



## Half of College Students Needing Remediation Drop Out; Remediation Completers Do Almost as Well as Other Students

### *at a glance*

Over half (55%) of all students entering Florida's public postsecondary institutions require remediation in mathematics, reading, and/or writing. Ninety-four percent of students who need remediation attend community colleges. These students are required to complete college preparatory programs before enrolling in college-level classes. However, only 52% of these students subsequently complete their college preparatory programs, taking an average of two years to do so. Those students who fail to complete college preparation within two years are very likely to discontinue their education rather than pursue other alternatives such as career/workforce training. Students who receive low scores on college readiness tests or who require remediation in multiple areas are particularly at risk of dropping out.

Students who do successfully complete college preparatory programs perform almost as well as other students in college credit foundation courses in the areas in which they received remediation. In addition, students completing college preparatory programs earn associates degrees at similar rates to other students, when the time needed to complete college preparatory courses is taken into consideration.

The state's community colleges have implemented strategies to improve the academic success of students needing remediation. However, they may be able to increase the academic success of these students by incorporating more of these practices into their college preparatory programs.

### Scope

As directed by the Legislature, OPPAGA examined the effectiveness of Florida's community colleges in providing remediation for students who are unprepared for college-level coursework. This report addresses the four questions below.<sup>1</sup>

- How successful are community colleges in helping students complete college preparatory program requirements?
- How well do students who complete college preparatory program requirements perform on subsequent college-level coursework?
- What percentage of students who complete college preparatory program requirements subsequently earn degrees?
- What is being done at the state and local levels to address remediation?

### Background

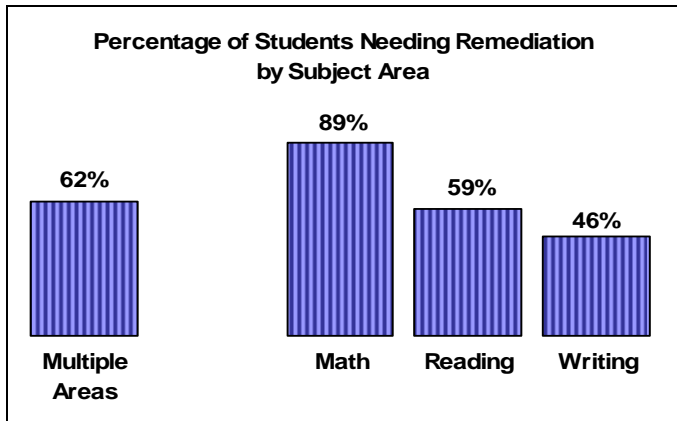
Recent high school graduates and older adult students entering Florida's public higher education system for the first time (referred to as first-time-in-college students) are required to demonstrate that they have sufficient reading, writing, and mathematics proficiency before they are permitted

<sup>1</sup> OPPAGA previously examined the readiness of students entering Florida colleges including the factors, such as high school coursework, that influence the need for remediation and options to reduce the need for remediation. For more information refer to *Steps Can Be Taken to Reduce Remediation Rates; 78% of Community College Students, 10% of University Students Need Remediation*, [OPPAGA Report No. 06-40](#), April 2006.

to take college-level courses.<sup>2</sup> Students must earn specified scores on the SAT or ACT examination, or pass the Florida College Entry-Level Placement Test (also called the Common Placement Test) to demonstrate this proficiency. Students scoring below the minimum cut-off scores must enroll in college preparatory courses in the respective subject area(s) before taking college-level courses in those subjects. College preparatory courses provide remedial instruction to address students' academic deficiencies and enable them to gain the skills and knowledge needed to succeed in college-level coursework.

OPPAGA's April 2006 report on postsecondary remediation programs found that in 2003-04, over half (55%) of the first-time-in-college students attending state public universities and community colleges required remediation. As shown in Exhibit 1, most (89%) of these students required remediation in mathematics, and almost two-thirds (62%) needed remediation in multiple subject areas.

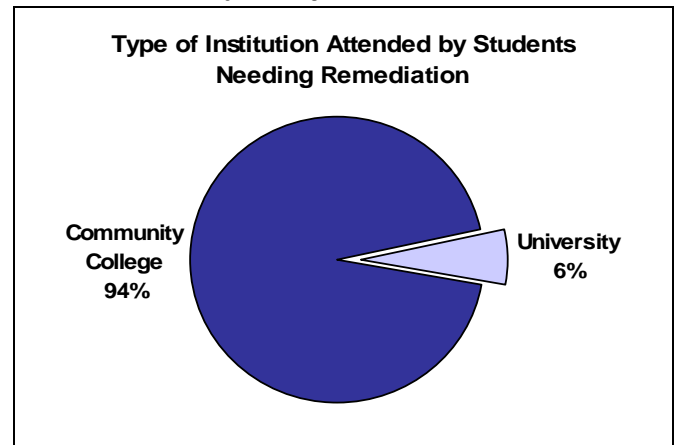
**Exhibit 1  
More Than Half (62%) of Students Not Ready for College Need Remediation in Multiple Subject Areas**



Source: OPPAGA analysis of Department of Education data on students attending Florida community colleges and public universities for the first time in 2003.

Postsecondary remediation is primarily a community college responsibility.<sup>3</sup> Florida law permits only the state's 28 community colleges and Florida Agricultural and Mechanical University to offer college preparatory courses.<sup>4</sup> The other 10 state universities may contract with community colleges to provide these courses for university students who need remediation. Most (94%) of the students needing remediation in 2003-04 attended state community colleges (see Exhibit 2).

**Exhibit 2  
Most College Students Needing Remediation Attend Community Colleges**



Source: OPPAGA analysis of Department of Education data on students attending Florida community colleges and public universities for the first time in 2003.

Community colleges and universities receive funding for remediation from legislative appropriations and student tuition and fees. In 2005-06 (the year for which most recent expenditure data is available), the total cost of postsecondary remediation was \$129.8 million. The state paid slightly over half (54%, or \$70 million) of these costs.<sup>5</sup> Students paid \$51.4 million (40%) of remediation costs, while community colleges paid \$8.4 million (6%) with other revenue sources.<sup>6</sup> (See Exhibit 3.)

<sup>2</sup> According to s. 1008.30(4)(a), *F.S.*, a passing score on a standardized, institutionally developed test must be achieved before a student is considered to have met basic computation and communication skills requirements. Rule 6A-10.0315, *F.A.C.* Test specifies minimum scores that students must achieve on the College Placement Test, SAT or ACT to be considered ready for college-level mathematics, reading, and writing coursework.

<sup>3</sup> Remedial education also is referred to as developmental education. Remedial coursework is commonly referred to as college preparatory coursework.

<sup>4</sup> Section 1008.30(4)(b), *F.S.*

<sup>5</sup> Cost of remediation does not include FAMU expenditures.

<sup>6</sup> Other revenue includes institutional funds in the form of interest earned and endowments.

**Exhibit 3**  
**The State Paid \$70 Million 54% of the Cost of Remediation in 2005-06**

Remediation Fund Sources	Amount (in millions)	Percentage
State Funds		
General Revenue	\$ 60.8	46.9%
Lottery	9.2	7.1%
Total State Funds	\$ 70.0	54.0%
Other Revenue	8.4	6.4%
Matriculation and Tuition Fees	51.4	39.6%
<b>Total All Sources</b>	<b>\$129.8</b>	<b>100.0%</b>

Source: Florida Department of Education, Division of Community Colleges and Workforce Education.

***Students with greater remediation needs were less successful in completing college preparatory programs***

Students’ success in completing college preparatory programs varied greatly depending on the level of remediation they needed. Students’ remediation needs are identified by their test scores on the College Entry-Level Placement Test (CPT). Students who earn lower scores on this test have greater needs for remediation, and community colleges typically require such students to pass multiple remedial classes before they can enroll in regular college coursework in these areas.

As shown in Exhibit 4, students that failed the CPT but who received relatively high subject area test scores—scoring in the top third of such students—were more likely to complete their institution’s college preparatory program requirements than were students whose lower test scores indicated that they were less prepared in the subject areas.<sup>7</sup> For example, almost two-thirds of the students who failed the CPT but scored in the top third of such students successfully completed their remediation program. In contrast, less than a third of the students who scored in the lowest level of the CPT math test completed remediation.

Students who needed remediation in mathematics were most likely to complete their college preparation requirements. In contrast, students who needed remediation in writing were the least likely to finish their college preparation requirements regardless of their test scores. Less than half of the students who needed remediation in writing completed their college preparation requirements, even if they had scored relatively high on the CPT in this subject area.

**Methods**

To address the outcomes of community college remediation programs, we analyzed the performance of degree-seeking students who enrolled in Florida community colleges for the first time during the period from 2000-01 to 2003-04. We analyzed these students’ college readiness assessment test scores, college preparatory course grades, college course grades, and degree attainment through June 30, 2006. In addition, we conducted in-depth interviews of Florida community college administrators to determine the extent to which their institutions are using strategies that professional research indicates increase the academic success of students needing remediation. See Appendix B for a more detailed description of our methodology.

**Questions**

**How successful are community colleges in helping students complete college preparatory program requirements?**

Overall, slightly over half (52%) of the students who enrolled for the first time in a Florida community college in 2000-01 through 2003-04 and who were identified as needing remediation subsequently completed their college preparatory program requirements by the end of 2004-05.

<sup>7</sup> Community college students with higher CPT scores also generally took slightly less time to complete college preparatory requirements. Those students needing the least amount of remediation (whose CPT scores placed them in the top third of a subject area) typically took two semesters of remedial coursework. In contrast, students with the lowest CPT scores (in the bottom third) typically needed three semesters, depending on the subject area, before they were eligible to enroll in related college-level coursework. Department of Education data did not record whether all students had completed college preparatory programs (the data element indicating completion was missing data for some students). We classified a student as completing remedial requirements if the data indicated a completion, had taken college level coursework in the subject area in which they required remediation, or had received a college degree.

**Exhibit 4  
Students With Relatively High College Entry-Level Placement Test Scores Were More Likely to Complete College Preparatory Program Requirements**

Group	CPT Score Range	Percentage Completing College Preparatory Program Requirements
<b>MATH</b>		
Top Third	43-71	65.0%
Middle Third	30-42	45.1%
Bottom Third	Less than 30	30.2%
<b>READING</b>		
Top Third	72-82	54.1%
Middle Third	59-71	47.8%
Bottom Third	Less than 59	35.5%
<b>WRITING</b>		
Top Third	73-82	48.0%
Middle Third	58-72	41.7%
Bottom Third	Less than 57	29.0%

Source: OPPAGA analysis of Florida Department of Education metadata system of remedial students attending Florida community colleges for the first time in 2000-01 through 2003-04 with CPT scores.

***Students needing remediation in multiple subjects were unlikely to complete college preparation programs***

Students who required remediation in multiple subjects also were less likely than students needing remediation in a single area to complete their institution’s college preparation requirements. As shown in Exhibit 5, students who needed remediation in three subject areas had considerably lower completion rates (34%) and took more time (typically 3 semesters) to fulfill their college preparatory program requirements than did students who needed remediation in a single subject area (66% of these students completed remediation in an average of one semester).

The strong relationship between college readiness test scores and remediation outcomes is understandable. Students’ college readiness test score determines the number and types of courses they must successfully complete before enrolling in college-level coursework. Although Florida’s 28 community colleges differ in their specific preparatory policies, students with lower college readiness scores are generally required to take and pass more preparatory courses. For example, Hillsborough Community College requires students who fail the CPT to take up to two remedial courses in math, four courses in reading and five courses

in English/writing before enrolling in college-level coursework in these areas. Lake-Sumter Community College requires students who fail the CPT to take one or two courses in math, and one in reading and one in writing, while Miami-Dade College requires up to three courses in each subject area.

**Exhibit 5  
Students Needing Remediation in Multiple Subjects Were Less Likely to Complete College Preparatory Program Requirements and Took Longer to Do So**

Remediation Needed in	Completed College Preparatory Program Requirements	Typical Semesters Needed to Complete Requirements
One subject area	65.8%	1
Two subject areas	54.2%	2
All three subject areas	34.2%	3
<b>Overall</b>	<b>52.1%</b>	<b>2</b>

Note: Due to discrepancies in the data, semesters to complete requirements includes only those completers with a college prep completion indicator, not all who completed college preparatory program requirements.

Source: OPPAGA analysis of Florida Department of Education metadata system of remedial students attending Florida community colleges for the first time in 2000-01 through 2003-04.

In addition, students who receive low CPT scores not only have to successfully complete more preparatory coursework, but are also the least likely to have attained the skills necessary to be successful in postsecondary education. For instance, national research indicates that students needing remediation are less likely than other students to have critical thinking and study skills and often do not comprehend academic material delivered using traditional instructional methods. These skill gaps can be difficult to address and, if unresolved, make it difficult for students to succeed in college-level coursework.

***Most students who fail to complete remediation requirements leave school and few earn career or technical certificates***

While over half of the students who successfully completed remediation requirements subsequently stayed in school, few students who failed to complete their institution’s college preparatory program requirements within two years did so. As shown in Exhibit 6, only 15% of such students that failed to complete remediation were still



enrolled in school, less than 1% had earned a vocational or career certificate, and none had earned an associate degree.

**Exhibit 6  
Few Students Needing Remediation Earn Career/Technical Certificates**

Progress After Two Years	Completed College Prep Requirements	Did Not Complete College Prep Requirements
Percentage still enrolled or earned a degree or certificate	55.6%	14.7%
Percentage earned a certificate	0.8%	0.8%
Percentage earned a degree	2.0%	0.0%

Note: Still enrolled includes students who continue enrollment in a community college or a state university.

Source: OPPAGA analysis of Florida Department of Education metadata system of remedial students attending Florida community colleges for the first time in 2000-01 through 2003-04.

These findings suggest that community colleges should provide ongoing academic advising to students who are failing to complete remediation and that this advising should include discussing options such as pursuing career or technical certificates in applied areas of study such as culinary arts and landscape management. Postsecondary certificate programs are generally shorter than associate degree programs. Advising these students about certificate programs could provide them with an alternative career path and greater future employment opportunities than if they discontinued their education.

**How well do students who complete college preparatory program requirements perform on subsequent college-level coursework?**

College preparatory programs are generally successful in helping ensure that students have the knowledge and skills needed to be successful in college-level courses. Community college students who complete their remediation requirements subsequently perform almost as well as other students in college-level foundation courses.

**Students who complete college preparatory programs pass foundation courses at rates similar to other students**

As shown in Exhibit 7, students who successfully completed college preparatory program requirements passed related college-level foundation courses at similar rates to students who entered their postsecondary institutions ready for college level coursework. For instance, over three-quarters (76%) of the students in our sample who successfully completed mathematics preparatory requirements earned a “C” or better in college algebra, MAC 1105. This performance was only slightly lower than that of college-ready students who did not need remediation; 81% of such students earned a “C” or better in this class. There was also little difference between the two groups of students that took MGF 1106, a college-level math course for liberal arts. Similar outcomes were shown for students who completed remediation in reading/writing and who subsequently took English 1101 and 1102. This analysis suggests that college preparatory programs generally do a relatively good job of ensuring that students initially needing remediation have the knowledge and skills needed to pass related college-level coursework.

**Exhibit 7  
Students Who Completed College Preparatory Programs Generally Passed Foundation Courses But Earned Slightly Lower Grades Than Other Students**

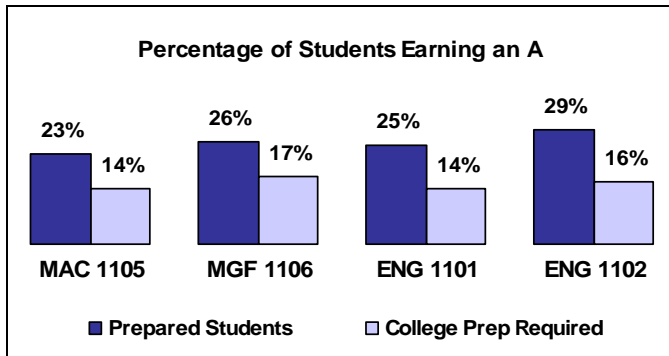
Math/English College Course	% C or Better		GPA	
	Completed College Prep	Did Not Need College Prep	Completed College Prep	Did Not Need College Prep
MAC 1105	76.1%	81.2%	2.2	2.5
MGF 1106	85.5%	87.4%	2.4	2.7
ENG 1101	88.7%	86.3%	2.5	2.6
ENG 1102	89.2%	89.0%	2.5	2.8

Source: OPPAGA analysis of Florida Department of Education metadata system of remedial students attending Florida community colleges for the first time in 2000-01 through 2003-04.

Students who completed college preparatory programs earned slightly lower grade point averages (an average of three-tenths of a point lower) in foundation courses than did students who entered postsecondary institutions ready for college-level coursework. These performance

differences were consistent across the foundation courses we examined. As shown in Exhibit 8, part of this difference is explained by the fact that students completing college preparatory courses were less likely to earn a course grade of “A” than were other students. Thus, while the remediation classes were successful in helping students gain critical knowledge and skills, students who needed college preparatory classes were somewhat less likely to excel in related subject area classes than were other students.

**Exhibit 8**  
**Students Who Completed College Preparatory Programs Were Less Likely to Earn an “A” in Foundation Courses Than Other Students**



Source: OPPAGA analysis of Florida Department of Education metadata system of remedial students attending Florida community colleges for the first time in 2000-01 through 2003-04.

### What percentage of students who complete college preparatory program requirements subsequently earn degrees?

Approximately 29% of community college students who completed college preparatory program requirements earned an associate in arts or associate in science degree within five years. This was approximately 10% lower than the percentage of students who did not require remediation (approximately 40% completed associate degrees within five years). On average, students who completed college preparatory program requirements earned a degree in four years, which was about a year longer than taken by students requiring no remediation.

### Students completing college preparatory program requirements earned degrees at similar rates to non-remedial students

As shown in Exhibit 9, the typical student who completed college preparatory program requirements earned a degree in just over four years (13 terms). This was on average about a year longer than students not requiring remediation who took an average of 10 terms to complete their associate degree. This difference is expected given the additional college preparatory courses these students must take.

**Exhibit 9**  
**Students Who Needed Remediation Took a Median of 13 Semesters to Earn Associate Degrees**

Median Number of Semesters to Earn AA, AS, AAS	
No College Preparation Needed	10
Completed College Preparation	13
<b>Overall</b>	<b>12</b>

Source: OPPAGA analysis of Florida Department of Education metadata system of remedial students attending Florida community colleges for the first time in 2000-01 through 2003-04.

As shown in Exhibit 10 when the extra year needed to complete college preparatory courses is taken into account, students who completed remediation earned degrees at similar rates to those students who were ready for college. For instance, 22% of students completing college preparatory programs earned a degree in four years, a slightly lower percentage than the 25% of non-remedial students who earned a degree within three years. The percentage of students who stayed in school and did not drop out after two, three, and four years was comparable between the two groups.

**Exhibit 10**  
**Students Who Needed College Preparatory Courses Are Less Likely to Earn Associate Degrees Within Five Years**

	2 Years	3 Years	4 Years	5 Years
<b>Percentage Earning a Degree</b>				
No college preparation needed	7.2%	24.6%	34.6%	39.9%
Completed college preparation	2.0%	12.2%	22.2%	29.3%
<b>Percentage Staying in School</b>				
No college preparation needed	49.0%	50.2%	52.2%	*
Completed college preparation	55.6%	51.3%	50.1%	*

Source: OPPAGA analysis of Florida Department of Education metadata system of remedial students attending Florida community colleges for the first time in 2000-01 through 2002-03.

## What is being done at the state and local levels to address remediation?

Reducing the need for college remediation requires collaboration among state educational agencies, K-12 schools and school districts, and postsecondary education institutions to ensure students who earn a high school diploma are prepared for college-level coursework. The state and community colleges are taking several steps to address the need for and effectiveness of college preparatory programs. These strategies include efforts to better academically prepare students while they are still in high school as well as to better assist all students who need remediation once they enroll in postsecondary education.

The 2006 Legislature increased graduation requirements to better prepare high school students for college. The 2006 Legislature passed the "A++" bill which included several initiatives to increase college readiness of Florida high school graduates.<sup>8</sup> These initiatives include creating the Center for Reading Research at Florida State University, strengthening requirements for promotion from middle school, encouraging the establishment of career and professional academies, expanding and strengthening professional development programs for teachers and principals, aligning professional development standards with regional and national model frameworks, and authorizing district school boards to require low-performing students to attend remediation programs held before or after school or during the summer. These initiatives should help to reduce the need for remediation by strengthening middle and high school education.

Community colleges and school districts participate in several state, federal, and local programs designed to reduce the need for remediation. Most community colleges and school districts also participate in state, federal, and local programs that help prepare students for college through scholarships, mentoring, academic assistance and other support. The longest running of these initiatives include Florida's College Reach-Out Program (CROP) and the federally funded TRIO Program. CROP assists educationally disadvantaged, low-income students in grades 6-12

in selecting courses required for graduation from high school and admission to a postsecondary educational institution. CROP also provides students with a variety of college-oriented academic and advising activities, including interacting with college students as mentors and role models. The TRIO Program includes several smaller programs that provide services such as counseling, tutoring, and instruction to assist low-income, first-generation college students, and students with disabilities to progress through the academic pipeline from middle school to post-baccalaureate programs.<sup>9</sup>

Other state initiatives designed to help prepare students for college include the Stanley Tate Project STARS (Scholarship Tuition for At Risk Students) Scholarship Program and the Take Stock in Children Program. The Stanley Tate Project STARS Scholarship Program provides college scholarships and other support to encourage economically disadvantaged high school students to become prepared for postsecondary education. The Take Stock in Children Program provides mentoring and other assistance to students in grades 6-12 to prepare them for college and awards scholarships to these students so that they can continue their education beyond high school.

In addition to these long-term efforts, the state of Florida is a round one participant in a nationally funded project known as Achieving the Dream, originally funded by the Lumina Foundation for Education. The goals of the project are to increase access to the success in higher education for low-income and minority students. Since many of these students need remediation when they arrive on community colleges' campuses, the four participating institutions (Broward, Hillsborough, Tallahassee, and Valencia) have focused on improving the outcomes for remedial students. This is the third year of the project.

More detailed information on some of these programs can be found in Appendix A.

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<sup>9</sup> In Florida's community colleges, TRIO supports the following programs and services: Educational Opportunity Centers, Upward Bound, Talent Search, and Student Support Services. More information on each of these programs and services is provided in Appendix A of this report.

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<sup>8</sup> Chapter 2006-74, *Laws of Florida*.

Articulation agreements do not adequately address strategies to reduce remediation. Florida law requires school districts and community colleges to develop articulation agreements that must include collaborative strategies to reduce the need for postsecondary remediation in math, reading, and writing for first time enrolled recent high school graduates.<sup>10</sup> We evaluated a sample of 15 of the 67 agreements between community colleges and school districts to determine whether (1) they contained clear, detailed remediation reduction strategies, (2) the strategies addressed remediation in all three subject areas identified in Florida law, (3) the strategies represented a comprehensive approach to remediation reduction by involving students from across a school district, and (4) the strategies included innovative practices and shared resources as encouraged by Florida law.<sup>11</sup> Appendix C contains an in-depth description our analysis and findings.

In general, our analysis revealed that most of the agreements were vague regarding institutions' current and planned activities to reduce the need for remediation. For instance, while all but 2 of the 15 agreements we reviewed included remediation reduction strategies, most (13) did not provide enough detail to identify what the institutions were doing or planned to do and how these activities would reduce remediation. In addition, most (12) of the agreements failed to include strategies to reduce remediation in all three subject areas. Furthermore, only three agreements described the numbers and types of students who would participate in the remediation reduction activities.

Despite these deficiencies, most agreements included sharing of institutional resources and/or one or more of the innovative practices identified in Florida law.

Community colleges are implementing strategies to assist students who enter postsecondary education unprepared. Published professional and academic literature identifies effective strategies for increasing the academic success of students who need remediation. These strategies include providing clear direction and accountability for the institutions' college preparatory programs, establishing strong academic advising for students needing remediation, providing specialized training to instructional faculty and staff who work with students needing remediation, using a variety of instructional approaches in college preparatory courses, providing supplemental courses and services to students who need remediation, and evaluating the institution's success at meeting the expectations it has established for its college preparatory program.

Our interviews with college preparatory program administrators found that the state's 28 community colleges are implementing many of these strategies. However, the community colleges vary in the extent and manner they implement these strategies.<sup>12</sup> Exhibit 11 presents the results of our analysis, which are highlighted below.

- Most community colleges have established goals and objectives for their college preparatory programs. However, fewer than half assign program accountability to a single entity or require college preparatory instructors to meet on a regular basis.
- Community colleges generally do not require students needing remediation to have face-to-face meetings with advisors, provide academic advisors with specialized training in the needs of students who are academically deficient, or advise students needing remediation differently than other students.

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<sup>10</sup> Section 1007.235(2)(c), *F.S.*, requires district school superintendents and community college presidents to jointly develop interinstitutional articulation agreements that include strategies to reduce the incidence of postsecondary remediation in math, reading, and writing for first-time-enrolled recent high school graduates. The specific strategies chosen should be based upon the findings in the most recent postsecondary readiness-for-college report. Section 1007.235(2)(c), *F.S.*, also encourages public schools and community colleges to share resources and implement innovative strategies such as distance learning, and summer student and faculty workshops.

<sup>11</sup> There are 67 interinstitutional articulation agreements between school districts and community colleges. In developing our sample, we selected 15 community colleges of varying sizes and locations from throughout the state. For each community college in our sample, we selected one interinstitutional articulation agreement. For those community colleges in the sample that had interinstitutional articulation agreements with multiple school districts, we randomly selected one of these agreements for our review.

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<sup>12</sup> Our analysis did not attempt to tie the use of these strategies to the college preparatory program outcomes primarily because of timeframe differences between historical cohort performance data and current community college practices.



## Exhibit 11 Community Colleges Have Implemented Strategies to Improve the Academic Success of Students Needing Remediation

	Strategy	Percentage of Community Colleges Using Strategy
<b>Program Direction and Accountability</b>	▪ Have goals and objectives that establish expectations specifically for their institution's college preparatory program.	64%
	▪ Assign overall responsibility and accountability for the college preparatory program to a single department and/or position.	18%
	▪ Require college preparatory program faculty to meet as a group at least once a semester to coordinate and share effective strategies.	21%
<b>Academic Advising</b>	▪ Provide academic advisors with specialized training to ensure they can identify those students needing remediation who are most at-risk for academic failure and are aware of academic support services/resources available to assist these students.	7%
	▪ Require students needing remediation to meet with academic advisors to ensure that these students are aware of requirements and available services/resources, and stay on track.	29%
	▪ Academic advising for students needing remediation is substantively different from that for college-ready students.	7%
	▪ Advisors routinely provide academically struggling students information about vocational and certificate programs before they drop out of school completely.	54%
	▪ Have/are developing systems to alert academic advisors early on of students needing remediation who are struggling academically to ensure that these students receive advising and are aware of available learning resources.	82%
<b>Professional Development for Instructional Staff</b>	▪ Require specialized training to ensure that college preparatory program instructors understand program expectations and college-level foundation course competencies, and adjust teaching methods to address the differing learning styles of students needing remediation.	18%
	▪ Have a mentoring program for new instructional staff that pairs new and experienced faculty to answer questions and provide assistance to new college preparatory program instructors as needed.	93%
<b>Instructional Approaches</b>	▪ Use (or plan to begin using in 2007-08) learning communities to foster stronger bonds and inter-reliance among students by having groups of students attend a series of college preparatory courses together.	57%
	▪ Using (or plan to begin using in 2007-08) course pairing techniques to provide reinforcement and continuity by having students register for two or more college preparatory courses during the same semester.	50%
	▪ Use laboratory courses for one or more college preparatory courses to supplement classroom lectures.	54%
<b>Supplemental Services and Resources</b>	▪ Offer learning skills classes to address the root causes of students needing remediation (such as deficiencies in time management skills, study skills, library usage, public speaking, and organizational skills).	100%
	▪ Require all students needing remediation to enroll in learning skills classes.	39%
	▪ Require students needing remediation in multiple subject areas to enroll in learning skills classes.	61%
	▪ Offer tutoring to remediation students to assist them in mastering classroom material.	100%
	▪ Have learning labs for students who need remediation that centralize services such as tutoring and other academic support services.	96%
<b>Program Evaluation</b>	▪ Evaluate key components of their remediation activities (usually at the department level).	89%
	▪ Comprehensively evaluate the overall effectiveness of their college preparatory program.	18%

Source: OPPAGA's review of professional literature and interviews of college preparatory program administrators at Florida's 28 community colleges.

- Community colleges’ training for college preparatory instructors rarely covers issues such as college preparatory program expectations, college-level foundation course competencies, and effective teaching methods for students needing remediation. However, most community colleges have mentoring programs for new instructors.
- Community colleges use a variety of instructional approaches to respond to the various learning styles of students needing remediation.
- All community colleges offer supplemental services such as tutoring to students needing remediation and most require students needing remediation in multiple subject areas to enroll in learning skills courses to address learning deficiencies that often cause students to be behind academically.
- While most community colleges evaluate aspects of their college preparatory program, few evaluate the overall effectiveness of these programs.

- provides adequate academic advising to students needing remediation, including information on career or technical certificates to students who are having difficulty successfully completing college preparatory requirements; and
- offers students needing remediation a sufficient level of support services including skills learning courses to improve student time management and study skills, and tutoring to help students master course content.

To strengthen articulation agreements between community colleges and school districts and help ensure that high school graduates are academically prepared for college, we recommend that the Legislature consider amending s. [1007.235\(2\)\(c\)](#), *Florida Statutes*, to require that these agreements include detailed information on the collaborative strategies that school districts and community colleges are implementing, including the schools and types of students that will be participating in each strategy and how the strategy is expected to reduce remediation rates in reading, writing, and/or mathematics.

We also recommend that the State Board of Education adopt performance measures and standards for community college remediation programs, which should include the percentage of recent high school students needing remediation and the success of community college programs in providing students with the skills and knowledge needed to succeed in college-level classes and attain associate degrees. The State Board of Education should use this information to monitor the college preparedness of high school graduates and to determine the effectiveness of community college remediation efforts.

## Recommendations

To improve the effectiveness of community college remediation programs, we recommend the State Board of Education direct the community colleges to evaluate their college preparatory programs.<sup>13</sup> At a minimum, these evaluations should assess whether each institution’s program uses the strategies identified as effective by national studies:

- has clear and specific outcomes and performance expectations;
- has effective communication among administrators, instructors, and staff;
- adequately trains instructional faculty, academic advisors, and other personnel working with students needing remediation;
- offers students needing remediation sufficient opportunities to learn material in settings and through delivery methods that suit their individual learning styles;

## Agency Response

In accordance with the provisions of s. 11.51(5), *Florida Statutes*, a draft of our report was submitted to the Commissioner of Education to review and respond. The Commissioner’s written response is reprinted herein in Appendix D.

<sup>13</sup> OPPAGA’s prior report, *Steps Can Be Taken to Reduce Remediation Rates; 78% of Community College Students, 10% of University Students Need Remediation*, [OPPAGA Report No. 06-40](#), April 2006, included several recommendations designed to better prepare high school students for college-level coursework.

## Appendix A

# State and Federal Programs to Improve College Readiness

Most Florida community colleges and school districts participate in several state, federal, and local programs that provide funding to help prepare students for college. The largest of these initiatives include Florida's College Reach-Out Program (CROP) and the federally funded TRIO Program.<sup>14</sup> Table A-1 provides information on each of these programs including a description of the program's purpose, and funding and participation data. In 2005-06, 25 of the state's 28 community colleges and 46 of the state's 67 school districts participated in CROP to help 5,307 students in grades 6-12 receive the preparation and motivation needed to pursue postsecondary education. Although fewer community colleges participated in the federally funded TRIO programs than in CROP, TRIO served more students statewide. In 2005-06, about two-thirds (19) Florida community colleges participated in one or more TRIO programs, which combined assisted 13,203 students at both the pre-college and college level by providing counseling, academic assistance and other support. In addition, 8,656 at-risk/economically disadvantaged students participated in the Stanley Tate Project STARS Scholarship Program in 2005-06 and 11,018 students participated in Take Stock in Children in that year.

**Table A-1**  
**State and Federally Funded Programs Designed to Support Collaboration**

Program	Purpose	2005-06 Funding (in millions)	2005-06 Participation		
			Students Served	School Districts	Postsecondary Institutions
CROP (College Reach-Out Program)	State program designed to provide educationally disadvantaged, low-income students in grades 6-12 with the preparation and motivation needed to pursue postsecondary education. Postsecondary educational institutions that participate in the program provide continuous contact with students from the point at which they are selected for participation until they enroll in a college and assist students in selecting courses required for graduation from high school and admission to a postsecondary educational institution and ensure that students continue to participate in program activities. Participating postsecondary institutions also provide on-campus academic and advisory activities during summer vacation and provide opportunities for interacting with college and university students as mentors, tutors, or role models.	\$3.199m	5,307	46	25 community colleges
TRIO Programs	Federally funded programs that provide outreach and support services to assist low-income, first-generation college students, and students with disabilities to progress through the academic pipeline from middle school to post-baccalaureate programs. TRIO programs in Florida community colleges include Educational Opportunity Centers, Upward Bound, Talent Search, and Student Support Services (see below).	\$9.85m	13,203	45	19 community colleges participated in one or more TRIO programs

<sup>14</sup> The term "TRIO" was coined in the late 1960s to describe several federal programs designed to help disadvantaged students succeed in school. TRIO includes the following programs and services: Educational Opportunity Centers, Upward Bound, Talent Search, and Student Support Services.

Program	Purpose	2005-06 Funding (in millions)	2005-06 Participation		
			Students Served	School Districts	Postsecondary Institutions
	<i>Educational Opportunity Centers.</i> Provide counseling and information on college admissions to qualified adults who want to enter or continue a program of postsecondary education. An important objective of the program is to counsel participants on financial aid options and to assist in the application process.	\$1.14m	4,500		
	<i>Talent Search.</i> Provides academic, career, and financial counseling and other assistance to middle and high school students and encourages them to graduate from high school and continue on to the postsecondary institution of their choice and encourages high school dropouts to reenter the education system and complete their education.	\$1.92m	5,250		
	<i>Upward Bound.</i> Postsecondary institutions provide academic coursework and other services to first generation in college and low income students in grades 9-12 to help them succeed in college and in their postgraduate careers.	\$2.83m	558		
	<i>Student Support Services.</i> Designed to increase the college retention and graduation rates of its participants and help students make the transition from one level of higher education to the next. The program provides opportunities for academic development, assists students with basic college requirements, and serves to motivate students toward the successful completion of their postsecondary education by providing services such as instruction in basic study skills; tutorial services; counseling; assistance in securing admission and financial aid for enrollment in four-year institutions and graduate and professional programs, and college scholarships.	\$3.94m	2,895		
Stanley Tate Project STARS Scholarship Program	State-funded program with matching support from local partners which provides scholarship assistance for economically disadvantaged students at risk of dropping out of school. Students must progress academically, meet school attendance requirements abide by their school code of conduct, remain drug and crime free, and participate in a mentoring program.	\$5.98m	8,656 <sup>1</sup>		
Take Stock in Children Program	Take Stock in Children helps high potential, low-income children stay in school, earn a high school diploma, graduate from college, and enter into the workforce. Enrolling students as early as sixth grade, and staying with the student through college graduation, each child receives a four-year college scholarship; a volunteer mentor to provide motivation, support, and tutoring; a case manager to support the student's educational achievements; and college and career counseling. The students sign performance contracts agreeing to get good grades, exhibit positive behaviors, and remain drug- and crime-free.	\$4.46m	11,018	66	

<sup>1</sup> A total of 16,139 prepaid scholarships have been awarded of which 7,483 participants have enrolled in college and 8,656 students are current participants. Source: Florida Department of Education and the U.S. Department of Education, Florida Prepaid College Foundation, Take Stock in Children Program, Chapter 2005-70, *Laws of Florida*.



## Appendix B

# Methodology

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To examine the effectiveness of college preparatory programs offered by Florida's community colleges to students who are unprepared for college-level coursework, we analyzed the performance of self-declared degree-seeking students who enrolled in a Florida community college for the first time during the period from the summer term of 2000-01 through the spring term of 2003-04. We examined college preparatory program completion rates, grades in college credit courses, enrollment retention, and degree completion. We compared these students to those students who did not require remediation. In addition, we conducted in-depth interviews of Florida community college administrators identify whether these institutions are using strategies that professional research indicates increase the academic success of students needing remediation.<sup>15</sup>

**Data.** The Department of Education provided information on student demographics, college readiness test scores; community college and state university enrollments, courses attempted, credits earned, and course grades by term; completion of college preparatory program requirements, and completion of community college certificates and associate degrees by these students. Data on students' term-level enrollment and course information was available through the spring of 2004-05. Information on the completion of certificates and associate degrees was available through the spring 2005-06. These data enabled us to examine college performance for at least two years for all students.

**Data limitations.** The available data contained information on 261,682 students. However, we did not have complete information for all students. For this reason, the number of students included in our separate analyses varies. For example, due to missing data, we were not able to determine the college readiness of almost 20% (51,372) of the students because the Department of Education lacked college readiness test scores for these students. *Florida Administrative Code* (Rule 6A-10.0315) requires students entering degree programs be tested for reading, writing, and mathematics proficiency to determine their need for remedial coursework. The relatively high level of missing data on readiness test scores is explained by two primary reasons: (1) students whose first language is not English can be placed in college preparatory courses prior to being tested; and (2) students are not required to be tested if they have not applied for a degree program. Our analysis included students who declared their intention to pursue a degree, but some of these students may not have met the community colleges' criteria to be declared a degree-seeking student. In both of these situations students would not have college readiness test scores if they dropped out soon after entering.

Due to data limitations we were not able to determine the length of time it took for 15% of the students to complete their college preparatory program requirements. Department of Education data indicated the term in which a student completed requirements. However many students who had not been indicated as completing their requirements had, according to other data,

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<sup>15</sup> We relied on several sources to identify effective remediation strategies, including those which follow. Boylan, Hunter R. *What Works: Research-Based Best Practices in Developmental Education*. Appalachian State University: National Center for Developmental Education, 2002. Boylan, Hunter R. and D. Patrick Saxon. "[Affirmation and Discovery: Learning from Successful Community College Developmental Programs in Texas](#)," Appalachian State University: National Center for Developmental Education. Boylan, Hunter R. and D. Patrick Saxon. "[What Works in Remediation: Lessons from 30 Years of Research](#)," Appalachian State University: National Center for Developmental Education.

completed a degree or taken a college credit course in the subject area in which they required remediation. We were unable to determine the reasons for these discrepancies. For our analyses we coded a student as completing their college preparatory program requirements if the data indicated a term of completion, that appropriate college credit courses had been taken, or if a degree had been earned.

Data analyses. Our report presents student counts, percentages, and measures of central tendency in three general areas – (1) students who completed their college preparatory program requirements; (2) performance in college credit courses of students who completed college preparatory program requirements compared to students not requiring college preparatory courses; and (3) students' success at remaining in school and completing vocational certificates and associate degrees. Due to constraints imposed by the available data, the number of students included in each descriptive analysis varies. Table B-1 describes each analysis and the number of students included.

**Table B-1**  
**The Number of Students Included in Each Analysis Varies Due to Data Constraints**

Description of Analysis	Number Completing College Prep Requirements	Number Not Completing College Prep Requirements	Number Not Requiring College Prep	Number Without College Readiness Test	Total
Percentage of students requiring college prep courses	86,141	79,339	44,830	51,372	261,682
Percentage of students completing college prep requirements <sup>1</sup>	86,141	79,339			165,480
Percentage of students completing college prep requirements who took the College Placement Test <sup>1,2</sup>	79,681	77,095			156,776
Median time to complete college prep requirements for students who took the College Placement Test <sup>3</sup>	70,128				70,128
Percentage of students completing college prep requirements according to the number of subjects requiring college prep <sup>1</sup>	86,141	79,339			165,480
Median time to complete college prep requirements according to the number of subjects requiring college prep <sup>3</sup>	73,452				73,452
Percentage and grade point average for students taking MAT 1105 <sup>4</sup>	26,259		38,648		64,907
Percentage and grade point average for students taking MAT 1106 <sup>4</sup>	8,043		8,453		16,496
Percentage and grade point average for students taking ENG 1101 <sup>4</sup>	45,342		81,252		126,594
Percentage and grade point average for students taking ENG 1102 <sup>4</sup>	27,349		47,627		74,976
Median time to earn an associate's degree	86,141		44,830		130,971
Percentage of students retained after 2 years <sup>5</sup>	69,255	58,994	34,063		162,312
Percentage of students retained after 3 years <sup>6</sup>	46,675	37,034	22,971		106,680
Percentage of students retained after 4 years <sup>7</sup>	24,120	17,760	11,480		53,360
Percentage of students earning a certificate in 2 years <sup>8,12</sup>	86,141	79,339	44,830		210,310
Percentage of students earning a certificate in 3 years <sup>9,12</sup>	69,255	58,994	34,063		162,312
Percentage of students earning a certificate in 4 years <sup>10,12</sup>	46,675	37,034	22,971		106,680
Percentage of students earning a certificate in 5 years <sup>11,12</sup>	24,120	17,760	11,480		53,360
Percentage of students earning a degree in 2 years <sup>8,12</sup>	86,141	79,339	44,830		210,310
Percentage of students earning a degree in 3 years <sup>9,12</sup>	69,255	58,994	34,063		162,312
Percentage of students earning a degree in 4 years <sup>10,12</sup>	46,675	37,034	22,971		106,680
Percentage of students earning a degree in 5 years <sup>11,12</sup>	24,120	17,760	11,480		53,360

<sup>1</sup> Excludes students who did not require college preparatory courses or did not have a college readiness test in the data.

<sup>2</sup> Excludes students using the SAT or ACT as college readiness exam.

<sup>3</sup> Excludes students completing college preparatory courses that did not have a completion term in the data.

<sup>4</sup> Excludes students who did not take the course and who required college preparatory courses but did not complete requirements.

<sup>5</sup> Retained is defined as still enrolled in a community college or state university or earned an award in that term or prior term. Excludes students for whom less than two years of enrollment data were available.

<sup>6</sup> Retained is defined as still enrolled in a community college or state university or earned an award in that term or prior term. Excludes students for whom less than three years of enrollment data were available.

<sup>7</sup> Retained is defined as still enrolled in a community college or state university or earned an award in that term or prior term. Excludes students for whom less than four years of enrollment data were available.

<sup>8</sup> Excludes students for whom less than two years of data were available.

<sup>9</sup> Excludes students for whom less than three years of data were available.

<sup>10</sup> Excludes students for whom less than four years of data were available.

<sup>11</sup> Excludes students for whom less than five years of data were available.

<sup>12</sup> Number of students included is greater than the retention analysis because an additional year of award data were available.

Source: OPPAGA analysis of self-declared degree seeking students attending Florida community colleges for the first time (FTIC) in 2000-01 through 2003-04.

## Appendix C

# Remediation Reduction Components in Interinstitutional Articulation Agreements

Section [1007.235\(2\)\(c\)](#), *Florida Statutes*, requires district school superintendents and community college presidents to jointly develop interinstitutional articulation agreements that include strategies to reduce the incidence of postsecondary remediation in math, reading, and writing for first-time-enrolled recent high school graduates. The specific strategies chosen should be based upon the findings in the most recent postsecondary readiness-for-college report. We evaluated a random sample of 15 of the 67 interinstitutional articulation agreements to determine the extent to which they address remediation reduction by assessing whether they (1) included clear, detailed descriptions of remediation reduction mechanisms and strategies referenced in the *Florida Statutes*, (2) included at least one remediation reduction mechanism/strategy in each subject area—math, reading, and writing—to ensure that the institutions focused on reducing remediation in each area tested, (3) described the numbers and types of students who would participate at both the middle and high school levels, to ensure that remediation reduction is being addressed broadly across the district (4) mentioned shared resources between the public school system and community college or public-private partnerships as encouraged in the *Florida Statutes*, and (5) referenced at least one of the innovative strategies identified in the *Florida Statutes* such as distance learning, summer student and faculty workshops, parental involvement activities, or the distribution of information over the Internet to reduce remediation.<sup>16</sup>

In general, we found that the agreements generally lacked the detail necessary for a comprehensive and systematic approach to remediation reduction. Table C-1 presents the results of our analysis by community college. Our findings are summarized below.

- Only 2 of the 15 agreements (Palm Beach County School District/Palm Beach Community College, and Seminole County School District/Seminole Community College) included clear, comprehensive, and detailed descriptions of remediation reduction strategies. Most (13 of 15) of the agreements included very brief, general, or vague descriptions with a limited number of specific remediation reduction activities (2 or fewer). Furthermore, two agreements simply stated that a committee would be formed or the respective boards would address this issue.
- Only 3 of the 15 agreements (Palm Beach County School District/Palm Beach Community College, Seminole County School District/Seminole Community College, and Union County School District/Lake City Community College) included at least one remediation reduction strategy in each subject area—math, reading and writing.
- Only 3 of the 15 agreements' (Marion County School District/Central Florida Community College, Palm Beach County School District/Palm Beach Community College, and Seminole County School District/Seminole Community College) strategies described the numbers and types of students who would participate at both the middle and high school levels. Other agreements either did not describe the number and types of students or schools that would

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<sup>16</sup> There are 67 interinstitutional articulation agreements between school districts and community colleges. In developing our sample, we selected 15 community colleges of varying sizes and locations from throughout the state. For each community college in our sample, we selected one interinstitutional articulation agreement. For those community colleges in the sample that had interinstitutional articulation agreements with multiple school districts, we randomly selected one of these agreements for our review.



participate or included narrow strategies that involved few students at one or two schools or classes in the school district.

- Almost half of the agreements (7 of 15) mentioned shared resources between the public school system and community college or public-private partnerships.
- Ten of the 15 agreements referenced at least one of the innovative strategies identified in the *Florida Statutes* such as distance learning, summer student and faculty workshops, parental involvement activities, or the distribution of information over the Internet to reduce remediation. None of the agreements contained more than two of these innovative strategies and five included none of these innovative strategies.

**Table C-1**  
**Most Interinstitutional Articulation Agreements Reviewed Lacked Detail on Remediation Reduction Strategies <sup>1</sup>**

District/College <sup>2</sup>	Remediation Reduction Mechanisms and Strategies <sup>3</sup>	Mechanisms and Strategies Related to All Three Subject Areas <sup>4</sup>	Large Number of Students/Schools Served <sup>5</sup>	Evidence of Shared Resources <sup>6</sup>	Innovative Strategies <sup>7</sup>
Bay/Gulf Coast CC	N	N	N	P	N
Brevard/Brevard CC	P	N	P	P	N
Calhoun/Chipola College	P	P	P	P	F
Duval/FCCJ	P	P	P	F	F
Escambia/Pensacola JC	P	P	P	F	F
Hillsborough/HCC	P	N	P	F	F
Marion/Central FL CC	P	N	F	F	N
Miami-Dade/Miami Dade College	P	P	P	P	F
Okeechobee/IRCC	P	N	P	P	N
Orange/Valencia CC	P	P	P	P	F
Palm Beach/PBCC	F	F	F	F	F
Pinellas/St. Petersburg College	P	P	P	F	F
St. Johns/SJRCC	N	N	N	P	N
Seminole/SCC	F	F	F	F	F
Union/Lake City CC	P	F	P	P	F
<b>Plans Fully Addressing Element:</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>7</b>	<b>10</b>

<sup>1</sup> F=Full, P=Partial, and N=None

<sup>2</sup> To ensure that our sample included was balanced, we chose the 15 agreements to provide taking into account school district and community college size and geographic location.

<sup>3</sup> Assessment of Remediation Reduction Mechanisms and Strategies: F - Comprehensive description of major mechanisms and strategies in place or proposed, P - General or vague description, two or less examples, N - No description or examples provided, or only states that a committee is being established or that the participating boards will address mechanisms and strategies.

<sup>4</sup> Assessment of Mechanisms and Strategies Related to All Three Subject Areas: F - Comprehensive description by subject area of major mechanisms and strategies in place or proposed, P - General or vague description for one or two subject areas, N - No description or examples by subject area provided.

<sup>5</sup> Assessment of Large Number of Students/Schools Served: F - Broadly addresses students in middle and high schools, P - Few schools/students included in strategies, N - No reference to types/numbers of schools/students addressed.

<sup>6</sup> Assessment of Evidence of Shared Resources: F - Comprehensive description of shared resources including partnerships with private industries either currently or proposed that included to share resources, P - General or vague description, N - No description provided.

<sup>7</sup> Assessment of Innovative Strategies: F - Clear description of innovative strategies and mechanisms (such as distance learning, summer student and faculty workshops, parental involvement activities, and the distribution of information over the Internet) either currently in place or proposed, P - General or limited description, N - No description provided.

Source: OPPAGA analysis of a sample of interinstitutional articulation agreements submitted to the Florida Department of Education for 2006-07.

**Appendix D**

**FLORIDA DEPARTMENT OF EDUCATION**



Jeanine Blomberg  
Commissioner of Education



STATE BOARD OF EDUCATION

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May 11, 2007

Mr. Gary R. VanLandingham  
Office of Program Policy Analysis  
and Government Accountability  
111 West Madison Street, Suite 312  
Tallahassee, Florida 32399-1475

Dear Mr. VanLandingham:

The attached response regarding the draft report *Half of College Students Needing Remediation Drop Out; Remediation Completers Do Almost as Well as Other Students* is for your information.

If you have any questions, please contact John Franco, Inspector General, at 245-0403.

Sincerely,

A handwritten signature in cursive script that reads "Jeanine Blomberg".

Jeanine Blomberg  
Commissioner

JB/jmf/br

Enclosure

**Florida Department of Education**  
**Office of Program Policy Analysis and Government Accountability**  
**Draft Report Response**  
***Half of College Students Needing Remediation Drop Out; Remediation Completers Do***  
***Almost as Well as Other Students***  
**May 9, 2007**

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**Recommendation**

The State Board of Education directs the community colleges to evaluate their college preparatory programs.

The Division of Community Colleges concurs with this recommendation.

**Recommendation**

The Legislature consider amending s.1007.235(2)(c), Florida Statutes, to require that these agreements include detailed information on the collaborative strategies that school districts and community colleges are implementing, including the schools and types of students that will be participating in each strategy and how the strategy is expected to reduce remediation rates in reading, writing, and/or mathematics.

The Division of Community Colleges believes this recommendation moves beyond policy and into operations and procedure and, therefore, is not appropriate for "statute".

**Recommendation**

The State Board of Education adopt performance measures and standards for community college remediation programs, which should include the percentage of recent high school students needing remediation and the success of community college programs in providing students with the skills and knowledge needed to succeed in college-level classes and attain associate degrees. The State Board of Education should use this information to monitor the college preparedness of high school graduates and to determine the effectiveness of community college remediation efforts.

This is already collected and reported, college-by-college and system-wide in the annual Accountability Report.

**OPPAGA Comment**

*While the annual accountability report is a useful information tool for community colleges, it does not provide information necessary to determine the program's success of preparing the majority of students who need remediation in several subject areas. Reporting the number and percentage of students who eventually complete remediation requirements in all subject areas would provide a more comprehensive analysis of the preparatory program's success. The annual accountability report also does not contain established standards or performance expectations which would provide institutional and state-level policy makers with a gauge to measure progress. Our recommendation is designed to increase the accountability of community colleges' preparatory programs by reporting additional information, which the department already collects, and establishing explicit expectations for each student outcome.*

## *The Florida Legislature*

# *Office of Program Policy Analysis and Government Accountability*



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OPPAGA provides performance and accountability information about Florida government in several ways.

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