

# The Impact of the Strong Start Program on Student Outcomes in Developmental College Courses

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## Abstract

Using the four-Cs framework, the Strong Start Program was developed and implemented at a two-year public community college to increase developmental course pass rates. There was a statistically significant difference ( $z = 1.93, p < .05$ ) in the proportion of students who passed Strong Start supported courses (68.43%;  $n = 199$ ) and students who passed traditional developmental courses (59.46%,  $n = 231$ ).

## Problem

To increase the performance of **at-risk students** completing **developmental courses** at community colleges, a variety of methods and support services have been utilized.

Despite employing these methods and support services, many community colleges continue to have low course pass rates for developmental college courses.

One targeted intervention is the **Strong Start Program**, which was created to increase the course pass rates of developmental courses by helping students to recognize, adopt, and engage in the behaviors needed to complete instructor-assigned course work outside of class.

What was not known is whether the Strong Start Program was positively impactful on the course pass rates of developmental college courses.

## Purpose

The purpose of this research study was to determine whether the Strong Start program was an effective intervention for increasing course pass rates for developmental college courses.

## Relevant Literature

### Theoretical Framework

The four-Cs framework was used as the theoretical framework for the development of the Strong Start Program. Research findings (Levin, Cox, Cerven, & Haberler, 2010) suggest that substantive student outcomes for developmental courses at community colleges are the result of programs that have four characteristics: **cohesion, cooperation, connection, and consistency**.

## Background

One third of first-year college students place into developmental math, reading, or writing courses (Gonzales, 2011).

At community colleges, developmental courses are a necessity, because by mandate community colleges are open to all students, including students who are underprepared (Perin, 2005).

More than 50% of all community college students take at least one developmental college course (Bailey, Jeong, & Cho, 2010).

The majority of students who take developmental courses at community colleges, do not reach college-level competency in the developmental courses in which they enroll (Bahr, 2011).

## Research Question

**Is the Strong Start Program an effective intervention for increasing the course pass rate for developmental college courses?**

## Method

### Design

A matched-comparison quasi-experimental research design was used.

### Sample

20 developmental courses were selected for inclusion in this study.

430 students enrolled in 20 courses comprised the entire sample for the study.

There were 10 Strong-Start supported courses ( $n = 199$ ).

- 4 courses were developmental writing courses, 3 were developmental math courses, and 3 were developmental reading courses.

10 instructor-matched developmental courses ( $n = 231$ ) were selected for comparison.

- Each instructor-matched comparison course was the same course taught by the same professor in a prior semester, but without Strong Start support.

## Procedures

**Intervention.** The intervention was administered in a single academic year across the Fall and Spring semesters by 3 Strong Start counselors.

**Data Collection.** The final grades for all students were retrieved from the student information system at the end of each semester.

## Results

The proportion of students who passed Strong-Start Supported developmental courses (68.43%) was significantly greater ( $z = 1.93, p < .05$ ) than the proportion of students who passed instructor-matched traditional unsupported developmental courses (59.46%).

- The significant overall difference was largely accounted for by the difference in Strong-Start supported **developmental math courses**.

There was a significant positive difference ( $z = 2.00, p < .05$ ) in the proportion of students who passed strong-start supported developmental math courses (49.33%) and the proportion of students who passed instructor-matched comparison developmental-math courses (33.60%).



Figure 1. Percentage of students in developmental math courses earning passing grades for Strong Start supported courses and traditional courses

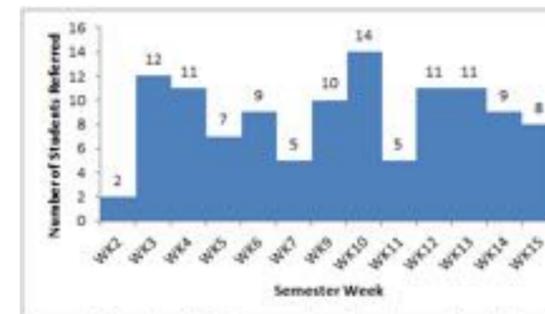


Figure 2. Number of developmental math students referred by week

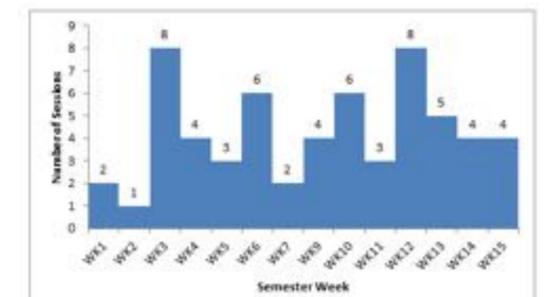


Figure 3. Number of academic counseling sessions with developmental math students conducted via phone by week

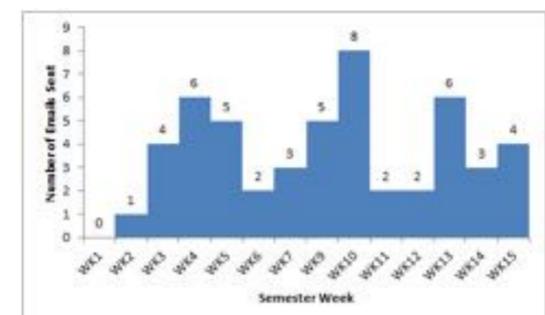


Figure 4. Number of personalized emails sent to developmental math students by week

## Limitations

Random assignment of students to the Strong-Start supported courses and instructor-matched comparison courses was not done.

The results of this study should be interpreted with caution, because it's possible that differences in course pass rates could be attributed to other factors.

## Conclusions

The Strong Start Program is a program that warrants continuation and replication.

## Social Change Implications

This study provides empirical evidence that supports what researchers (Capt, 2011) have suggested, which is that an inclusive approach involving faculty and other departments should be a part of the developmental mission of community colleges.