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Accelerating Student Success: The Case for Corequisite Instruction

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ACCELERATING STUDENT SUCCESS

THE CASE FOR COREQUISITE INSTRUCTION

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STATEMENT OF PROBLEM

The scale of underprepared students entering college appears larger than outside observers may suspect. Approximately 33% of first-year students at four-year colleges and 40% at community colleges place into one or more developmental courses each year according to the U.S. Department of Education (2016). For public two-year college students, the number increases to 55 % taking at least one remedial course after high school (U.S. Department of Education, 2016). For first-time college students (first in their families to attend college), the numbers are highest with 68 % enrolled in some type of remediation (U.S. Department of Education, 2016).

Increasing evidence links the assignment of remediation to low college completion outcomes (Community College Research Center, 2019). Fewer than 25% of community college students who require developmental classes earn a credential within eight years of first enrolling in college (Bailey, Jeong & Cho, 2010; U.S. Department of Education, 2016). This can be compared to 40% of community college students who never take developmental coursework in college completing a degree or certificate within the same time frame (Bailey, Jeong & Cho, 2010). Although neither statistic is particularly impressive, the data clearly demonstrate that

degree completion remains a major challenge for underprepared students in need of developmental education.

The Virginia Community College System (VCCS) serves 240,000 students per year (VCCS annual enrollment, 2016). The new strategic plan of the VCCS, Complete 2021, emphasizes student success with the ambitious aspiration to "triple credentials students earn." Closing the achievement gap for underprepared college students is key to meeting this goal.

To address this issue, VCCS and other community colleges around the nation developed a remediation plan based on modularization. Adopted in 2012 by the VCCS, this plan included the modular Math Essentials (MTE) and a similar model for English known as English Fundamentals (ENF). While modestly successful (McNeal, 2016), success rates for students employing these modular modes remain low (Bickerstaff, Fay & Trimble, 2016), impeding the completion goals of the VCCS strategic plan. Subsequently, recent initiatives including multiple measures and "direct enrollment" seek to increase the success of underprepared students requiring remediation by improving course placement processes.

Identified Opportunities

The successes of corequisite remediation courses and supplemental instruction over traditional remediation courses such as the modular Math Essentials have been widely and recently documented (Logue, Watanabe-Rose, & Douglas, 2016). As a result, several states seek to promote large-scale implementations of corequisite models through policy or legislative changes that limit remedial education (Logue, Watanabe-Rose, & Douglas, 2016; Vandal, 2014; Park, Woods, Hu, Bertrand Jones & Tandberg, 2018). Florida was the first state to pass legislation making developmental education optional for many students (Park, et al., 2017).

Colorado, Indiana, Connecticut, Tennessee and other states have passed legislation addressing student placement and remedial education (Vandal, 2014; Bailey & Jaggars, 2016).

In 2007, the Community College of Baltimore County (CCBC) led the way with its Accelerated Learning Program, which uses the corequisite format (Adams, Gearheart, Miller, & Roberts, 2009). A study of CCBC's accelerated learning program by the Community College Research Center shows higher rates of college credit course completion for students who participated in the program (Adams et al., 2009). Consequently, community colleges started to develop and adopt corequisite models to facilitate developmental education and promote completion.

In California, early implementers of the corequisite remediation models have seen promising results, showing significant increases in students completing college-level math and English courses across all demographics (California Acceleration Project, 2018). For example, with corequisite courses, completion rates at Los Medanos College more than doubled for all students and quadrupled among African-Americans and Hispanics when compared to the state average completion rates for student taking college-level mathematics (California Acceleration Project, 2018).

Corequisite models have undergone great development and success in Tennessee. After implementing a corequisite model in 2015, in combination with other systemic reforms, Tennessee experienced notable improvements in pass rates for mathematics and writing introductory college-level courses. Subsequent analysis indicates that the Tennessee corequisite math remediation is significantly more cost-effective than prerequisite math remediation (Belfield, Jenkins, & Lahr, 2016). In fact, the corequisite model in Tennessee required 50% less

resources than the prerequisite models to enable an academically underprepared student to succeed in completing the college-level gateway course (Belfield et al., 2016).

Identified Challenges

Despite the evidence of its success, several challenges are associated with implementing and sustaining a successful corequisite model. These challenges can be classed as logistical and financial. Logistical challenges include coordinating corequisite placement with multiple measures, identifying the scope of corequisite remediation, concomitantly adjusting faculty workloads, developing meaningful faculty professional development and achieving faculty buy-in.

Solving these implementation challenges is essential to the success of corequisite remediation. Navigating the initial hazard of correct corequisite placement through the appropriate use of multiple measures or direct placement is a key first step (Daugherty, Gomez, Carew, Mendoza-Graf & Miller, 2018). A related critical issue involves identifying the scope of the corequisite model, in other words determining how much remediation may be successfully accomplished through a corequisite course. Concurrently, the number of contact hours along with the associated faculty teaching load needs to be identified per course. Teaching loads need to reflect both the additional work required of instructors when developmental students are integrated into college-level courses as well as the additional required time teaching the corequisite course (Brothen & Wambach, 2012).

Faculty buy-in is also key to successful implementation of a corequisite model. Community colleges in Texas faced challenges resulting from limited buy-in among stakeholders

including faculty and advisors (Daugherty, Gomez, Carew, Mendoza-Graf, & Miller, 2018). In Texas, successes with implementing corequisites were more often found in places with faculty "champions" to design and implement the model. A source of faculty "champions" in Virginia may be found in the membership and leadership of the Virginia Mathematical Association for Two Year Colleges. Additional factors driving success in Texas included a "culture of flexibility and innovation" which fosters a willingness to embrace new challenges and strategies (Daugherty, Gomez, Carew, Mendoza-Graf, & Miller, 2018). Administrative support for faculty innovation is key to creating this culture. Furthermore, instructors need meaningful training to effectively support developmental learners alongside those who are college ready (Brothen & Wambach, 2012).

Changing the remedial education program to include corequisite remediation requires money. However, funding challenges should be broadly considered by policymakers in the context of increased student success (Vandal, 2014). At first glance in Tennessee, the apparent cost of corequisite remediation appears higher than conventional prerequisite remedial education. This seems obvious given that faculty need time and resources to develop these new programs and a corequisite adds to the faculty workload. However, when using student success rates as a measure of cost, corequisite remediation appears to be much more cost effective per student (Belfield, Jenkins & Lahr, 2016). That is to say, the per student cost of students successfully completing a college course in the co-requisite model is about 50% lower than in the pre-requisite model (Belfield, Jenkins & Lahr, 2016).

Specific Recommendations for the VCCS

Corequisite reform is an important strategy to improve student completion of higher education goals. A robust corequisite model integrates gateway course content with lifelong tools such as time management and study skills that help students beyond the scope of one course. Corequisite remediation may not completely eliminate developmental courses; however, "a fundamental redesign of the support system for academically underprepared students" will include corequisite remediation (Vandal, 2014). This broader "support system" may integrate corequisite courses with the current (or similar) modular curriculum with non-modular precollege courses such as MTH 5 or MTH 9 in the VCCS. Student placement into the optimal teaching/learning mode may be as key as course level placement (Bickerstaff, 2016).

Policy supporting remediation should not be monolithic, but instead should allow for these multiple approaches and models. A corequisite program should include a robust pedagogy "tool-box" and flexibility for the faculty to implement the most useful tools for the class in question and its unique student population (Vandal, 2018). To make the corequisite course successful, faculty will need to "focus on what the student needs to succeed in the college level course" (Barshay, 2018). A corequisite course should target "what the student is learning each week in the college course" (Barshay, 2018). This type of planning and coordination and spontaneous responsiveness will require pedagogically flexible faculty with a robust pedagogical tool-box and administrative support to develop the faculty.

In addition to corequisite support classes (Vandal, 2014), extra time, or assigning more credits to a class's instructional time are additional ways to build supplemental instruction (Barhoum, 2018). Robust and mandatory tutoring or an accelerated summer boot camp may be part of the remediation solution (The Charles A. Dana Center at the University of Texas at Austin, 2018). For technical certificate programs, remediation may include "aligned and parallel

support" appropriate to the certificate rather than prerequisite course completion (Complete College America, 2017).

While summarizing the importance of adopting corequisite remediation, it is important to acknowledge its specific positive impact on some of our most vulnerable populations. The dramatic improvement for students who tested two levels below college level is especially critical in terms of access for minority and low-income students, since they are more likely to need remedial courses (Vandal, 2018). Community Colleges in California that have recently broadened access have shown that students of color and low-income complete their degrees at two to three below times the average (Rodriguez, Cuellar Mejia, & Johnson, 2018).

Corequisite remediation provides the VCCS with a powerful tool for student success. Wise integration of corequisite courses as part of a robust remediation program makes the vision of Complete 2021 more clearly attainable.

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