

Practitioner to Practitioner

Volume 10 | Number 1 | NADE.net/digest.html

Winter 2019

NOSS Executive Board 2017-2018

Denise LujanPresident
D. Patrick Saxon
Wes Anthony
Carol Mueller
Meredith Sides
Annette Cook
and Conference Manager

The NOSS *Practitioner to Practioner* publishes articles of interest for developmental education professionals including administrators, faculty, learning assistance personnel, academic counselors, and tutors who are interested in the discussion of practical issues in post-secondary developmental education. *Practitioner to Practioner* is published electronically twice each academic year. Articles in *Practitioner to Practioner* are indexed in ERIC.

NOSS Practitioner to Practioner Submissions

Articles should relate to issues that inform and broaden our understanding and practice of teaching and learning in developmental education. The subject of the article may emphasize innovative approaches, best practices, how meaningful research affects teaching and learning, or techniques to enhance student performance. Review the "Call for Manuscripts" on page 2 for more information.

Authorization to photocopy items for one-time personal use is granted by the National Organization for Student Success. Authorization is required for all other existing and subsequently developed means of reproducing analogous to, or performing the function of, photocopying, whether electronically or otherwise.

© 2019 The National Organization for Student Success

IN THIS ISSUE

The Corequisite Model: Origins, Evolution, Data, and Net Effects
Bridging the Academic–Athletic
Divide through a Sustainable
Summer Literacy Program



MISSION -

NOSS seeks to improve the theory and practice of developmental education at all levels of the educational spectrum, the professional capabilities of developmental educators, and the design of programs to prepare developmental educators.

Practitioner to Practitioner

"Promoting Communication among Education Professionals Who Care About Student Success"

Call for Manuscripts

Practitioner to Practitioner is a publication of the National Organization for Student Success (NOSS). NOSS invites articles of interest for professionals in higher education that relate to issues which inform and broaden members understanding and practice. The subject of the article may emphasize innovative approaches, best practices, or techniques to enhance student access, performance and/or retention. Researched or non-researched articles are accepted. If researched, then the article should include references.

Please follow these guidelines when submitting your manuscript:

- There is no deadline for submission. All submissions are accepted for review at any time. Practitioner to Practitioner will be published depending on the number of manuscript submissions. Issues are published electronically on the NOSS website.
- Articles are written for faculty, counselors, support service professionals, and academic administrators.
- The article must be typewritten. *Practitioner to* Practitioner articles are generally between 1200 and 1500 words and follow AP Style.
- References, citations in the text, tables, figures or a bibliographic section are only necessary with researched articles.
- The body should be double-spaced with one-inch margins, 12-point font. Do not justify the right margins.

- The manuscript must include a cover sheet with:
 - 1. Title of the article
 - 2. The names of the author(s)
 - 3. Job title and employer of each author
 - 4. Name, address, and email of author responsible for correspondence.
- The subject matter must be relevant to the journal's audience.
- Author information will appear at the end of the published article.
- The manuscript must not have been published previously nor be scheduled for publication in any other publication.
- Manuscripts must be electronically submitted in MS Word or Rich Text format as an attachment to Deb Daiek at debdaiek@gmail.com
- NOSS will acknowledge receipt of manuscripts via email within ten days.
- Articles are not refereed.
- All communication will be with the lead author, who is responsible for all communication with any additional author(s).

NOSS Practioner to Practioner

Volume 10, Number 1 | Winter 2019 National Organization for Student Success (NOSS) PO Box 963, Northport, AL 35476 office@thenade.org | www.thenade.org Tel: 205.331.5997 | Fax: 866.519.1331

Graphic Design courtesy of Schoolcraft College, Livonia, Michigan

The Corequisite Model: Origins, **Evolution, Data, and Net Effects**

Alexandros M. Goudas

Abstract

Postsecondary reform has proliferated since the Obama administration initiated the completion agenda a decade ago. During this time, researchers and interest groups have been assiduously involved with studying, implementing, and promoting reforms designed to increase completion metrics. One prolific reform is the corequisite model, a term for an accelerated course design in which students who test below college-level are allowed to take credit-bearing gatekeeper courses along with an added component of support in lieu of traditional prerequisite remediation. Some researchers and interest groups claim this model has sufficient evidence to conclude it should be used instead of prerequisite remedial courses, but a lack of peer-reviewed studies and the number of limitations in these studies suggest this conclusion might be premature. Furthermore, the net effect of the hasty nationwide implementation of the model might in fact be harming many students. This paper explores the origins, evolution, data, and net effects of the current corequisite model and its numerous variations. Finally, this paper attempts to explain how a college reform model with relatively few peer-reviewed studies supporting it became accepted as having a data-based scientific consensus, and it provides recommendations for more comprehensive reform in place of or including the most effective model of corequisites. Keywords: college, community college, postsecondary, remediation, corequisites

The Corequisite Model: Origins, **Evolution, Data, and Net Effects**

Since President Obama initiated the postsecondary completion agenda in 2009 (Field, 2015), states, institutions, and interest groups have been working assiduously to reform higher education to increase graduation rates and improve related metrics. One of the most influential research organizations that became heavily involved in the movement and which has contributed to a number of common reforms in the nation is the Community College Research Center (CCRC). Though it formed in the late 1990s, the Center expanded when it received the first of several 10 million dollar grants from Institute of Education Sciences in 2006 to investigate potential programs designed to improve completion in two-year colleges.

Researchers from the CCRC, headed by noted labor economist Thomas R. Bailey at Teachers College, Columbia University, began disseminating a significant number of working papers and published articles which promote various reforms in higher education, primarily involving two-year public colleges. They study a range of reforms, but the most important include developmental education acceleration, intake placement modifications, online education analysis, labor market impacts, counseling and advising changes, high school alignment, and math pathways. These data and recommendations culminated in their book outlining a holistic approach to reforming community colleges called guided pathways (Bailey, Jaggars, & Jenkins, 2015). Now that many of these reforms have been implemented, the crucial question is whether they are increasing student success metrics such as completion of certificates, degrees, or transfer rates.

One of the most popular reforms the CCRC studied and espoused is corequisites. It is a term used to describe a postsecondary structural course design, a type of acceleration, in which students who test below college-level are allowed to take credit-bearing gatekeeper courses along with an added component of support in lieu of traditional prerequisite remediation. Traditionally, any student who is admitted to college and who places below college-level would be required to enroll in remedial courses, almost exclusively in the disciplines of English and mathematics, which are termed prerequisite remedial courses or developmental education. These two terms are usually used interchangeably, but remediation typically refers to the courses and developmental education refers to the courses and the systems of support surrounding the courses (i.e., counseling, tutors, financial aid, etc.). Research suggests up to six out of 10 students entering community college and about three of 10 university students place into remedial English or math sequences (Bailey, Jeong, & Cho, 2010). These students, if they place into the lowest remedial courses, could take up to two or three English courses and three or four math courses before qualifying to take college-level composition and math such as algebra (Bailey et al., 2010).

The original corequisite model allowed students to enroll in an actual upper-level remedial writing course as

a support course, while simultaneously enrolling in the corresponding English composition gatekeeper course. Currently, corequisite models with other variations of support are being employed across the nation (Rutschow & Mayer, 2018), and these range from required lab hours to structured learning assistance models. Some state legislatures and university systems have also recently begun requiring variations of corequisites in place of traditional remediation, thus entirely removing prerequisite remedial courses as options for students (Complete College Georgia, 2018; Daugherty, Gomez, Carew, Mendoza-Graf, & Miller, 2018; Oklahoma State System, 2016; "Scaling Co-Requisite Supports," 2018; Scott-Clayton, 2018).

The question is whether this reform movement is effective for students when all aspects are considered. More importantly, as with any substantive reform that may potentially negatively affect millions of students, the initial concern should be whether there is indeed a consensus in the research base, especially in peer-reviewed rigorous journals, to support such a significant change in postsecondary design such as the corequisite model. Thus, the purpose of this literature review is to provide a background on the origins of corequisites and how they evolved, highlight the number of states and institutions mandating them, evaluate the research base supporting the model, and outline the benefits, problems, and unintended consequences which may result from their wide implementation.

Origins

In 2007, Dr. Peter Adams founded and directed the Accelerated Learning Program (ALP) at the Community College of Baltimore County (CCBC) (Adams, Gearhart, Miller, & Roberts, 2009). This original corequisite model involved students volunteering to take an upper-level remedial writing course and its corresponding college-level gatekeeper course simultaneously, both from the same instructor, with mostly full-time faculty, in a well-organized program of support. Several years later, the Community College Research Center (CCRC) authored two working papers on the model (Cho, Kopko, Jenkins, & Jaggars, 2012; Jenkins, Speroni, Belfield, Jaggars, & Edgecombe, 2010), and ALP became the leading example model as a means by which to accelerate remedial writing students. The self-reported numbers from Dr. Adams's original paper (2009) and the two CCRC papers thus became the foundation for almost every subsequent data-based argument in favor of the implementation of corequisites in the nation.

After the second CCRC working paper was released (2012), both the CCRC and ALP began to promote the implementation of corequisites throughout the nation at vari-

ous conferences. However, what boosted corequisites into the national education stage was the numerous influential and well-funded interest groups which began to embrace and promote them as a way to solve a problem they argue is a barrier for students of color and of low socioeconomic status: prerequisite remedial courses. The interest group Complete College America (CCA) is the most aggressive organization that espouses corequisites and promotes them heavily. Shortly after the CCRC's 2012 paper, CCA produced one of the most vociferous arguments against remediation and in favor of corequisites, a report entitled "Remediation: Higher Education's Bridge to Nowhere" (Complete College America, 2012). Corequisites are highlighted as the best and only solution to remediation as a barrier: "The Big Idea: Start in college courses with support" (p. 3). It also featured ALP as the most important of four state redesign examples (p. 9).

Evolution

The Introduction of Corequisite Variations

The CCA's provocative paper (2012) introduced several variations of corequisite support. A follow-up paper by CCA (Vandal, 2014) also introduced and recommended corequisite variations. The corequisite idea, model, and its variations started to become widespread among experts and practitioners in higher education after 2012 when the CCA enlisted the help of other influential organizations, especially those with significant monetary resources and political connections. The groups with the largest impact have been the Community College Research Center (CCRC) and its related organizations, Complete College America (CCA), the Education Commission of the States (ECS), Jobs for the Future (JFF), Achieving the Dream (ATD), the Bill and Melinda Gates Foundation, Lumina, Kresge, Dell, and the League for Innovation in the Community College.

The addition of funding and the support of well-known and influential organizations drastically changed the promotion of corequisites and the basic corequisite model itself. It was also the beginning of an earnest push to reform entire state systems instead of individual institutions. For example, CCA created several partnerships with state systems such as the Oklahoma State System of Higher Education (2016), Complete College Indiana, Complete College Georgia (2018), Complete College Arkansas, and Complete College Texas (Daugherty et al., 2018; "Scaling Co-Requisite Supports," 2018). Thus, entire state systems

Thomas R. Bailey, now President of Teachers College, Columbia University, heads or has headed four related research organizations: the CCRC; the National Center for Postsecondary Research (NCPR); the Center for the Analysis of Postsecondary Readiness (CAPR); and the Center for Analysis of Postsecondary Education and Employment

began to implement corequisites in different ways because CCA recommended that any "just in time" support would work better than traditional prerequisite remediation (Complete College America, 2012).

Interest Groups and the Legitimization of Corequisite Variations

The Oklahoma State System of Higher Education's (2016) partnership with CCA illustrates the number and range of corequisite variations that CCA and other organizations began promoting, variations which at that point had not been studied. The state's administration and CCA, with funding from Lumina, Dell, the Gates Foundation, Kresge, and Carnegie, mandated all the state institutions to offer one of four corequisite options by fall of 2018: 1) the original ALP model; 2) a required tutoring or lab component; 3) a compressed course sequence in which the remedial course is half the semester, and the gatekeeper course is the other half of the semester; 4) and finally, a version of traditional remediation, with the remedial course the first semester and the gatekeeper course in the second semester, yet the two course outcomes must be more aligned than before. That an entire state system signed on to and mandated corequisites may have provided a seemingly legitimate example to other states that were looking to implement changes to reform traditional remediation, which was increasingly viewed as a barrier due to CCA's 2012 paper.

Further legitimizing corequisites, research groups such as the CCRC, NCPR, CAPR, and CAPSEE continued to present and promote corequisites at various conferences—Achieving the Dream (ATD), League for Innovation in the Community College (LICC), and American Association of Community Colleges (AACC), to name a few—using ALP and their own papers (Adams, 2009; Cho et al., 2012; Jenkins et al., 2010) as examples of rigorous evidence.

Then in 2015, six interest groups—ATD, AACC, Charles A. Dana Center, CCA, ECS, and JFF—created a paper entitled "Core Principles for Transforming Remediation within a Comprehensive Student Success Strategy: A Joint Statement," which also pushed for the use of corequisites and the minimization of stand-alone traditional prerequisite remediation. This document was in fact created by Bruce Vandal, Senior Vice President of CCA, and its original version promoted the complete elimination of remediation (2015). However, this recommendation was removed after a compromise was reached through negotiations with the five other interest groups ("Core Principles," 2015). In 2016, CCA produced another website dedicated to promoting corequisites called "Spanning the Divide," in which they cite self-reported datasets from five states using various corequisite models: Georgia, West Virginia, Tennessee, Indiana, and Colorado.

The important part of this evolution is that the variations of corequisites had not been researched at the time, and they became legitimatized through the concerted effort to promote reforms by CCA and others, especially the media (Barshay, 2018; Hanford, 2016; Scott-Clayton, 2012). Most of these variations still have little rigorous research supporting them. Even more important is the fact that the CCA's marketing repeatedly cites legitimate research organizations to undergird their arguments, thus leading to a false sense of scientific consensus. Moreover, the papers cited are largely unpublished studies.

For example, in 2016, the CCRC, which is considered a legitimate research organization by everyone in the field, disseminated yet another paper on corequisites, a research brief entitled, "Is Corequisite Remediation Cost Effective? Early Findings from Tennessee" (Belfield, Jenkins, & Lahr, 2016). It is a descriptive paper that reported preliminary data on one of the most important and common variations of corequisites, the switch from college algebra to college-level statistics as a program requirement, a design change now heavily promoted by the Charles A. Dana Center of The University of Texas at Austin. This math modification is also promoted in the CCRC book (Bailey et al., 2015) which outlined the holistic reform termed guided pathways, an approach designed to increase two-year completion.

A major recommendation in this book, which the Data Center puts into practice by offering practice guides, pedagogy, and videos, was a shift away from requiring algebra as the primary gatekeeper math course for every student in every program of study. Instead, they argued, statistics should be the course of choice for most majors. This is a very recent change, and it had only been implemented and studied informally before it became so popular currently (Belfield et al., 2016; Denley, 2017). More rigorous research was published shortly after, and it argued in favor of this approach as well (Logue, Watanabe-Rose, & Douglas, 2016).

The issue is that only one peer-reviewed paper to-date has been published in support of the switch from algebra to statistics with corequisite support as a variation of corequisites (Logue et al., 2016), yet other unpublished papers are and have been cited routinely, giving the appearance of rigorous research backing this change (Belfield et al., 2016). For instance, the CCRC's Belfield et al. (2016) paper, in combination with their 2012 and 2010 papers on ALP (Cho et al., 2012; Jenkins et al., 2010) has been cited numerous times in articles, papers, and presentations. The interest groups or media citing these papers use them as arguments for the implementation of variations of corequisites that have not been studied in those papers.

State Systems and Legislative Mandates

Other variations of corequisites became legitimized and promoted through other state systems, though again, they have not been grounded in rigorous research. For instance, at the same time the Oklahoma State System of Higher Education (2016) was working with CCA to implement unstudied iterations of corequisites, CCA was also working with the University System of Georgia and with the State System of Texas to implement corequisites (Complete College Georgia, 2018; Daugherty et al., 2018). Now all of Georgia's two-year and four-year institutions are required to implement the removal of stand-alone prerequisite remedial courses and replace them with corequisite models (Scott-Clayton, 2018). Other states have passed laws that require the state university systems to substitute up to 75% of remedial courses with corequisites by 2020, such as California and Texas (Scott-Clayton, 2018). Tennessee has already moved to a full implementation of corequisites based on the research by Denley (2017).

Analyses of the Data on Corequisites

Alexandra Logue, a research professor in the Center for Advanced Study in Education at the Graduate Center of The City University of New York (CUNY), recently authored an editorial in Inside Higher Education in which she argued that the corequisite model has extensive data to support its wide implementation (Logue, 2018). Currently the piece is the most comprehensive overview outlining nearly all of the most important studies involving corequisites, and it serves well as a basis for examining the extant research on the model. However, once these studies are analyzed, what does the corpus of data actually say, and how big is this corpus? Also, what are the actual findings and limitations of each study? Furthermore, are the data extensive, and do the findings conclude that this reform is indeed effective?

After conducting a limited meta-analysis, including and expanding on the references Logue (2018) cited, I find that there are approximately four peer-reviewed published studies involving corequisite models, as defined by remedial students taking college-level courses with a form of support concurrently. There are an additional seven to 10 working papers and research briefs disseminated by reputable research organizations which include various levels of data with limited statistical analyses. Finally, there are numerous self-reported but unanalyzed findings by states and organizations, all of which have implied bias because they have included numerous references to data that may or may not be related to the corequisite model. Based on the limited nature of the corpus of these studies, the con-

clusion that the research on corequisites is extensive and data-based may be premature, and it appears that much more in-depth and rigorous work needs to be conducted before one can be determined that the net effect of this reform is positive for most students.

Initial Findings on Corequisites

Logue (2018) included a link to the CCRC papers that studied the original ALP model twice, with the second paper following up on the first (Cho et al., 2012; Jenkins et al., 2010). The CCRC findings showed an increase in gatekeeper pass rates of students who took the corequisite ALP model. They also found that more ALP students passed the second college composition course in the sequence when compared to students who took traditional remediation. ALP students were retained at a slightly higher rate the second year. Some negative or neutral findings included the following: the model was more effective for white students but neutral for black students overall, though the ALP sample included fewer black students than the traditional remediation sample; the college-ready students who took the college-level section with the ALP students had worse outcomes in terms of attempting and finishing college credits when they were compared to college-level students who did not take composition with ALP students; and the model itself cost double the traditional model.

The main problems with these two studies (Cho et al., 2012; Jenkins et al., 2010) is that first, they have only been released as CCRC working papers and have not been published in peer-reviewed journals. Second, when the What Works Clearinghouse (WWC), a government organization designed to assess research in education and to rate reforms and education studies, applied their methods to corequisites, they found that the two CCRC working papers did not meet WWC standards because they were quasi-experimental in design (Bailey et al., 2016). These two CCRC studies, nonetheless, have been cited hundreds of times in articles, other working papers, presentations, and news articles to argue in favor of the corequisite model, even if the organizations citing the papers are not arguing for the implementation of the ALP model specifically. It is dubious to cite a study's intervention and then recommend a different version of the reform that the study highlighted.

Subsequent Data on Variations of Corequisites

Starting in 2012, after the two seminal CCRC papers were promoted (Cho et al., 2012; Jenkins et al., 2010), CCA released self-reported data from several states claiming that corequisites caused higher pass rates (Complete College America, 2012; "Spanning the Divide," 2016; Vandal, 2014). Unfortunately, these findings have not been published in peer-reviewed journals and are only reported with whole numbers, none of which provide subcategories

of data. In fact, many of the "Spanning the Divide" (2016) website numbers are simple percentages showing before and after results. Even the link to the methodology shows similar self-reported data.

In 2016, the CCRC's Belfield et al. disseminated their research brief on corequisite math variations in Tennessee, which Logue (2018) also cited. They found that more students completed college-level math courses due to the corequisite model. However, at the same time a corequisite model was implemented in the state, the definition of "college-level math" was changed from algebra to statistics, thus confounding the researchers' ability to know whether it was the course or the variation of the corequisite model that caused the increase in pass rates.

Another report on corequisite data that Logue (2018) cited came from Tennessee and was disseminated by Denley (2017). This paper is one of a series of five technical reports Denley authored. They all have included simple percentages and relatively little data on the numbers of students involved in the analyses. This particular report contained five references, one of which was Denley's (2017) report, and three of which were CCA's "Remediation: Higher Education's Bridge to Nowhere" (Complete College America, 2012), Belfield et al. (2016), and CCA's "Spanning the Divide" (2016). The number of self- and circular-citations is a pervasive problem contributing to the perception that there is a consensus in the literature supporting corequisites as data-based.

Logue et al. (2016) published the most rigorous research to date on a corequisite variation involving remedial math. They conducted a randomized controlled trial with groups of similar-performing remedial students were placed into three different courses: remedial algebra (traditional prerequisite course); remedial algebra with a two-hour weekly supplemental instruction component; and a college-level statistics course with a two-hour weekly supplemental instruction corequisite support. Their findings showed that remedial math students passed the college-level corequisite statistics course at a rate of 13.3 percentage points lower than the nonremedial college-level students who were in the control group. Logue et al. (2016) argued that this means remedial algebra students should be placed into college-level statistics courses with additional support instead of taking remedial algebra first and then taking college-level algebra.

In the 2018 opinion piece, Logue also argued that numerous other studies support the conclusion that there is an extensive research base for the corequisite model. After citing the CCRC's 2010 and 2012 papers (Cho et al., 2012; Jenkins et al., 2010), Logue cited a peer-reviewed study on a sociology corequisite model (Parker, Traver, & Cornick, 2018), whose findings are limited due to a low number in

its sample. Logue also cited a peer-reviewed chemistry corequisite model (Hesser & Gregory, 2016). Another peer-reviewed paper on a corequisite model for quantitative reasoning was not referenced by Logue (Kashyap & Mathew, 2017), and though it employed a random assignment methodology, it also suffers from low numbers in both the control and intervention groups.

Including Logue's 2016 paper, these four appear to be the only peer-reviewed studies on corequisite models. Other papers Logue (2018) cited are largely self-reported data or unpublished working papers (Daugherty et al., 2018; Edgecombe, Jaggars, Xu, & Barragan, 2014; "Scaling Co-Requisite Supports," 2018; Vandal, 2014). Surprisingly, one of these papers Logue cited is a CCRC paper that only reported on remedial acceleration and not a corequisite model (Edgecombe et al., 2014). This suggests a bias inherent in the argument that corequisites has an extensive base of data.

Overall Limitations

The CCRC is one of the most reputable sources for data on community college reforms such as corequisites. Yet they have stated several times that their own research into the corequisite model is limited. For instance, in spite of the push to eliminate prerequisite remediation by interest groups such as CCA—which is a deliberate and concerted effort that has based its claims on CCRC, RAND, Dana Center, and other more reputable research organizations—the CCRC has noted that they do not support the implementation of corequisite models as complete replacements for prerequisite remediation (Bailey, Jaggars, & Scott-Clayton, 2013).

In addition, the CCRC authors who were originally involved in the research and subsequent promotion of reforms such as corequisites have now admitted that these individual reforms are not likely to improve graduation rates, which is the ultimate goal of the completion agenda they signed onto originally and made an effort to impact with their research (Jaggars & Bickerstaff, 2018). Another CCRC research brief (Belfield et al., 2016) has stated that rigorous research still needs to be conducted on the design: "The corequisite model has not yet been subjected to rigorous evaluation" (p. 8). Most importantly, Bailey et al. (2016), in a paper on the Institute of Education Science's What Works Clearinghouse (WWC) website, excluded the 2010 and 2012 CCRC papers (Cho et al., 2012; Jenkins et al., 2010) as not meeting the WWC standards for rigorous research. The authors also labeled the evidence on acceleration in general as "minimal," a designation which includes the original corequisite model ALP.

If the research base of corequisites is called into question by the very researchers who originally studied it

and promoted it, and the CCRC has chosen not to publish their working papers on the model, then it appears that the numerous citations of ALP and the arguments made with them to legitimize corequisite variations may be called into question. Logue's (2018) assertions about the extensive evidence supporting corequisites should also thus be questioned.

Net Effects of the Corequisite Reform Movement

Aside from the premature conclusion some researchers and interest groups have come to regarding the extensiveness of the evidence base on corequisites, there are unintended consequences that affect millions of students when state systems and hundreds of institutions restrict or eliminate prerequisite remediation. For example, one study (Pain, 2016) showed that after the state of Florida made remediation optional, remedial students performed worse in college-level courses. This finding is relevant to the use of corequisites because at the very minimum, any minimal-support corequisite model would have to overcome the negative effect of a total lack of support.

Most prominently, no studies have been conducted todate exploring the negative effects on students who enroll in corequisite variations such as the options offered in Oklahoma (2016) in which the support offered is as little as one lab hour. Logue et al. (2016), one of the few peer-reviewed published studies on this model, has provided tangential evidence on the effect of a two-hour supplemental instructional support system for a remedial algebra course. The results showed that a two-hour organized supplemental instruction (SI) session, with a trained SI assistant, increased pass rates in remedial algebra by a small but statistically insignificant amount. Therefore, pass rates in college-level corequisite courses with a self-directed lab hour mandatory requirement may not increase pass rates. It may simply result in lower pass rates in college-level courses, as can be found in Florida (Pain, 2016).

Proponents of the corequisite model argue that in spite of the lower number of students passing gateway courses, the overall numbers passing gatekeeper classes is higher (Scott-Clayton, 2018). Nevertheless, the net effects on atrisk students who fail these college-level corequisite courses have not been studied. In fact, researchers intimately involved in studying the corequisite model have conceded that the reform has not been studied rigorously (Belfield et al., 2016). Thousands of underprepared students are being required to take college-level courses instead of prerequisite remediation, and this is in spite of research demonstrating that 49% of all remedial students pass their remedial sequences, and these students graduate at a higher rate than nonremedial students (Chen, 2016). The

ramifications of the changes in numerous state systems and institutions across the nation have not been studied and will not be studied until well after potential and likely negative effects, such as lower pass rates and graduation rates among remedial students, have already occurred.

Conclusion

After analyzing and weighing the corequisite model's entire corpus of research, evolution, and net effects, including the limitations expressed by reputable researchers from the CCRC—the very organization that originally studied and promoted the reform—it is not reasonable to conclude that this relatively recent approach to remediation has extensive evidence in support of its wide implementation. In fact, some rigorous research exists (Logue et al., 2016) demonstrating that low levels of corequisite support in remedial courses have no effect on pass rates. This also suggests that even lower levels of support in college-level corequisite models, such as a single lab hour, may have detrimental effects on underprepared students in gateway courses.

The combination of the influence of targeted funding by monied interest groups, in addition to these groups' persistent attacks on traditional remediation, has contributed to the legitimization of multiple unpublished papers with self-reported data, leading to a premature conclusion that the evidence on corequisites is widespread and rigorous. Thus, the push to alter entire university and college systems in numerous states—supported by citations of a severely limited number of peer-reviewed journal articles, several working papers, and many papers with self-reported data—may be a misguided attempt at increasing postsecondary completion metrics.

The net effect may simply be to remove access to much needed remedial courses, to increase fail rates in college-level courses, to lower standards in gateway courses, and to perhaps negatively affect graduation rates for underprepared students. Before a reform that affects tens of thousands of students is expanded beyond its current extensive implementation, legislators, policy makers, and practitioners should begin insisting that a more rigorous and replicated research base on corequisites from peer-reviewed journals be undertaken and completed. This will increase the chances that results from corequisite variations are indeed beneficial and will increase completion metrics without harming subgroups of students. Perhaps instead of removing beneficial courses, those involved in higher education could support underprepared students more broadly by implementing holistic and well-supported reforms that may include a data-based variation of the corequisite model but will also retain effective prerequisite remediation as an option (Chen, 2016).

References

- Adams, P., Gearhart, S., Miller, R., & Roberts, A. (2009). The accelerated learning program: Throwing open the gates. *Journal of Basic Writing*, 28(2), 50–69. Retrieved from http://files.eric.ed.gov/fulltext/EJ877255.pdf
- Bailey, T. R., Bashford, J., Boatman, A., Squires, J., Weiss, M., Doyle, W., Valentine, J. C., LaSota, R., Polanin, J. R., Spinney, E., Wilson, W., Yeide, M., & Young, S. H. (2016). Strategies for postsecondary students in developmental education A practice guide for college and university administrators, advisors, and faculty. Washington, DC: Institute of Education Sciences, What Works Clearinghouse. Retrieved from http://ies.ed.gov/ncee/wwc/Docs/PracticeGuide/wwc_dev_ed_112916.pdf
- Bailey, T. R., Jaggars, S. S., & Jenkins, D. (2015). *Redesigning America's community colleges: A clearer path to student success*. Cambridge, MA: Harvard Press.
- Bailey, T. R., Jaggars, S. S., & Scott-Clayton, J. (2013). Characterizing the effectiveness of developmental education: A response to recent criticism. New York, NY: Columbia University, Teachers College, Community College Research Center. Retrieved from http://files.eric.ed.gov/fulltext/ED542142.pdf
- Bailey, T. R., Jeong, D. W., & Cho, S. W. (2010). Referral, enrollment and completion in developmental education sequences in community colleges. *Economics of Education Review*, 29(2), 255–270. https://doi.org/10.1016/j.econedurev.2009.09.002
- Barshay, L. (2018, February 19). How to help students avoid the remedial ed trap. *The Hechinger Report*. Retrieved from https://hechingerreport.org/help-students-avoid-remedial-ed-trap/
- Belfield, C. R., Jenkins, D., & Lahr, H. (2016). Is corequisite remediation cost effective? Early findings from Tennessee (CCRC Research Brief No. 62). New York, NY: Columbia University, Teachers College, Community College Research Center. Retrieved from https://ccrc.tc.columbia.edu/media/k2/attachments/corequisite-remediation-cost-effective-tennessee.pdf
- Chen, X. (2016). Remedial coursetaking at U.S. public 2- and 4-year institutions: Scope, experiences, and outcomes (NCES 2016-405). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from https://nces.ed.gov/pubs2016/2016405.pdf
- Cho, S. W., Kopko, E., Jenkins, D., & Jaggars, S. S. (2012). New evidence of success for community college remedial English students: Tracking the outcomes of students in the Accelerated Learning Program (ALP) (CCRC Working Paper No. 53). New York, NY: Columbia University, Teachers College, Community College Research Center. Retrieved from http://ccrc.tc.columbia.edu/media/k2/attachments/ccbc-alp-student-outcomes-follow-up.pdf
- Complete College America. (2012). Remediation: Higher education's bridge to nowhere. Seattle, WA: Bill & Melinda Gates Foundation. Retrieved from https://postsecondary.gatesfoundation.org/wp-content/uploads/2014/10/CCA-Remediation-Bridge-to-No-Where.pdf

- Core principles for transforming remediation within a comprehensive student success strategy: A joint statement. (2015, November 10). *Education Commission of the States*. Retrieved from https://www.ecs.org/wp-content/uploads/core principles nov9.pdf
- Daugherty, L., Gomez, C. J., Carew, D. G., Mendoza-Graf, A., & Miller, T. (2018). Designing and implementing corequisite models of developmental education: Findings from Texas community colleges. RAND Corporation. Retrieved from https://www.rand.org/pubs/research_reports/RR2337.html
- Denley, T. (2017). Co-requisite remediation full implementation 2015-16 (Tennessee Board of Regents Technical Brief No. 3). Nashville: Tennessee Board of Regents. Retrieved from https://www.tbr.edu/sites/tbr.edu/files/media/2016/12/TBR%20CoRequisite%20Study%20-%20Full%20Implementation%202015-2016.pdf
- Edgecombe, N., Jaggars, S. S., Xu, D., & Barragan, M. (2014). Accelerating the integrated instruction of developmental reading and writing at Chabot College (CCRC Working Paper No. 71). New York, NY: Columbia University, Teachers College, Community College Research Center. Retrieved from http://ccrc.tc.columbia.edu/media/k2/attachments/accelerating-integrated-developmental-reading-and-writing-at-chabot.pdf
- Field, K. (2015, January 20). 6 years in and 6 to go, only modest progress on Obama's college completion goal. *The Chronicle of Higher Education*. Retrieved from https://www.chronicle.com/article/6-Years-in6-to-Go-Only/151303
- Hanford, E. (2016, August 16). Stuck at square one: College students increasingly caught in remedial education trap. *American Public Media*. Retrieved from https://www.apmreports.org/story/2016/08/18/remedial-education-trap
- Hesser, T. L., & Gregory, J. L. (2016). Instructional support sessions in chemistry: Alternative to remediation. *Journal of Developmental Education*, 39(3), 22–28. Retrieved from https://files.eric.ed.gov/fulltext/EJ1130190.pdf
- Important change in the ALP model. (2016, August 12). Community College of Baltimore County Accelerated Learning Program Website: Alp-deved.org. Retrieved from http://alp-deved.org/2016/08/important-change-in-the-alp-model/
- Jaggars, S. S., & Bickerstaff, S. (2018). Developmental education: The evolution of research and reform. In M. B. Paulsen (Ed.), (2018). Higher education: Handbook of theory and research (pp. 469–503). New York: Springer International Publishing.
- Jaggars, S. S., Hodara, M., & Cho, S. W. (2014). Three accelerated developmental education programs. *Community College Review*, 43(1), 3–26. doi: 10.1177/0091552114551752
- Jenkins, D., & Bailey, T. (2017). Early momentum metrics: Why they matter for college improvement (CCRC Brief No. 65).

 New York, NY: Columbia University, Teachers College,
 Community College Research Center. Retrieved from https://ccrc.tc.columbia.edu/media/k2/attachments/early-momentum-metrics-college-improvement.pdf

- Jenkins, D., Speroni, C., Belfield, C., Jaggars, S., & Edgecombe, N. (2010). 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, NY: Columbia University, Teachers College, Community College Research Center. Retrieved from https://ccrc.tc.columbia.edu/media/k2/attachments/remedial-english-alp-effective-affordable.pdf
- Kashyap, U., & Mathew, S. (2017). Corequisite model: An effective strategy for remediation in freshmen level quantitative reasoning course. *Journal of STEM Education*, *18*(2), 23–29. Retrieved from https://eric.ed.gov/?id=EJ1149407
- Logue, A. W. (2018, July 17). The extensive evidence of co-requisite remediation's effectiveness. *Inside Higher Education*. Retrieved from https://www.insidehighered.com/views/2018/07/17/data-already-tell-us-how-effective-co-requisite-education-opinion
- Logue, A. W., Watanabe-Rose, M., & Douglas, D. (2016). Should students assessed as needing remedial mathematics take college-level quantitative courses instead? A randomized controlled trial. *Educational Evaluation and Policy Analysis*, 38(3), 578–598. doi: 10.3102/0162373716649056
- Oklahoma State System of Higher Education. (2016). *Corequisite at scale guidance*. Retrieved from http://www.okhighered.org/complete-college-america/corequisite-at-scale-docs/corequisite-at-scale-guidance.pdf
- Pain, K. D. (2016). Voluntary remediation in Florida: Will it blaze a new trail or stop student pathways? *Community College Journal of Research and Practice*, 40(11), 927–941. https://www.tandfonline.com/doi/full/10.1080/10668926. 2015.1134361
- Parker, S., Traver, A. E., & Cornick, J. (2018). Contextualizing developmental math content into introduction to sociology in community colleges. *Teaching Sociology*, 46(1). 25–33. http://journals.sagepub.com/doi/10.1177/0092055X17714853

- Rutschow, E. Z., & Mayer, A. K. (2018). *Making it through: Early findings from a national survey of developmental education practices* (CAPR Research Brief). New York, NY:
 MDRC. Retrieved from https://www.mdrc.org/sites/default/files/DCMP-InterimFindings.pdf
- Scaling co-requisite supports at the University of Central Arkansas: Perspective from a four-year higher education institution (Notes from the Field: Number 4). (2018). Austin, TX: The University of Texas at Austin: Charles A. Dana Center. Retrieved from https://dcmathpathways.org/sites/default/files/resources/2018-05/1 Notes%20from%20the%20 field number%204 FINAL%5B1%5D.pdf
- Scott-Clayton, J. (2012, April 20). Are college entrants overdiagnosed as underprepared? *The New York Times Economix Blog.* Retrieved from http://economix.blogs.nytimes.com/2012/04/20/ are-college-entrants-overdiagnosed-as-underprepared/
- Scott-Clayton, J. (2018, March 29). Evidence-based reforms in college remediation are gaining steam and so far living up to the hype (Evidence Speaks Series). Washington, DC: The Brookings Institute. Retrieved from https://www.brookings.edu/research/evidence-based-reforms-in-college-remediation-are-gaining-steam-and-so-far-living-up-to-the-hype/
- Spanning the divide. (2016). *Complete College America*. Retrieved from http://completecollege.org/spanningthedivide/
- Complete College Georgia. (2018). *Transforming remediation*. Atlanta, GA: University System of Georgia. Retrieved from https://www.completegeorgia.org/content/transforming-remediation
- Vandal, B. (2014). Promoting gateway course success: Scaling corequisite academic support. *Complete College America*. Retrieved from https://eric.ed.gov/?id=ED558791
- Vandal, B. (2015). Core principles for transforming remediation. Complete College America. Retrieved from https://ccrscenter.org/sites/default/files/August-15-Bruce-Vandal.pdf



Bridging the Academic-Athletic Divide through a Sustainable Summer Literacy Program

Pam Segal

Introduction

In the college setting, academics and athletics are often at odds regarding how they view football student-athletes (Horton, 2009). There is no shortage of athlete stereotypes (e.g., "dumb jock," "at college only to play a sport," "not literate"), and football student-athletes often fall into them by default (Beamon & Bell, 2006; Benson, 2000). Yet what many individuals on and off the field miss is how skills on the football field—specifically literacy skills can translate into the college setting. My research [name withheld, 2013] has shown that college football student athletes have literacy¹ skills (e.g., analyzing, verbal communication, comprehension, note taking) to be successful in the college setting but often do not realize it and do not know how to use them until late in their college careers. As a result, they have poor grades early on, lack confidence, and need to "catch up" to their non-athlete counterparts.

Tensions between college faculty and athletic staff began when athletics became part of the college setting in 1852. Then, faculty became increasingly concerned with the academics of student-athletes (Barr, 1999). For over 100 years, the working relationship between the two has been fraught with power struggles, stereotypes, and disquiet. In 1999, the National Collegiate Athletic Association (NCAA) called for more collaboration between the athletic community and faculty (Barr, 1999)— for faculty representatives to serve as advisers to athletic departments. Sadly, this policy did not spark collaboration beyond oversight and did little to push for research on the impacts of faculty and athletics working together or the impact on student athletes.

Given limited research, there is a need to document the experiences of partnerships between the two fields. The goal of this study was to enhance a partnership not often seen and to make programs more supportive of student-athletes.

The Case Study

This case study examines the collaboration between an athletics learning specialist and a literacy professor in creating an engaging, interactive literacy program for incoming freshman college football student-athletes. The study addresses two main questions: (1) Can academic research and theory inform a practical literacy program to imbue athletes with literacy competence, helping them learn how athletic competency skills are transferable to the classroom? (2) What's the best way to do that? It also addresses two sub-questions: (1) Can such a collaboration be productive? (2) What are the main tenets for collaborating when designing a literacy program?

The study took place at a public mid-size Mid-Atlantic university. The learning specialist and I—the literacy professor— are women. While we knew of one another, we had not previously worked together. An academia-athletics collaboration is rarely seen in the college setting, and we wanted to demonstrate how it could be done and present its benefits.

Designing and Implementing the Literacy Program

Getting Sign-on

Getting various individuals in the athletic department to meet with me and agree to sign on to the program was one of the most critical tasks in implementing the literacy program. In the past decade, despite calls to work together more (Barr, 1999), athletics and academics remain at odds regarding student-athletes. Athletic departments are often protective, weary of letting "outsiders" in, for fear of possibly negative push-back and press coverage. This is not surprising, given recent sport-related scandals and athlete stereotypes on and off the field. But while approaching and then working with an athletic department can take time and effort, the results are worthwhile.

First, I met with the academic athletic director and explained my research findings and the program that I created, based on the findings. I showed why the program would support the football players and their entry into the college setting and clarified that it could be modified to meet specific needs of the players. I also shared that I would need to use the results of the collaboration for data, as it was necessary research as part of my position.

I For purposes of this paper, literacy is defined as the integration of listening, speaking, reading, writing and critical thinking, and is embedded within social and cultural phenomena (Kirkland & Jackson, 2009; Mahiri, 2004). It uses cultural and social knowledge for discourse in specific situations (e.g., home, school, athletics) (Tatum, 2008).

Second, the academic athletic director introduced me to the learning specialist with whom I would work if the coach agreed to the program. They agreed that the program would be a welcome addition, supporting the student-athletes, but would need modifications to tailor it for the current players.

Third, a meeting was arranged between me and the academic athletic director, learning specialist, and head football coach, during which I explained the research, program, and anticipated outcomes. After many questions from the head coach, (e.g., "Why did you not do this where the research was done?" "How do you see the results differing here?" "What do you get out of this?"), he agreed to the program and looked forward to the results.

Being honest, clear, and open to what the athletic department needed and wanted was important for getting sign-off. Also critical was not losing sight of the program goals.

After gaining permission to proceed with the program, the learning specialist and I began planning, shifting the curriculum from being solely theory-based to ensuring practical applications of the research to benefit the student-athletes. Our partnership was based in trust in each other and on our mutual goal of supporting the student-athletes, whom we both know have the skills necessary to be successful in college. Student-athletes often need help early on in their college careers in making the connection between their multiple literacies so that they can be successful on and off the field.

The Literacy Curriculum

Basic program. The literacy program was designed based on research [name withheld, 2013] showing that football student-athletes saw that the literacy skills they possessed on the field were applicable in the college classroom and that they could use those skills in both settings to be successful.2 Its' purpose is to connect incoming freshman to literacy in three components of their lives: football, society, and academia. The first program component introduces general literacy (e.g., definition, discourse, multiple literacies) and connects it to football literacy. The second part focuses on what it means to be literate in society and how that connects to football literacy. The third part looks at literacy in the college setting and how it connects to societal norms of literacy and football literacy. Through this structure, the players learn, connect, and show how the literacy skills they have from football translate into all aspects of their lives, hopefully giving them the confidence they need to be successful at the start

of their college careers. The original program design had a four-week schedule, with planned meetings three times a week for 45 minutes.

Grounding in the practical: The how and why of modifying the program. During my first meeting with the learning specialist, it became clear that the program needed to be less theoretical and more practical. We discussed needing to check in with the students to ensure they understood why they were doing a particular activity. We also considered how to ensure that the students learned information and skills that are relevant and transferable to all aspects of their lives.

The needed program modifications became apparent as we reviewed my Power Point presentations and activities plan. Working with the learning specialist, we refocused the program on practical application of literacy skills and shortened it to a three-week format with 30-minute sessions twice a week. The basic structure of the program remained the same.

We stripped the program of academic jargon, revising it to include plain language, an understandable rationale, and practical activities that connected the world of literacy to football, society, and the classroom, still keeping its original, research-based purpose. Working together, we ensured that the planned videos, activities, and discourse would be beneficial to a group of athletes with a range of interests, majors, and education backgrounds. For example, instead of having the students analyze a video of a general football play in the first week (and support what they see happening, highlighting their comprehension, reading, analysis, and discourse skills), we chose a video of their own college team, allowing them to watch the types of films they would be required to watch. This made the program practical and applicable to the students, helping to show them their literacy skills and how they use them on the field.

We soon realized that the most important aspect of the program's second week was not how literacy is used in society, but how society views literacy and how that connects to football players. We agreed that the players needed to see literacy as a lens that society sees them through and how the skills they have are valuable to society. The players watched videos of football players being interviewed and then analyzed, supported, and discussed how these players are seen from various perspectives (i.e., fellow players, fans, society). This showed the students how the skills they have on the field (discussed previously) apply in the real world.

During the third week, academic literacy is explored and connected to society and football. As an academic, I wanted them to see how some of the academic vocabulary

² Many of the study participants did not realize that connection between onand off-the-field literacies until the end of their sophomore or junior years, putting them on academic probation as freshman and sophomores and playing catch-up for the rest of their college careers [name withheld, 2013].

is used on the football field, and stress the importance of using the correct vocabulary in one's courses, showing how important language is across the spaces they take part in daily. The learning specialist agreed, and together we designed an activity placing the players into teams and competing against one another to come up with the greatest number of words that are used both in academia and football (showing that their vocabulary is valuable in all spaces in which they participate). By reviewing the program and modifying it to be more practical, we created a plan that can be used every year yet should be routinely adjusted to support future students.

What We Learned

Common Goals are Critical

In any partnership, ensuring that everyone has the same goals is essential to its success (Hefferman & Poole, 2005). We had to figure out our goals as well as what we wanted the students to achieve. We had to decide how important was it to have the students see their skill set versus ensuring they had knowledge sufficient to pass a class. Focusing on how to take theory and make it practical, we wanted to make sure that the students could take what they knew from their athletic experience and move it into society and the classroom.

Goal-setting took time, and as we worked together, we refined goals. Going through the program plan for each day and week, we developed sub-goals at the end of each lesson (e.g., students should be able to use their football discourse to explain a video, connect societal literacy to football literacy, use their academic discourse to discuss football). This approach focused us on specific lessons and taking time to consider whether and how they met our goals. We were thus able to achieve sub-goals and adjust them, as needed, for the next lesson. This took time but gave us the opportunity to make adjustments, either changing goals or activities if we saw challenges or gaps in comprehending the primary goals. This process worked best, given the program length and connections we intended to make.

Flexibility and Interactions are Key

Research shows that, when interacting collaboratively, flexibility is a valuable trait (Daily & Hauschild-Monk, 2017; Hefferman & Poole, 2005). We each had ideas of what should and should not be done in the program. As a literacy professor, I was considering the background knowledge needed by the participants and how to build on it. The learning specialist focused more on how to take the information I had and make it practical for the college classroom. We realized early on that, to succeed, we both had to be flexible, trust the other's expertise, and value

what we each brought to the program. Our different perspectives were essential to creating something sustainable and valuable.

From my theory-based perspective, I felt that the students needed to know the underlying theory so they could understand the reason for the program. The learning specialist agreed but countered that, when explaining, we needed to use everyday language for clarity and concision. Together, we turned this idea into a classroom activity: I first discussed the importance of using specific words and phrases for certain classes and on the football field. We discussed being an expert and helped them understand that as football players they are experts at discussing their sport. We had the students explain a play they watched on video to someone who understands football jargon and someone who does not. This showed the students that they are experts who must learn to explain the sport differently off the field. We then connected this to professors in the classroom, explaining that the students should ask for clarity if academic jargon is unclear.

Our planning conversations were valuable. We both had to remember each other's perspectives and our end goal. By meeting, working through ideas, and editing, our partnership and program were successful.

Cross-department Collaborations are Challenging and Worthwhile

Cross-disciplinary work takes time and effort. There is no shortage of difficulties that may arise, but such work is essential to bridging gaps in the academic setting (Dailey & Hauschild-Monk, 2017; Zirger & Privitera, 2009). Up front, certain work must occur before faculty-athletics collaboration can begin. For example, constraints on both sides may or may not be evident from the start (e.g., requirements, research), and differing goals, expectations, and perspectives can sometimes complicate something that initially appears to be simple to one party.

When both individuals are invested, understand each other's constraints, and trust each other, the process, while still be challenging, is worthwhile. We learned from each other professionally, and realized that working with someone with different expertise was beneficial to our personal experiences and professional growth on campus. The athletic learning specialist stated:

I was surprised at how well this went. I had assumed that, as an academic, she would be more rigid and less likely to listen to my perspective; she would not need my expertise only her own. However, she wanted my input and valued what I was willing to put into the program. (D.W. personal communication, August 2017)

At first, I was concerned that, even though the learning specialist agreed to work with me, she would not take an interest in the program. What I found was the opposite—She made sure she gave her opinions, shared ideas, and worked with me, investing in making the program something we both could be proud of. Working together was challenging because of our pre-conceived notions of each other and differing perspectives, but once we began modifying the program and working together, we realized how much we were on the same page.

Student feedback ranged from "I knew some of this stuff," to "I enjoyed the videos and talking about what we know." When asked in a survey what they learned from the program, several responded, "What it means to be literate in all parts of our lives"— our program goal.

Sustainability through Collaboration and Transferred Ownership

One of my overarching goals was to create a literacy program that the athletic department would adopt as its own, thereby sustaining it into the future. I envisioned working with the department only on yearly modifications to tailor the program to the current student needs and having the department teach it.

Our collaboration was key to this transition. It allowed me to let go of the program and the athletic department to see it as something beneficial that it could own. Moreover, it provided a clear role for the learning specialist in the athletic department, engraining the literacy program as part of the incoming freshman football student athlete experience.

Conclusion

Given how little research there is on athletic and academic departments working together, it was important to document our cross-disciplinary collaborative experience, no matter the outcome. The study indicated that working together on a literacy program for athletes can be beneficial to the education and athletic departments as well as the students on the receiving end of the collaboration. This was a small-scale study, and more research is needed to make it generalizable. Our effort shows how important it is for the two departments to work together. We hope that this study is the first of many efforts by cross-department personnel, working together to bridge the academic and athletic divide while enhancing literacy for student-athletes

References

- Barr, C. (1999). History of Faculty Involvement in Collegiate Athletics. Faculty Athletics Representative: A Survey of the Membership Document.
- Beamon, K., & Bell, P.A. (2006). Academic versus athletics: An examination of the effects of background and socialization on African American male student athletes. The Social Science Journal, 43, 393-403. https://doi.org/10.1016/j. soscij.2006.04.009
- Benson, K.F. (2000). Constructing academic inadequacy: African American athletes' stories of schooling. The Journal of Higher Education, 71(2), 223-246. https://doi.org/10.1080/00 221546.2000.11778835
- Daily, R. & Hauschild-Mork, M. (2017). Making it all count: A cross-disciplinary collaboration model incorporating scholarship, creative activity, and student engagement. InSight: A Journal of Scholarly Teaching, 12, 64-77.
- Heffernan, T., & Poole, D. (2005). In search of "the vibe:" Creating effective international education partnerships. Higher Education, 50, 223–245. https://doi.org/10.1007/ s10734-004-6352-2
- Horton, D. (2009). Class and cleats: Community college student athletes and academic success. New Directions For Community Colleges, 147, 15-27. https://doi.org/10.1002/cc.374
- Kirkland, D.E., & Jackson, A. (2009). "We real cool": Toward a theory of black masculine literacies. Reading Research Quarterly, 44(3), 278-297. dx.doi.org/10.1598/RRQ.43.3.3
- Mahiri, J. (2004). What they don't learn in school: Literacy in the lives of urban youth. Vol. 2. New York: Peter Lang. [name withheld]. (2013) Reading the defense: Conceptualizations of literacy by male football student-athletes (Doctoral dissertation). Retrieved from ProQuest. (1432724061)
- Tatum, A. (2008). Toward a more anatomically complete model of literacy instruction: A Focus on African American male adolescents and texts. Harvard Educational Review, 78(1), 155-180. https://doi.org/10.17763/ haer.78.1.6852t5065w30h449
- Zirger, B.J., & Privitera, M.B. (2009). New models of cross-disciplinary collaborative education. Metropolitan Universities, 20(1), 130- 146.