Assessment of the Florida College and Career Readiness Initiative: 2018 Final Summary Report

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Abstract

Florida enacted legislation in 2008 for a statewide program known as the Florida College and Career Readiness Initiative (FCCRI), which was intended to reduce the need for postsecondary remediation. The FCCRI consisted of testing grade 11 students to determine their college readiness and offering math and English college readiness and success (CRS) courses in grade 12 for students who did not test college-ready the year before. FCCRI is based on the theory that providing college readiness testing and CRS courses in high school may raise students' awareness of their academic deficiencies and motivate them to further develop college-level skills in their senior year. We found considerable variation across districts and schools in the initiative's implementation and level of compliance with state requirements for participation.

We estimated program impacts using two different methods. First, we used a regression discontinuity design to compare outcomes for students scoring just above and below test score cutoffs for assignment to the FCCRI. Among the two cohorts of students required to participate in the FCCRI, we found little to no effect on short-term outcomes including high school graduation, college enrollment, and enrolling in or passing nondevelopmental courses. There is little evidence for improved enrollment or pass rates in for-credit coursework among the highest- and lowest-performing targeted students. However, enrollment and pass rates in transition and degree credit courses were similar for students on the margins of assignment to college readiness courses in either subject, indicating that students just below college-ready were able to "catch up" by the time they enrolled in college. There were also few differences between marginal targeted and non-targeted students on longer-term outcomes including persistence, transfer, nondevelopmental enrollment and pass, and degree completion rates.

Second, we examined the effect of offering the FCCRI to students from a wider range of academic performance levels by using regression analysis to compare student outcomes for targeted students in schools before and after the schools implemented the FCCRI. As with the regression discontinuity analyses, we found that the FCCRI had little to no effect on most short-term student outcomes. We did find that the treatment group was more likely to both take and pass nondevelopmental courses in math and English. Although the average effects were small, the magnitudes of these effects were quite large for some portions of the achievement distribution, with effects of up to 10.7 percentage points for the treatment group.

Finally, we estimated the cost for the FCCRI's ongoing implementation at $57 per targeted student in the 2014/2015 school year, with about 63 percent of per-student program costs incurred at the school level ($36), 33 percent at the district level ($19), and 3 percent at the state level ($2). We also found that while net costs exceeded benefits for the FCCRI as a whole, program effects and costs varied both within and between districts.

Final Summary report

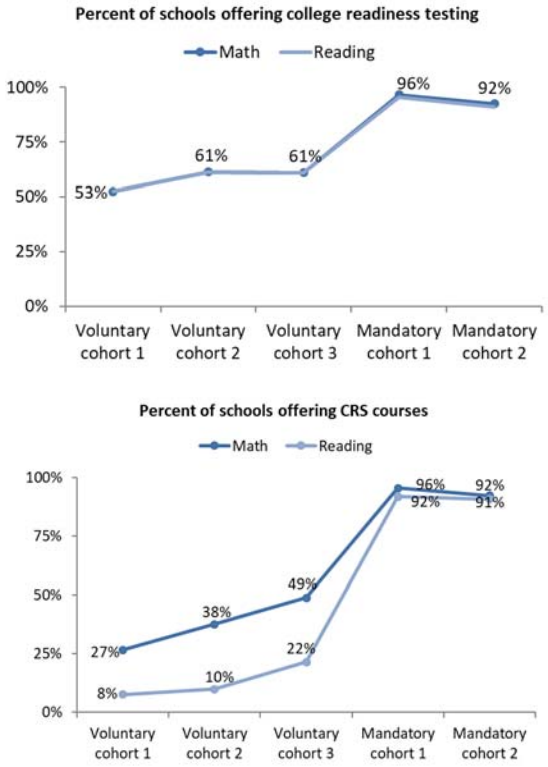
There is nationwide concern about the number of students who leave high school unprepared for college-level coursework and the lack of student awareness of their own levels of preparation. In 2010, approximately 86 percent of community college students believed that they were academically prepared for college, yet 67 percent tested into developmental coursework (Center for Community College Student Engagement, 2016). Results were similar in Florida, where 63.6 percent of first-time degree-seeking students at two-year state colleges did not meet the college-ready entry-level scores in at least one subject on the placement test and were required to enroll in developmental education (Florida College System, 2012a).

Florida attempted to address these concerns by implementing the Florida College and Career Readiness Initiative (FCCRI), a statewide initiative that provided college placement testing to grade 11 students who were mid-performing on the grade 10 Florida Comprehensive Achievement Test (FCAT), and college readiness and success courses (CRS) in grade 12 to students who scored below the threshold for college-ready on the placement test in math and reading. Student participation in both the college readiness testing and the courses was voluntary when the initiative began in the 2008/2009 school year. Legislative changes in 2011/12 required college readiness testing in grade 11 for mid-performing students on the grade 10 state assessment and CRS course participation in grade 12 for students who do not test college-ready. Additional legislative changes in 2015 made participation in the FCCRI voluntary once again. The FCCRI is based on the theory that providing college readiness testing and CRS courses in high school may raise students' awareness of their own academic deficiencies and motivate them to further develop college-level skills in their senior year. The CRS courses were designed to develop these skills by improving the alignment between the content taught in grade 12 courses and first year college courses in math and English.

Implementation

When the FCCRI began in 2008/09, student participation in both college readiness testing and the CRS courses was voluntary. In 2011/12, participation in both components became mandatory for targeted students. The mandatory FCCRI continued through 2014/15. This report includes findings for the three cohorts of

Figure 1. Percentage of schools offering college readiness testing and CRS courses



students in the voluntary FCCRI (cohorts V1, V2, and V3) and the subsequent two cohorts under the mandatory FCCRI (cohorts M1 and M2).

During the first year of the voluntary FCCRI, only about half of all high schools offered college readiness testing and less than one-third offered CRS courses even though all schools were supposed to offer both interventions (see Figure 1). The percentage of schools offering each component rose slightly during each subsequent year of the voluntary FCCRI. There was a large increase in participation during the 2 years of the mandatory FCCRI, with over 90 percent of schools offering both college readiness testing and CRS courses.

Even though FCCRI participation was supposed to be required for targeted students under the mandatory FCCRI, schools did not always adhere to student eligibility criteria in the state policy. Between 58 to 73 percent of students (depending on cohort and subject area) in the mandatory FCCRI were targeted to take the Postsecondary Education Readiness Test (PERT) based on their FCAT scores. Between 58 and 65 percent of students who scored below college-ready on the PERT enrolled in a CRS course in grade 12. Some students took the PERT and enrolled in the CRS courses even though they were not required to participate under the mandatory FCCRI. Their participation rates ranged from 5 percent to 25 percent, depending on FCAT level and cohort.

The content and rigor of the CRS courses varied substantially across schools. In some schools, the CRS courses were very similar to the courses taken by students prior to the FCCRI. In other schools, the CRS courses placed more emphasis on developing academic skills for college and testing college-ready.

In both math and English, targeted students who scored just above college-ready were more likely to enroll in honors and college credit–bearing courses than students who scored just below college-ready. However, we also found a small increase (3.5 percentage points) in the likelihood of taking no math in the senior year for students who scored just above college-ready on the PERT in grade 11.

Effect of the FCCRI at program cutoffs

We examined the effect of assignment to take college readiness assessments or coursework. Our sample consisted of first-time grade 11 students in 2011/12 (cohort M1) and 2012/13 (M2). We used regression discontinuity (RD) analysis to compare students just above and below the FCCRI's cutoffs on the FCAT and the grade 11 PERT. If students on either side of a cutoff have similar background characteristics and do not bunch on either side, RD will capture the effect of the FCCRI without any outside effects. However, it applies only to students very near the cutoff being studied.

Assignment to participate in the FCCRI had no effect on high school graduation or college enrollment. It had no effect on for-credit enrollment or passing in math in cohort M1; M2 had too little data for math. In English, students at the low FCAT cutoff in M1 were 4.3 percentage points more likely to enroll in for-credit coursework but no more likely to pass; there was no effect at the high cutoff (figure 2). In cohort M2, there was no effect at the low FCAT cutoff, but students at the high cutoff were 2.8 percentage points more likely to pass.

There may be small or null effects at FCAT cutoffs because they capture a wide range of abilities. Students at the low cutoff were not yet eligible for high school graduation, while almost all of those near the high cutoff were already college-ready. Students unprepared to graduate high school likely need more than one course to become college-ready, while those who are prepared do not need any.

The FCCRI may have helped students near the grade 11 PERT's college readiness cutoff, as those targeted for CRS courses performed comparably in college to those who were college-ready in grade 11. Since scores below this cutoff corresponded to remediation and those above it were exempt, we would expect higher remediation rates just below the grade 11 cutoff. Yet in math, students just below and just above this cutoff were equally likely to enroll in or pass for-credit courses. In English, students just below the cutoff were 2.3 percentage points less likely to enroll in for-credit courses but no less likely to pass. In cohort M2, students below this cutoff were less likely to enroll in for-credit courses but were no less likely to pass, suggesting that the FCCRI was preventing students from failing for-credit courses rather than helping them succeed. For comparison, scoring below college-ready after grade 11 had a very large effect for cohort M1 on enrolling in or passing a for-credit course within a year of high school graduation (remediation was optional for cohort M2).

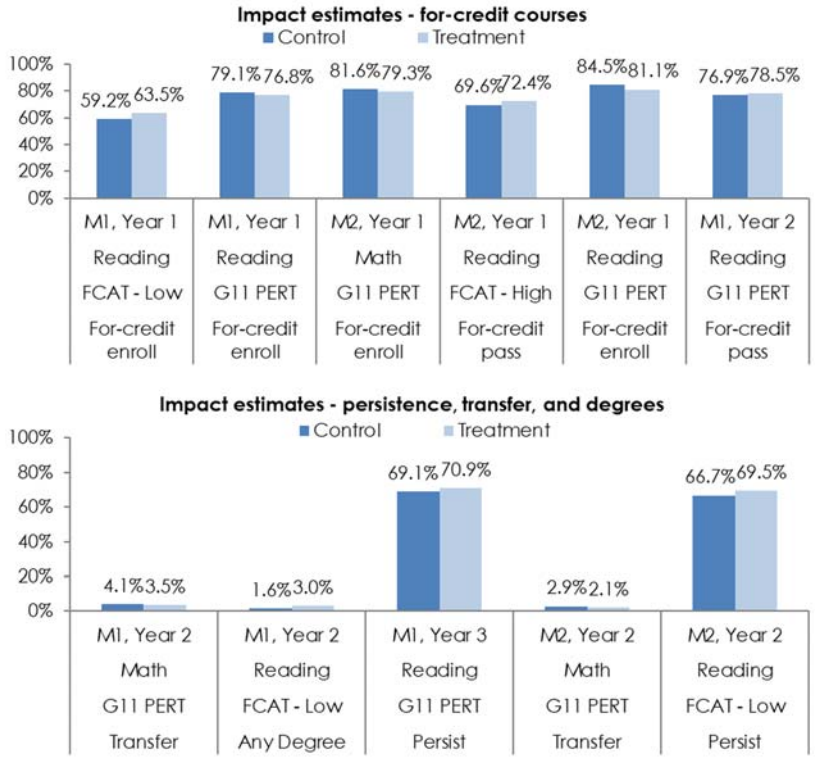
Results for students assigned to CRS courses are striking when considering other course options. Students who barely scored college-ready on the grade 11 PERT were more likely to enroll in honors and other advanced courses during grade 12, while those just below the cutoff were much more likely to enroll in standard-level CRS courses. Either students assigned to CRS courses fared as well in college as their peers

in rigorous high school courses or their peers may have enrolled in inappropriately challenging courses or ones not aligned with college content.

We found little long-term effect two or three years after high school graduation for students near the FCAT cutoffs. The only effect at any of the FCAT cutoffs for cohort M1 was a slight increase in degree receipt within two years for students near the low reading cutoff. At the low FCAT reading cutoff, seamless enrollees from cohort M2 were slightly more likely to persist to a second year of school and students overall were more likely to be enrolled in a two-year institution.

There were long-term effects at the grade 11 PERT cutoffs, though they were small in magnitude. In cohort M1, seamless enrollees barely targeted for CRS math courses were slightly less likely to transfer from a two-year institution to a four-year one in their second year. Seamless enrollees barely assigned to CRS English were slightly more likely to pass a for-credit English course within two years and to persist to a third year of college. Overall, students at this cutoff were slightly more likely to be enrolled at a four-year institution within three years. In cohort M2, students narrowly assigned to CRS math were slightly less likely to transfer in year 2 and those assigned to CRS English courses were less likely to enroll in a four-year school.

Figure 2. Effect of the FCCRI on short- and long-term outcomes.



Effect of the FCCRI beyond program cutoffs

We used a different strategy to assess the effect of the FCCRI beyond program cutoffs because it is reasonable to believe the effect could be different for students who were not near one of the cutoffs. To control for differences in the types of students that participate in the FCCRI, we created a sample using a before-and-after design. The comparison group included students who attended schools during a low-compliance period (less than 5 percent of eligible students participated in college readiness testing and CRS courses), while the treatment group included students who attended a school during a high-compliance period (at least 50 percent of eligible students participated). We limited the sample to schools that switched from low to high compliance to control for differences in school-level characteristics that may be related to compliance with the FCCRI. We used regression analysis with this sample of comparable students and schools and controlled for student background characteristics and pretreatment achievement.

As with the RD analysis, we found the FCCRI had no effect on high school graduation or college enrollment. There was, however, an effect on college course outcomes. Among targeted students who seamlessly enrolled in college, the treatment group was 5.7 percentage points more likely to enroll in a nondevelopmental math course, 4.3 percentage points more likely to enroll in a nondevelopmental English course, and 3.5 percentage points more likely to pass nondevelopmental courses in both subjects.

We also broke down the results for the college course outcomes by pretreatment achievement, as measured by the continuous variable for grade 10 FCAT score, to determine whether there is variation in the effect of the FCCRI. The results are presented in Figure 3, which contains predicted probabilities of enrolling in each course level by treatment status and baseline achievement. The difference between the two lines is the marginal effect of the intent to treat. The FCCRI had a larger effect on students in the lower and middle range of baseline achievement. The largest difference across treatment status in math was for students near the FCAT level 3 cutoff. In English, the largest difference was for students at the bottom of the targeted range.

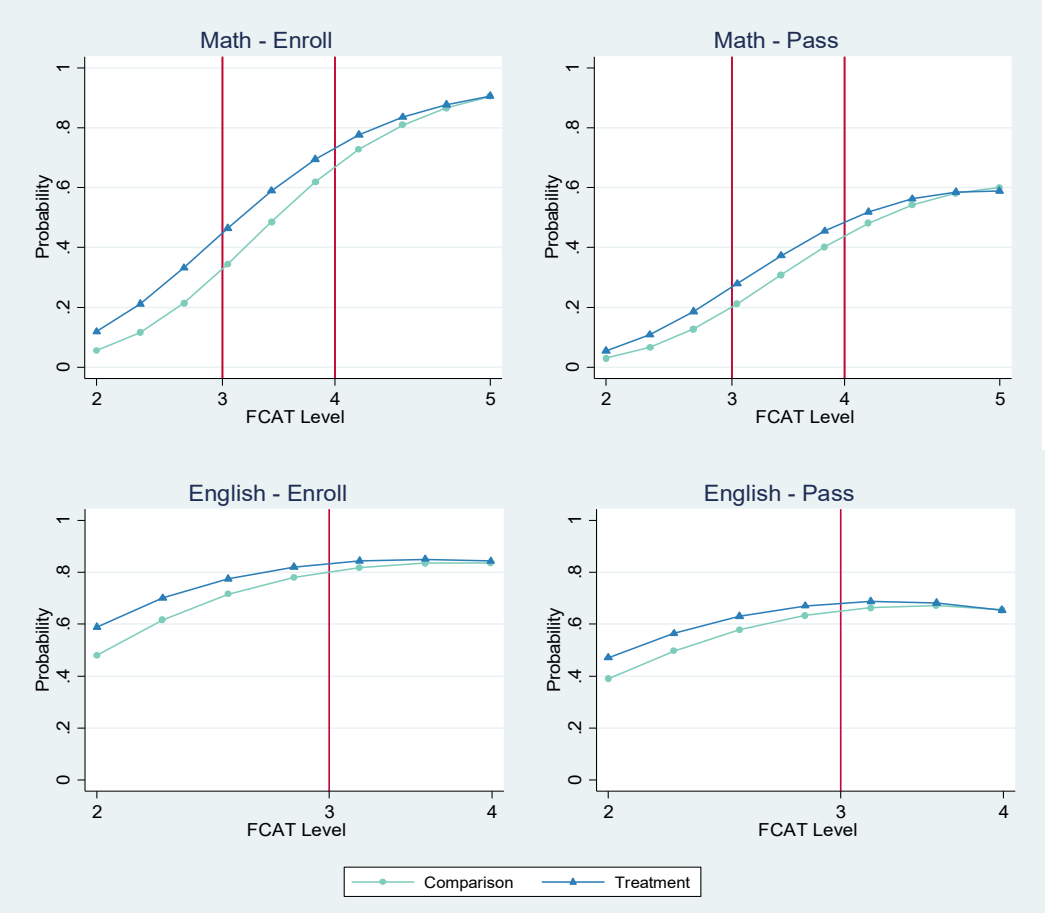
As a final line of inquiry, we broke down course enrollment outcomes to include more options so we could estimate the impact of the FCCRI on a wider variety of course levels (lower level developmental, upper level developmental, transitional (math only), and degree credit). The FCCRI reduced developmental enrollment in math. The effect was especially large for students at the lower end of the targeted range (FCAT level 2), where the treatment group had up to a 12.6 percentage point decrease in the likelihood of enrolling in lower-level developmental education courses. Most of this difference was due to students being more likely to enroll in transitional math; however, there was also an increase in the likelihood of taking no math course in the first year of college. The largest overall positive effect was among treated students in the middle of the targeted range (FCAT level 3), where there was a 10.7 percentage point increase in the likelihood of enrolling in nondevelopmental (transitional or degree credit) courses.

The change to degree credit course enrollment in math was small across all FCAT levels. This is not surprising, as students were targeted for CRS courses if their test scores would have placed them into a developmental course. Students with placement

scores at the transitional level would be exempt from taking a CRS course; thus, the FCCRI is trying to move students from developmental courses to the transitional level.

Developmental education course enrollment was also lower for the treatment group in English, though the differences were smaller. The main change was in moving FCAT level 2s from upper-level developmental education to degree credit courses, where FCAT level 2 treatment students had up to a 5.8 percentage point decrease in the likelihood of enrolling in upper-level developmental courses. Over 80 percent of FCAT level 3s in both the treatment and comparison groups enrolled in degree credit courses, which suggests that many of these students were college-ready by the time they enrolled in college, regardless of whether they received any intervention.

Figure 3. Predicted probability of enrolling in and passing nondevelopmental courses by baseline achievement



Cost-benefit analysis

Our analysis aimed to determine whether the FCCRI's benefits outweighed its costs. We surveyed state, district, and school personnel to estimate the cost of the FCCRI based on the ingredients used in its implementation. We estimated benefits based on RD analysis (see "Effect of the FCCRI at program cutoffs"). Due to data demands, we aggregated benefit estimates at the district level, not at individual schools.

The annual cost of the FCCRI, not including startup costs, was approximately $57 per student (Table 1). With an estimated 128,988 students from cohort M1 participating, the total cost of all resources devoted to the FCCRI for its students was approximately $7 million. However, since most of these resources were repurposed from other uses, the actual on-budget cost of the FCCRI consisted only of state reimbursements to schools and districts for administering the PERT and totaled only about $150,000 per year, or just over $1 per student.

About 63 percent was incurred at the school level, with district-level costs constituting about 33 percent and state-level costs about 3 percent. Personnel costs, incurred mainly at the school level, were the most expensive component of the program, at about 69 percent of the total. Materials and equipment made up about 30 percent of program costs, and were incurred mainly at the district level. Facilities made up only a very small proportion of FCCRI implementation costs. CRS costs represented about 26 percent of total program costs, while PERT testing costs were about 74 percent.

Per-student costs varied across schools and districts. Across schools, estimated total costs (including state- and district-level costs) ranged from $23 to $312 per student. Schools and districts that allocated more resources to the FCCRI tended to dedicate them to PERT administration; providing teachers with professional development; and CRS course materials, such as planning guides, textbooks, and computer software. Schools that tested relatively few students tended to have higher per-student costs and may have had difficulty achieving economies of scale.

The FCCRI produced a range of different benefits, which we define as the reduction in required costs prior to passing a for-credit course, based on students' preparation levels and the districts in which they were enrolled. Of the eight districts that met our sample requirements, three did not produce any discernible benefits and two others produced negative benefits (Figure 4). Of the three with any positive benefits at any cutoffs, only one had positive benefits at more than one cutoff.

When comparing expected benefits against average costs, six of the eight districts had negative net benefits at every cutoff, and the other two had negative net benefits at most cutoffs. This would not change if we instead used the lowest per-student costs from our cost sample; three sets of school-level costs would yield negative net benefits at all cutoffs. Thus, while a program such as the FCCRI can be implemented extremely

cheaply if substantial resources are repurposed from other uses, additional on-budget costs could be necessary to see widespread net benefits.

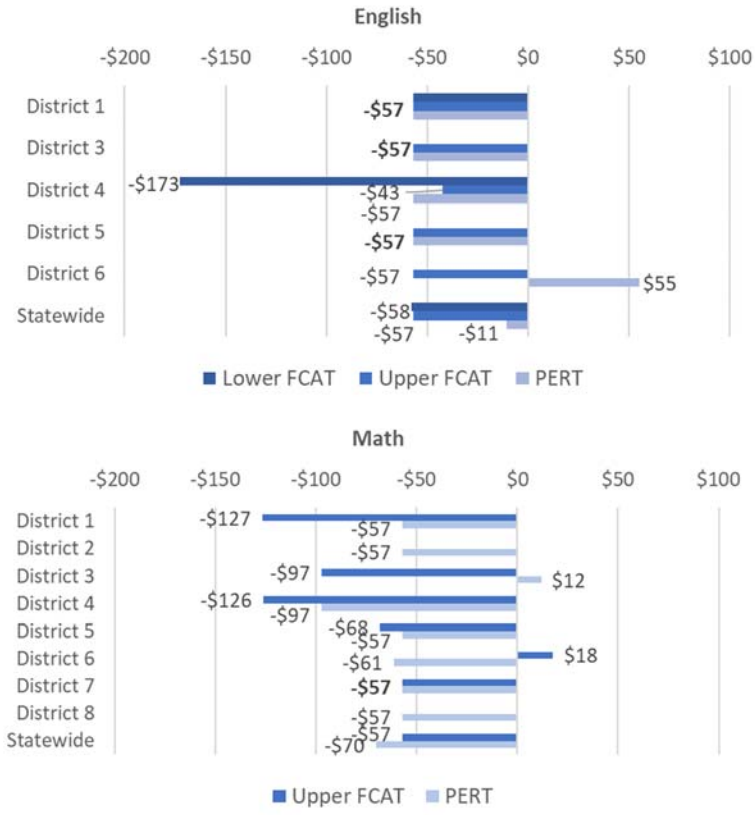
Table 1. Per-student annual cost of the FCCRI, by cost ingredient

Cost ingredient	PERT testing				CRS courses				Total cost
	Level			Subtotal	Level			Subtotal	
	State	District	School		State	District	School		
Personnel	$1	$3	$33	**$37**	$0[a]	$2	$0[a]	**$2**	**$39**
Materials & equipment	$1	$1	$2	**$4**	$0[a]	$13	$0[a]	**$13**	**$17**
Facilities	$0[a]	$0[a]	$0[a]	**$0[a]**	$0[a]	$0[a]	$0[a]	**$0[a]**	**$0[a]**
Total cost	**$2**	**$4**	**$36**	**$42**	**$0[a]**	**$15**	**$0[a]**	**$15**	**$57**

Note. Values are reported in 2014 dollars and rounded to the nearest dollar.

[a] Estimated cost, rounded to the nearest dollar, is less than $1 per student.

Figure 4. Net benefit of the FCCRI, using average per-student cost of $57



Note. Values are in 2014 dollars and rounded to the nearest dollar. Values in bold apply to all cutoffs for a district. Districts and cutoffs with too few students (including the low FCAT cutoff in math) are omitted.

Conclusions

Our findings and the lessons learned about the initiative's design and implementation may have implications for researchers and policymakers considering similar college readiness programs. These findings may also help to explain why the FCCRI had few discernable effects on student outcomes.

Lessons learned about the design of the FCCRI:

- The FCCRI did not seem to adequately consider students' motivations to attend college. The initiative was focused on helping students become college-ready regardless of whether they intended to enroll in college. No additional advising or support was provided to non-college-bound students to improve their career options or to encourage them to consider other postsecondary programs.

- The FCCRI likely targeted students from too wide a range of achievement levels. Some higher-performing students took CRS courses at the expense of more rigorous grade 12 courses, while lower-performing students may have needed more than a single course to become college-ready. A single course cannot meet the needs of every student from such a wide range of achievement levels.

- The FCCRI was largely an unfunded mandate, resulting in varying reallocations of existing resources among schools and districts. This disparity led to uneven implementation across districts and schools, some of which may not have had the resources to serve all targeted students adequately.

- While the Florida Department of Education provided funding for college readiness testing and approved CRS courses, this may not have been enough to successfully implement the initiative. Teachers and administrators lacked guidance beyond broad standards on what CRS courses should over or how they would do so. This confusion likely contributed to lower and less-uniform instructional quality that lacked alignment with the original intent of the initiative.

- It may have been more effective to begin participation in the FCCRI in earlier grade levels. The Institute of Education Sciences (IES) Practice Guide on pathways to college suggests offering college readiness assessments throughout high school and recommends that students begin preparing for college-level work by ninth grade (Tierney, Bailey, Constantine, Finkelstein, and Hurd, 2009).

Lessons learned about the implementation of the FCCRI:

- Schools and districts often did not follow state requirements for participation in the FCCRI; this situation may have been exacerbated by the lack of enforcement or sanctions for non-compliance. Under the voluntary FCCRI, most schools did not offer college readiness testing, CRS courses, or both. Although school-level compliance increased under the mandatory FCCRI, many targeted students did not participate.

- Schools required more guidance and better communication about how to implement the FCCRI, as teachers were often unaware of the content of the PERT or of how CRS courses were supposed to prepare students for college-level work. While FLDOE recommended that high schools collaborate with local colleges, we found very little evidence of collaboration around CRS courses or college readiness more broadly. The few educators who did participate in cross-sector collaboration indicated that they found it very helpful, and those who did not participate expressed a desire for more opportunities to do so.

- Though CRS courses shared the same names and course numbers statewide, they were implemented differently across and sometimes even within schools. This made it difficult to evaluate the program as a whole. CRS courses will have little effect if they do not contrast with existing courses (e.g., some English CRS courses covered the same material in the same way as the regular English 4 courses).