	7	27	6	29	6	455	2.7582

Simple comparison revealed only a slight difference in the means (.194) of the two groups. To determine if this difference was statistically significant, an independent samples t-test was computed using SPSS. The null hypothesis was that there would not be a statistically significant difference between the mean GPA of the students who did not take developmental math prior to taking MTH 163 and the mean GPA of the students who did take developmental prior to taking MTH 163. For the purpose of this study, statistical significance was set at  $p < .05$ , a commonly used significance level in educational research. Results of the t-test are below.

Group	N <sup>2</sup>	Mean	STD DEV	STD Error	t	df	Significance
Non-Devel.	302	2.8179	1.1339	.1258	1.542	417	.124
Devel.	117	2.6239	1.2086				

As shown above, the t statistic was 1.542 with 417 degrees of freedom and a p of .124. Since .124 is greater than .05, we accept the null hypothesis that there is no statistically significant difference between the mean of the students who did not take developmental math prior to taking MTH 163 and the mean of those who did take developmental prior to taking MTH 163.

<sup>1</sup> This group represents those who enrolled in developmental but did not satisfactorily complete.

<sup>2</sup> The total N is less than the total N of A, B, C, D, & F grades because some grades fell into the “tested developmental but did not satisfactorily complete” category.

In the perception survey, when asked about students completing college-level math courses, 54 percent of the respondents believed that the pass rate of developmental students was about the same as the pass rate of non-developmental students, 19 percent believed that the pass rate for developmental students would be lower, and 27 percent believed that the pass rate would be higher. Regarding grades, 58 percent of the respondents believed that developmental students would earn grades comparable to non-developmental students, 25 percent believed that developmental student grades would be lower, and 17 percent believed that developmental student grades would be higher.

When asked about students completing college-level English courses, 51 percent of the respondents believed that the pass rate of developmental students was about the same as the pass rate of non-developmental students, 24 percent believed that the pass rate would be lower, and 24 percent believed that the pass rate would be higher. Regarding grades, 50 percent of the respondents believed that developmental students would earn grades comparable to non-developmental students, 30 percent believed that developmental student grades would be lower, and 17 percent believed that developmental student grades would be higher.

Although roughly half of the responses to the survey agreed with the data collected for college-level courses, it is disturbing that many respondents believed that developmental students would have lower pass rates (19 percent for math and 24 percent for English). Given that one of the primary goals of any developmental program is to prepare students to perform at the same level as their non-developmental peers in college-level courses, it is troubling to see that some faculty think that developmental studies is not doing its job. Another item of note is that developmental math is perceived to be more successful than developmental English – even though the actual data indicates equal success for both areas.

### **Miscellaneous Honors**

At the beginning of this project, all non-developmental faculty were asked to identify approximately five

students whom they perceived as the greatest success stories in their classrooms that semester (Spring 2001). (These names were solicited under the guise of someone unaffiliated with developmental studies in order to ensure that the submissions were not skewed for or against developmental). Examining the list of “successful students” submitted by faculty, 49 percent of the students listed had taken or were taking at least one developmental course. This percentage of students is higher than the percent of developmental students enrolled that semester (45 percent). Hence, students who had taken at least one developmental course were perceived by faculty as “success stories” at a rate higher than their non-developmental counterparts. Also of interest, 18 percent of the “successful students” identified by faculty were developmental in two or more areas. Since being developmental in two or more areas normally places students at great academic risk, it is quite impressive that so many were identified as “success stories” by faculty.

In the perception survey, 56 percent of respondents indicated that they believed that less than 45 percent of students identified as “success stories” were developmental. Only 22 percent believed that between 45 percent and 55 percent of the “successful students” identified were developmental.

On our campus, students named to Who’s Who Among Students in American Junior Colleges are selected by full-time faculty from a circulated list of students who have GPAs over 2.50 and are enrolled in six or more credits. Each faculty nominates up to two students from that list. The top nominees are then submitted to Who’s Who. Among the students from Patrick Henry honored by Who’s Who, 61 percent had taken at least one developmental course.

According to the perception survey, 59 percent of faculty respondents thought that less than 45 percent of the Who’s Who honorees for the institution were developmental. Only 15 percent believed that more than 55 percent of the honorees were developmental.

According to this data, non-developmental faculty – time after time – identified developmental students as outstanding (61 percent of Who’s Who honorees, 49 percent of Spring 2001 “success stories”). However, many non-developmental faculty members continue to believe that the label “developmental” implies that the student will *not* be outstanding.

### **Survey Remarks**

At the end of the perception survey, faculty respondents were asked to provide comments to expand on or clarify their responses. Following is a list of some of these comments:

- *“I have no idea on most of these – I just guessed.”*
- *“My opinion of developmental studies is that it is a critical part of our college.”*
- *“I feel that the developmental classes adequately prepare the students to be successful in their on level classes. However, there are many students that need that preparation but their scores don’t indicate the need.”*
- *“I think that the extra attention to study skills, test taking, etc. that the developmental students get is a real asset to them.”*
- *“I am really baffled as to why we have been asked these questions. They give me the impression someone is attempting to prove how little we know about the assessment of developmental students. If you in the developmental department now come back and ridicule us because our perceptions were incorrect, what of it? As long as we are knowledgeable of our own disciplines and department, we are competent.”*
- *“I believe students become better at performing academically by ‘doing.’ Thus, developmental students are as well prepared to start on-line course work as non-developmental high school students.”*
- *“I believe the developmental program is especially helpful for older, non-traditional students who need more direction with specifics on how to write, how to work math problems, and how to interpret English.”*
- *“I’m not sure why faculty perceptions are important.”*
- *“I feel that students who take one or more developmental courses are exposed to additional study strategies which better prepares them for on-level courses and strengthens their academic self-confidence.”*
- *“With no evidence to back this up, I think that students who complete developmental English courses are not as prepared for their on-level English classes as those students who take developmental math courses are prepared for their on-level math courses.”*
- *“Student motivation and persistence is something that is hard to measure. These are characteristics of some developmental and college-ready students.”*

Many of the comments made at the end of the perceptions survey were quite complimentary. Many of the remarks were very supportive of developmental education and showed great understanding of the overall nature and purpose of the developmental education program. Of course, there were some comments that were discouraging. In particular, it was disappointing that there were faculty on campus who questioned the need to have accurate perceptions of the developmental program. Also, it was distressing to discover the narrow-mindedness and open hostility displayed in some of the comments.

## Disseminating Results

Once all of the data was gathered and analyzed, the conclusion was clear: developmental students at Patrick Henry Community College are *terrific*. Every piece of information reviewed supported the notion that developmental education was necessary, effective, and vital to the institution. The developmental faculty and staff were thrilled to see hard evidence of what the developmental program had accomplished. Their chests swelled with pride, and they drew great inspiration for their continued work. But the mission was not complete. Would the research prove to outsiders how wonderful, interesting, smart, and motivated developmental students really are? Furthermore, would the research help to inform and educate the college community regarding the purpose, effectiveness, and contribution of the developmental education program?

It was important to widely broadcast the results of this study. Dissemination of these results would resolve many misconceptions about the developmental studies program and provide validation for the program as a vital and effective component of the college's overall mission. The results of the study were incorporated into a developmental education program review. (A program review is a report detailing the periodic examination of the developmental studies program, much like a scaled-down accreditation self-study. Program reviews are performed for all programs and departments at Patrick Henry Community College.) Because this program review so thoroughly examined all aspects of developmental education, it became the template for all future program reviews campus-wide. All programs and departments at Patrick Henry now read and study the developmental education program review when performing their own research.

The results of the study were also presented at a meeting of the college's local board of directors. Local media covered this meeting. The local newspaper became so intrigued by the developmental studies program that it published an article that included the results of the study.

The study was further presented and discussed in a college faculty meeting – and at a state conference for developmental educators.

Sharing this research throughout the college community might not have affected everyone's opinion, but it answered many questions and provided support where it was needed. Any institution interested in promoting its developmental education program could incorporate these methods. I hope that this article encourages other developmental educators to research success at their own institutions – to find out how well their own students are doing, using every measurement they can fathom. They should showcase their successes by sharing their investigations with everyone using every medium. Such positive research would help break down misconceptions and stereotypes about developmental education and provide ever-needed credibility and acceptance of developmental education programs. With so many students entering America's colleges and universities underprepared, the need for strong developmental programs keeps growing. With greater understanding and acceptance, developmental educators can put behind them the business of trying to justify their existence and get on with the important work of helping students succeed.

## References

- Casazza, M. (1999). Where are we and where did we come from? *Journal of Developmental Education*, 23(1), 2–7.
- Damashek, R. (1999). Reflections on the future of developmental education, part 1. *Journal of Developmental Education*, 23(1), 18–35.
- Hull, G., Rose, M., Fraser, K., Castellano, M. (1991). Technical report #44: Remediation as a social construct: perspective from an analysis of classroom discourse.



McCabe, R. (2001). Developmental education: a policy primer. *League for Innovation Leadership Abstracts*, 14(1). Retrieved April 26, 2002, from the World Wide Web: <http://www.league.org/publication/abstracts/leadership/labs0102.htm>

Oudenhoven, B. (2002). Remediation at the community college: pressing issues, uncertain solutions. *New Directions For Community Colleges: Next Steps for the Community College*, 117 ( Spring), 35–44.

Pitts, J.M., White, W.G. (1996). The impact of underprepared students on regular college faculty. ERIC Document Presented at 2<sup>nd</sup> National Conference on Research in Developmental Education, Charlotte NC.

---

**Bronte A. Overby** is associate professor of developmental mathematics at Patrick Henry Community College.

[Return to Contents Page](#)