Title:
The Impact of the Florida College and Career Readiness Initiative on Postsecondary Outcomes\textsuperscript{1}

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\textsuperscript{1} The research reported here was supported by the Institute of Education Science, U.S. Department of Education, through Grant R305E120010 to CNA. The research represents the best opinion of CNA at the time of issue and does not represent views of the Institute or the U.S. Department of Education.
The Impact of the Florida College and Career Readiness Initiative on Postsecondary Outcomes

**Background**

In 2010, approximately 86 percent of community college students believed they were college-ready, yet 67 percent tested into remediation (Center for Community College Engagement, 2016). Remediation is costly, and students needing remediation are less likely to obtain a two-year degree or complete courses that provide marketable skills (e.g., Furchtgott-Roth, Jacobson, & Mokher, 2009; Martorell & McFarlin, 2011).

**Purpose**

This study evaluated the effectiveness of the Florida College and Career Readiness Initiative (FCCRI).

**Intervention**

The FCCRI was passed in 2008 to reduce college remediation; it was initially voluntary but became mandatory with the 2011/12 school year. The FCCRI targeted grade 10 students with mid-range scores on the Florida Comprehensive Achievement Test (FCAT) in math and reading. Targeted students were assigned to take a college placement exam in grade 11; if they scored below college ready, they were assigned to take a college readiness and success (CRS) course in grade 12. College readiness testing and CRS courses may raise students’ awareness of academic deficiencies and help them become college ready (figure 1). The state provided limited support for implementation, and the initiative did not include any consequences for non-compliance; thus, implementation and compliance varied by school.

**Setting**

Florida’s public school system is the third largest in the country (Florida School Boards Association, 2015). The state has 67 county-based districts that represent a diverse group of students and school locales. In Florida, 63.6 percent of first-time degree-seeking students at two-year state colleges were assigned to remediation (Florida College System, 2012).

**Research Design**

We used quasi-experimental methodologies to evaluate the effectiveness of the FCCRI because assignment to treatment was nonrandom. We used regression discontinuity (RD) analysis to estimate the FCCRI’s impact on students by utilizing treatment cutoffs for: college readiness testing in grade 11 and enrolling in a CRS course in grade 12. RD analysis has a strong causal interpretation if students on either side of the treatment cutoff are similar; however, the results are not generalizable away from the treatment cutoff. Therefore, we also used coarsened exact matching (CEM) to produce a sample of comparable students that could be used to estimate the FCCRI’s impact on students from a wider range of baseline achievement. We matched students by their grade 12 school and baseline achievement, and we verified baseline equivalency of
student achievement and background characteristics across the treatment and comparison groups. Both portions of the analysis meet What Works Clearinghouse standards with reservations. Both analyses examine the FCCRI’s effect on the probability of: receiving a high school diploma, seamlessly enrolling in college, and enrolling in and passing various types of college courses in math and English. For students who seamlessly enroll in college, we also analyzed the effect on passing three or more for-credit courses and first-year college GPA. Models are assessed separately for students targeted in math and students targeted in English.

Subjects

The RD analysis used the first mandatory grade 11 cohort; prior to this, participation in college readiness testing and CRS courses was voluntary and low. Sample sizes vary between 4,142 and 43,636 due to the use of an optimal bandwidth selector.

The CEM analysis also includes voluntary cohorts. Schools with low FCCRI compliance rates form a comparison group that avoids selection bias, as taking a CRS course at a high-compliance school (or not taking a CRS course at a low-compliance school) likely reflects school policy or course availability rather than student attributes. We limit the sample to schools that were both low- and high-compliance at some point to avoid idiosyncratic features of persistently low- or high-compliance schools. The treatment-on-the-treated treatment group consisted of students who were targeted by the FCAT, took a CRS course, and attended a high-compliance school in grade 12. The comparison group consisted of students who were targeted by the FCAT, did not take a CRS course, and attended a low-compliance school in grade 12. We also estimated the intent to treat, where students are assigned to treatment and comparison groups without considering CRS course enrollment. Finally, we reran the analysis for the sub sample of students who seamlessly enroll in college. The full treatment-on-the-treated sample contains approximately 152,000 students in math and reading, and the intent-to-treat sample is roughly 208,000 students.

Data

We used the Florida K–20 Education Data Warehouse, which has student-level data from all public high schools in the state.

Findings

The RD results found effects near the FCAT and 11th grade PERT cutoffs were generally statistically insignificant and/or small in magnitude (figure 2). However, the FCCRI may have helped college enrollees near the college readiness cutoff on the grade 11 PERT enroll in degree credit coursework in math.

The CEM results tended to be similar to the RD for all targeted students. However, there were some larger effects for the treatment-on-the-treated, college enrollee sub sample (see figures 3 and 4). The results indicated that the FCCRI moved students towards transitional math, a college course that provides credit but does not count towards the degree requirement in math. Lower performing treatment students are moved away from lower level remedial courses (estimated
10% difference from the comparison group) and higher performing treatment students are moved away from degree credit courses (estimated 14% difference from the comparison group). Results in English show the FCCRI was most effective for the lowest performing targeted group, as these students were less likely to enroll in remedial courses and more likely to enroll in degree credit courses.

Conclusions

The findings have implications on which types of students should be targeted for this type of initiative. Educators reported that the FCCRI was ineffective for students who were already disengaged (Mokher & Jacobson, 2014). The analysis showed the FCCRI had no impact on college going; thus, requiring participation for students without postsecondary plans may be counterproductive. The FCCRI was effective for lower-performing, college-going, targeted students; but seems to be holding back higher-performing students from taking degree credit courses. States should use this information to inform eligibility criteria.
References

Center for Community College Student Engagement. (2016). *Expectations meet reality: The underprepared student and community colleges*. Austin, TX: The University of Texas at Austin, College of Education, Department of Educational Administration, Program in Higher Education Leadership.


Figure 1. Logic model for the theory of action of the FCCRI

<table>
<thead>
<tr>
<th>STATE POLICY INPUTS</th>
<th>EDUCATIONAL OUTPUTS</th>
<th>STUDENT OUTCOMES</th>
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<tbody>
<tr>
<td></td>
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<td>SHORT-TERM</td>
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<td>State policy requires high schools to administer a college readiness assessment in grade 11.</td>
<td>Students gain awareness of their level of preparation for postsecondary education.</td>
<td>Increase the number of high school graduates who are college and career ready.</td>
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<td>Students modify course taking in grade 12 based on their level of postsecondary preparation.</td>
<td>Increase the likelihood of completing courses for college credit.</td>
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<td>Students gain skills in grade 12 courses to increase college readiness.</td>
<td>Increase the likelihood of completing high-return college courses.</td>
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<td>MEDIUM-TERM</td>
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<tr>
<td>State policy requires high schools to offer postsecondary preparatory instruction to students in grade 12 who score below the college-ready cut scores.</td>
<td>Increase access to postsecondary education.</td>
<td>Increase college GPA.</td>
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<tr>
<td></td>
<td>The state approves courses and makes them available to all schools.</td>
<td>Increase the likelihood of completing gateway college courses.</td>
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<td>LONG-TERM</td>
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<td></td>
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<td>Increase the likelihood of postsecondary degree completion.</td>
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<td>Increase the likelihood of college persistence.</td>
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</tbody>
</table>
Figure 2: Results from the regression discontinuity analysis of the impact of the FCCRI on enrollment in and passing degree credit courses in math.
Figure 3: Results from the coarsened exact matching analysis of the estimated average marginal treatment effect in math for the treatment-on-the-treated, fall-start subsample.

Notes: The figure shows the estimated average marginal treatment effect for the treatment on the treated, fall-start subsample. The different levels shown represent the students’ level of achievement on the FCAT in grade 10, where level one is the lowest possible score range; we only show the range of scores that were targeted by the policy.
Figure 4: Results from the coarsened exact matching analysis of the estimated average marginal treatment effect in English for the intent-to-treat, fall-start subsample.

Notes: The figure shows the estimated average marginal treatment effect for the intent to treat, fall-start subsample. The intent to treat results are shown instead of the treatment on the treated because we only look at the fall-start subsample when the estimate for going to college on time was found to be zero. The different levels shown represent the students’ level of achievement on the FCAT in grade 10, where level one is the lowest possible score range; we only show the range of scores that were targeted by the policy.