



PROMOTING GATEWAY COURSE SUCCESS: SCALING COREQUISITE ACADEMIC SUPPORT

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Overview

With research indicating that upwards of 50 percent of all new entering postsecondary education students are placed into remedial educationⁱ and that students placed into remedial education are less likely to earn a postsecondary credentialⁱⁱ, policymakers and postsecondary leaders alike have committed themselves to transforming remedial education in their states.

New research revealing the underlying causes of low success rates for remedial education students has led to promising new models that have resulted in dramatic increases in student success. At the heart of the new research and improved practice is the realization that placing students into multi-semester, non-credit remedial course sequences as a pre-requisite to enrollment in college-level gateway courses results in most students leaking out of the system and never making it to a college gateway course.ⁱⁱⁱ In addition, research has also revealed that assessment and placement practices at many colleges result in many college-ready students being placed into remedial courses.^{iv} Consequently, innovators have found great success with models that place significantly more students directly into college-level courses and provide them additional academic support as a corequisite.

With corequisite models showing student success rates in college-level gateway courses that are two or three times better than traditional models^v, postsecondary leaders and state policymakers are moving aggressively to implement corequisite remediation reform at scale. States like Connecticut, Colorado and Indiana are leading the way with legislation or state-level policies that either require or provide incentives to institutions to implement corequisite models.

There is a growing sense that the adoption of corequisite models can result in significant increases in the percent of students placed into remedial education who complete gateway math and English courses in one academic year. In fact, 22 states recently signed a commitment to the White House as part of its new college completion strategy to significantly increase gateway course completion in one academic year for remedial education students.

As more states consider reforms to their remedial education policies, it is important for policymakers to fully understand why prerequisite remedial education has not succeeded and how to design effective policies that lead to the broad adoption of co-requisite strategies that, in turn, result in dramatic improvements in success for students who are not optimally prepared for postsecondary education.

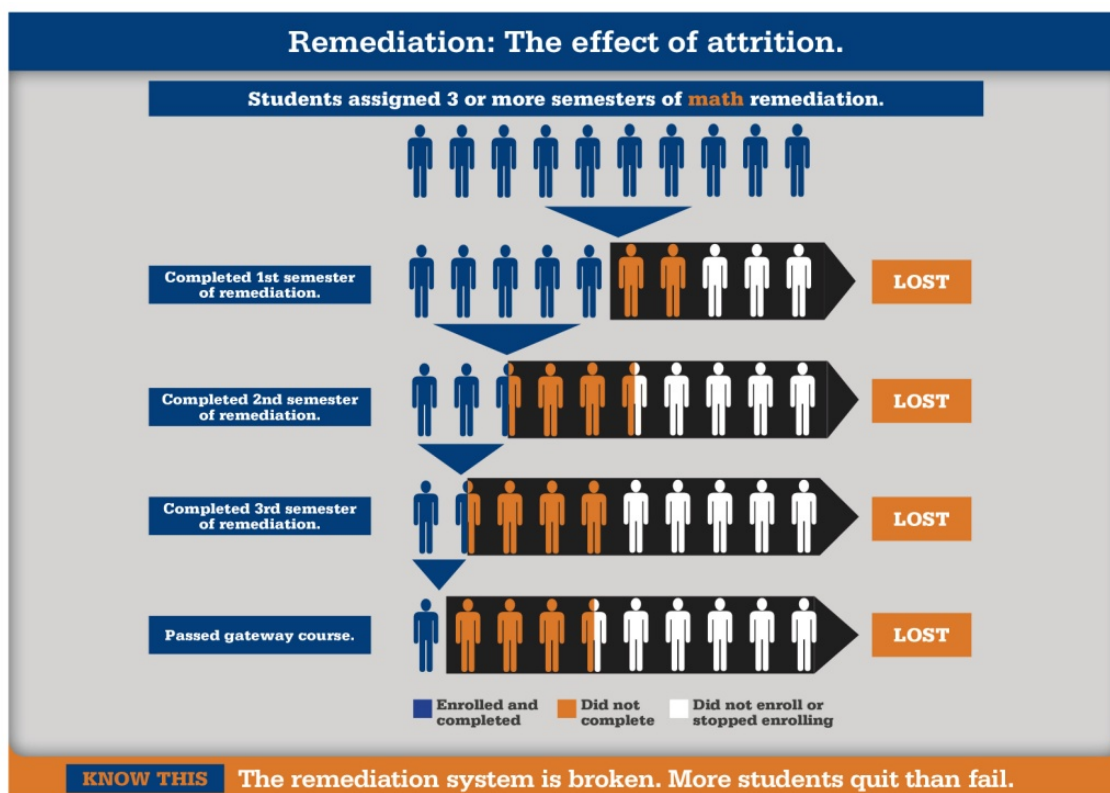
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Long Remedial Course Sequences: A Barrier, Not a Bridge, to Student Success

Why do students who place in remedial education fail to earn a college credential? Are some students simply not college material? Is the instruction in remedial courses of low quality? While these might be reasonable conclusions – they are not the reasons students fail. For the most part, low success rates in gateway math and English courses for remedial education students are the consequence of designing remedial instruction as a sequence of one-, two-, or three-semester long courses that students must complete before entering college-level courses in math and English. This approach adds significant time and cost to a college education, which in turn creates a massive disincentive to pursue a college credential.

The Community College Research Center found that only 10% of all students who are placed three levels below college-level math complete a gateway course in two academic years. In other words, failure is not due to a student's ability to learn college material, but because they fail to enroll in the next course in their remedial course sequence. Many students may successfully complete their remedial education courses and never even enroll in the gateway course. Figure 1 shows how the vast majority of students who start in remedial education leak out of the system even after passing previous courses.^{vi} The bottom line – the longer the remedial education sequence, the less likely students will succeed.

Figure 1: Student Attrition in Remedial Education



Some might argue that students who do not persist through long sequences may not be “college material.” The research says otherwise. The Community College Research Center found students, regardless of their level of readiness for college, were discouraged from pursuing postsecondary

education when placed into remedial education. In fact, students with skills that were closest to college ready were the most discouraged from pursuing postsecondary education after a remedial placement.^{vii} In addition, CCRC's research found that upwards of 50 percent of students who are placed in remedial education could earn a "C" or better in a college-level math course.^{viii}

The research is clear - long remedial education course sequences are a barrier, not a bridge, to college.

Co-Requisite Models Eliminate Long Sequences and Promote Gateway Course Success

In the policy brief, *Key Principles for Transforming Remedial Education*, Complete College America, Education Commission of the States, Jobs for the Future and the Charles Dana Center issued a joint statement calling for the elimination of long remedial sequences. The statement goes on to articulate seven key principles for transforming remedial education, including placing many more students into gateway college courses and delivering academic support as a corequisite.^{ix}

Broadly defined, corequisite remediation is the delivery of academic support to academically underprepared students while they are learning gateway course content in the same subject. For example, in a corequisite model of support, a student assessed below college ready in English might enroll in both college-level English and an academic support course in English in the same semester.

Corequisite remediation is more than a remedial education technique; it is a fundamental redesign of the system of support for academically underprepared students. By immediately engaging students in gateway college content and providing support in a just-in-time manner, corequisite remediation eliminates the structural flaw of prerequisite remedial sequences. In effect, corequisite remediation supports college students by admitting them to college and college-level work, where traditional remediation admits students to long sequences of remedial courses that do not count toward a college credential, but must be completed before a student can enter a gateway course in that subject.

Corequisite remediation does not limit or eliminate academic support for underprepared students. It merely delivers the academic support while students are learning college-level content. Policy makers and practitioners should not assume that corequisite remediation is intended to limit access to higher education. Likewise, policymakers should not assume that delivering academic support to students while they are enrolled in college-level courses justifies the elimination of funding for that academic support. Corequisite support should be seen as a cost-effective way for using existing resources to support improved college completion.

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Corequisite Remediation Models

Corequisite remediation is not a monolithic approach to delivering academic support. There are many different approaches to delivering corequisite support that can meet the needs of a wide range of students. In fact, corequisite remediation models have been successful at increasing gateway course success for students all along the continuum of academic preparedness, including many who score at lower levels on placement exams.

Following are the prevailing approaches to delivering corequisite support:

One Semester Redesigned Gateway

One semester corequisite models, where students enroll directly into single-semester, gateway college-level courses and are provided additional academic support either within or alongside the course is the most commonly understood approach to corequisite remediation. However, what is not widely understood is that there are a variety of strategies within this framework that have been successfully implemented on college campuses. They include:

Extra Time approaches simply add additional time for students who need it to succeed. These approaches include special sections of gateway courses with additional credits and/or time. For example, a college might offer Comp 101 and Comp 101+. Comp 101 is a traditional three-credit college-level course that meets three times a week, and Comp 101+ would be for four credits and meet four times a week for students who need additional support. For example, the Accelerated Learning Program (ALP) asks students to co-enroll in the gateway course and the remedial education course. Students attend the college-level gateway course immediately followed by a section of the remedial course. Students revisit concepts delivered in the gateway course and also work on basic skills. The extra time approach has also been effectively implemented for remedial reading at institutions like Front Range Community College and Miami Dade College. Students enroll in a college-level course, like history or English literature, and receive academic support in reading while enrolled in those courses.

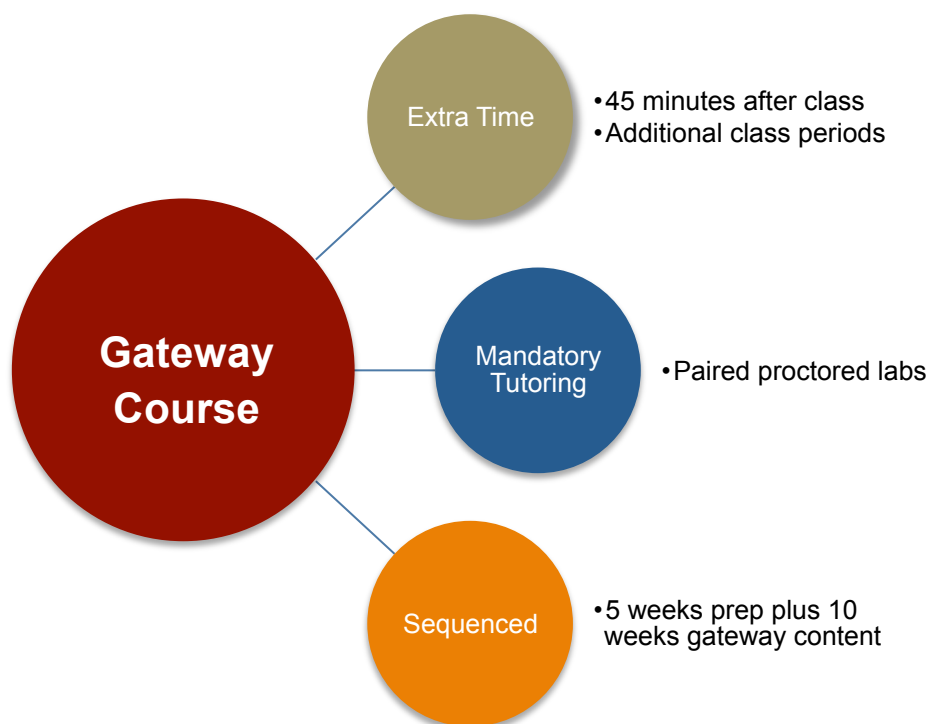
Mandatory Tutoring or Labs allow underprepared students to enroll in the gateway college-level course but then require them to spend additional time with a tutor or in a lab where they receive customized support. The tutoring or lab model can utilize mastery-based technology platforms and involve adjuncts, graduate students or even high ability undergraduates as tutors. Austin Peay State University's Structured Assistance Program eliminated all traditional remedial math and English courses in favor of placing all students into college-level math and English courses and requiring students who tested below college ready to attend a lab for two additional hours a week. Students received support from tutors and engaged education software that allowed them to develop the essential skills they need to succeed in the college-level course. Austin Peay State University's Structured Assistance Program increased student success in gateway math from about 10 percent to between 65 and 75 percent.

Sequenced courses allow students, within a single semester, to enroll in an accelerated five-week section of a remedial course, followed by an intensive 10-week version of the college-level gateway course. Students who successfully complete the remedial course are immediately enrolled in the gateway college-level course. Both the accelerated remedial course and the gateway course meet five days a week, providing students the time they need to succeed. The University of Maryland has

implemented this model for students who enroll in college algebra. Students who complete the accelerated remedial course proceed to college algebra for the remainder of the semester.

Many believe that the redesigned gateway course is only for those students who are assessed just below college-ready. However, models using this approach have success with students with a wide range of academic abilities. In fact, many models are showing dramatic improvements for students who test at lower levels. For example, the Austin Peay model is effectively serving students who had been previously placed two levels below the college-level course. Likewise, the Accelerated Learning Program has been effective with up to 90% of students who have placed in the traditional prerequisite remedial education course.

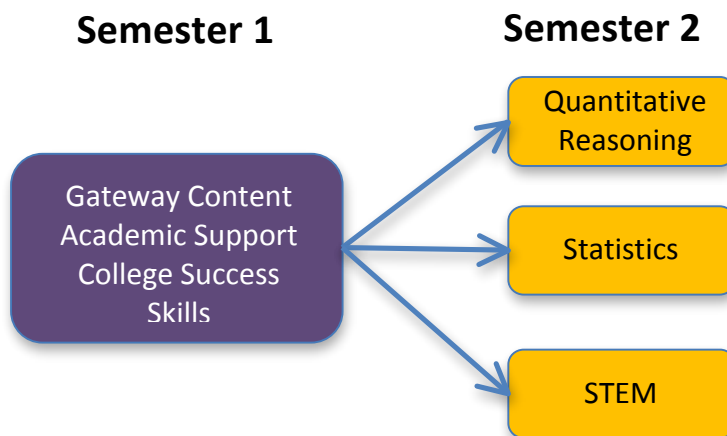
Figure 2: One Semester Redesigned Gateway



One-Year Corequisite

The one-year corequisite is an exciting new approach to corequisite remediation that delivers gateway course content over two semesters, providing additional academic support in gateway course content throughout the academic year. New models using this approach are showing significant improvements in the percent of students who complete gateway college-level courses within one academic year. Most noteworthy is that one-year corequisite models are showing dramatic improvements in gateway course success for students who are assessed at the lowest academic levels.

Figure 3: One-Year Corequisite in Math



What makes the one-year model different from traditional prerequisite models is that course content over the two semesters is meticulously aligned to the core competencies and skills required for students to complete the college-level gateway course. These models integrate the teaching of gateway course content with basic skills. Another important component of these models is that they also address other college success skills like time management and study skills.

Following are the most prominent one-year corequisite models:

The **California Acceleration Project (CAP)**, led by Myra Snell and Katie Hern, has been a trailblazer in the one-year corequisite approach. Myra Snell's Path2Stats model has effectively eliminated the need for students to complete intermediate algebra or any other basic skills courses by designing a rigorous two semester model that teaches the essential skills required for students to complete a college-level statistics course. Likewise, the accelerated English model at Chabot College has eliminated the need for students to enroll in both remedial reading and composition by designing a two-semester model that results in students completing college-level composition.

Both courses accept students regardless of their scores on placement exams. In fact, students are not required to take a placement exam to enroll. Despite the wide range of academic abilities in the classroom, the CAP models are showing dramatic improvements for all students, far exceeding the results of traditional remedial education sequences.^x

The Statway and Quantway models, developed by the Carnegie Foundation for the Advancement of Teaching, is a rigorous and highly integrated model that is designed for students to complete gateway statistics or quantitative reasoning courses in one academic year. Institutions that enlist with the Carnegie Foundation are provided technical assistance in the content, pedagogical approaches and program implementation strategies of their model. While still in the early stages, preliminary results have been promising. Institutions who implemented the Statway model saw an increase in gateway course success from an average of 5% to over 50% for students who participated in Statway.^{xi}

The New Mathways model, developed by the Charles Dana Center at the University of Texas-Austin, shares many of the same attributes as the Statway/Quantway models, including the highly rigorous

course and curriculum design. Like the Carnegie model, New Mathways will eventually offer a Statistics and Quantitative Reasoning pathway. In time, the strategy will include a STEM math pathway.

The Texas Association of Community Colleges and the Dana Center are implementing the Mathway model at all Texas community colleges.

Aligned and Parallel Support in Technical Certificate Programs

The third corequisite strategy is implemented parallel to technical college programs. Instead of requiring students to complete basic skills instruction before entering a technical certificate program, students are required to attend a basic skills lab while enrolled in their technical college certificate program. The model is competency-based, not course-based, meaning students can move through the content as quickly or deliberately as they choose. At the Tennessee Colleges of Applied Technology (TCAT), all technical certificate students must demonstrate their competencies in the basic skills program before earning a certificate. Some students may quickly test out of the modules, while others will use a technology-based platform to work through each module to completion.

TCAT institutions have seen graduation rates over 70% for all students using the aligned and parallel support strategy.

These and many other corequisite strategies are emerging in technical colleges, community colleges and four-year institutions across the nation. With new research confirming their improved results over traditional remedial models, state policy leaders are taking notice. Many states have adopted or are considering state policy to either require or encourage the implementation of corequisite support for new, entering college students who are assessed below college ready.

State Policy Strategies for Implementing Corequisite Academic Support

In many state legislatures, remedial education has long been viewed as a confounding and frustrating redundancy of the education system. The notion that students with high school diplomas would require additional academic support to be college ready has drawn the ire of many legislators. As a result, many legislatures have passed laws limiting or prohibiting four-year institutions from delivering remedial education. Unfortunately, these strategies do little to improve college access and success. It is for this reason that many legislators who are committed to college access and completion, but are frustrated by high remedial education rates, have shown great interest in corequisite models. Corequisite remediation meets the needs of academically underprepared students, while not investing in ineffective prerequisite remedial courses or denying access to higher education.

Several states have recently passed legislation or adopted state higher education policy to promote the large scale implementation of corequisite models. Connecticut, Colorado and Indiana are leading the

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way with new policies that will result in the expansion of corequisite models at both four-year and community colleges.

Each state has taken different policy approaches to corequisite remediation. Some states have mandated the offering of corequisite support, while others provide incentives to institutions. Following is a description and analysis of the approaches taken in Connecticut, Colorado and Indiana:

Connecticut Public Act 12-40

In 2012, the Connecticut Legislature adopted “An Act Concerning College Readiness and Completion,” requiring that, by Fall of 2014, all postsecondary institutions deliver necessary support to academically underprepared students while they are enrolled in the relevant college-level course. The legislation requires the offering of corequisite support but does allow institutions to provide students one semester of intensive college readiness support prior to enrollment in a gateway course. The end result is that, in Connecticut, all students will have the opportunity to complete college-level gateway courses within one academic year.

The legislation, which was developed as a direct result of research on the failures of traditional remedial education sequences and the success of corequisite models, was seen by its authors as an important step in providing equal academic opportunities for all students.

Currently, postsecondary institutions in Connecticut are adopting many of the evidence-based corequisite models, including the Accelerated Learning Program and Statway. In addition, community colleges have engaged adult education providers to develop new strategies to deliver academic support for students with more profound academic deficiencies.

Colorado House Bill 12-1155

In 2012, Colorado adopted a comprehensive set of reforms to remedial education. Included in the reforms was the opportunity for all postsecondary education institutions to receive financial support to deliver “supplemental academic instruction” to students deficient in an academic subject while they are enrolled in the relevant college-level college course. Unlike Connecticut, the legislation does not require corequisite support, but allows institutions to be compensated for delivering corequisite support.

The legislation was particularly significant for four-year institutions, which had previously not received state funds to deliver remedial education. Instead, four-year institutions were encouraged to partner with local community colleges to deliver remedial education for students. The legislation addressed the incongruity of four-year colleges admitting students, determining they were not college ready and sending them to community college to be remediated. HB 12-1155 called for greater alignment in admission and placement practices to ensure that students admitted to four-year institutions had access to college-level courses with appropriate academic support.

The legislation requires the Colorado Commission of Higher Education to authorize institutions before they receive financial support for delivering supplemental academic instruction. As a result, colleges have a choice on whether to adopt corequisite models or maintain their current approaches to serving underprepared students.

Community colleges also have the opportunity to receive financial support for delivering corequisite sections of college-level courses. The legislation provided fuel to a comprehensive new remedial education policy adopted by the Colorado Community College System which, like Connecticut, provides all students the opportunity to complete gateway college courses in one academic year. In the new Community College System policy, students will be placed in no more than one semester of standalone remediation. Students placed into remedial education who complete their one semester of instruction can either move on to the college-level gateway course, with or without additional academic support. Students can also be placed directly into a gateway course and receive supplemental academic instruction.

Indiana Commission for Higher Education Resolution to Redesign Remedial Education and Performance Based Funding for Indiana Higher Education Institutions

In 2013, the Indiana Commission for Higher Education adopted a resolution endorsing corequisite remedial education as a best practice, affirming the state's lone public community college's goal that all remedial education be delivered as a corequisite by 2014. Unlike Connecticut and Colorado's use of state legislation to catalyze the adoption of corequisite academic support, the Indiana resolution was a culmination of several years of work by the Commission and Ivy Tech Community College to transform remedial education. Ivy Tech, because it is a statewide institution, was able to develop an institutional policy that has the desired statewide impact that typically requires legislation in other states.

Another important state policy lever that is influencing institutional reform is the state's revised outcomes-based funding model, which includes gateway course success as a critical metric for community colleges. Ivy Tech Community College will receive additional funding for increases in the number of students who complete remediation and the relevant gateway college-level course at their institution. As a result, Ivy Tech has a financial incentive to dramatically increase the percent of students who are completing gateway math and English courses. The combination of a statewide goal to implement corequisite remediation, at scale, throughout all Ivy Tech campuses and the performance funding system creates a unique model for driving a dramatic redesign of academic support for Indiana college students.

Corequisite Support: An Essential Strategy for Ending Stand Alone Remedial Education

Corequisite reform is an essential strategy for conquering the long-standing problem of high remedial education rates for new entering college students. With research revealing the failings of the current system and the impressive results of corequisite models, policymakers should take note and consider how they can promote the scaling of corequisite support at their postsecondary institutions.

Corequisite support is the perfect complement to current innovations in high schools that are providing early assessments for college readiness and then delivering transition courses or dual credit opportunities for students who are not fully on track to be college ready. Developing a system where students address academic deficiencies during their senior year of high school and then are guaranteed placement into gateway college-level courses, either with or without corequisite support, is an achievable and worthy goal for policymakers and education leaders to pursue.

Conclusion

As policymakers and postsecondary leaders consider corequisite support as a new solution for increasing the college completion of academically underprepared students, they should consider building policy with the following considerations:

Set Policy that Defines Corequisite Support as:

- A means for achieving the goal of dramatically increasing the percent of students who complete gateway, college-level courses in math and English in one academic year.
- A shift in the system of providing academic support for underprepared students from prerequisite, non-credit courses to fully scaling support for the vast majority of students while they earn college credit in gateway course content.
- A systemic strategy that includes multiple approaches and models, all with a commitment to delivering academic support in a given subject while students are learning college-level material in that subject area.
- A component of a larger state strategy for improving college readiness of high school graduates and successfully transitioning them through college-level gateway courses.
- A means for achieving performance metrics related to gateway course success that are included in state outcome-based funding systems.

A Corequisite Support Policy should not:

- Deny student access to higher education.
- Limit, eliminate or make optional the delivery of necessary academic support for academically underprepared students.
- Justify decreasing financial support for the delivery of academic support to academically underprepared students.
- Dictate a monolithic model for delivering academic support to students.
- Provide corequisite support to only a small number of students who test just below college ready.

ⁱ Judith Scott Clayton and Olga Rodriguez. "Development, Discouragement, or Diversion? New Evidence on the Effects of College Remediation." NBER Working Paper No. 18328. August, 2012.

ⁱⁱ Thomas R. Bailey. "Challenge and Opportunity: Rethinking the Role and Function of Developmental Education in Community College," *New Directions for Community Colleges* 145 (2009): 11-30.

ⁱⁱⁱ Bailey. "Challenge and Opportunity: Rethinking the Role and Function of Developmental Education in Community College, 11-30.

^{iv} Judith Scott Clayton. "Do High Stakes Placement Exams Predict College Success?" CCRC Working Paper No. 41. New York: Community College Research Center, Teachers College, Columbia University. February, 2012.

^v Davis Jenkins, Cecilia Speroni, Clive Belfield, Shanna Smith Jaggars and Nikki Edgecombe. "A Model for Accelerating Academic Success of Community College Remedial English Students: Is the Accelerated Learning Program (ALP) Effective and Affordable? CCRC Working Paper No. 21. New York: Community College Research Center, Teachers College, Columbia University. September, 2010.

^{vi} Katherine Hughes, Nikki Edgecombe, Myra Snell. "Developmental Education: Why and How We Must Reform It." New York: Columbia University, Teachers College, Community College Research Center. Presentation given at the 2011 League for Innovation in the Community College Annual Conference. 2011.

^{vii} Judith Scott Clayton and Olga Rodriguez. "Development, Discouragement, or Diversion? New Evidence on the Effects of College Remediation." NBER Working Paper No. 18328. August, 2012.

^{viii} Judith Scott Clayton. "Do High Stakes Placement Exams Predict College Success?" CCRC Working Paper No. 41. New York: Community College Research Center, Teachers College, Columbia University. February, 2012.

^{ix} Core Principles for Transforming Remedial Education: A Joint Statement. Charles A. Dana Center, Complete College America, Education Commission of the States and Jobs for the Future. December, 2012.

^x Nikki Edgecombe and Katie Hern, The Accelerated Alternative: Findings from an Analysis of Chabot College's One-Semester Integrated Reading and Writing Developmental English Course. Presentation at the Annual Conference on Acceleration in Developmental Education. June, 2012.

^{xi} James Van Campen, Nicole Sowers, and Scott Strother. Community College Pathways: 2012-2013 Descriptive Report. Community College Pathways Project. Carnegie Foundation for the Advancement of Teaching. December, 2013.