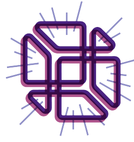

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Redesigning Course Placement in Service of Guided Pathways

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Redesigning Course Placement in Service of Guided Pathways

Ross Markle

Introduction

There has been no greater revolution in the community college than the Guided Pathways movement. Never before has the world of community colleges, seemingly as a whole, realized its challenges and engaged in a systemic effort of change. It is admittedly not perfectly coordinated—with efforts taking various forms such as direct work with the Community College Research Center (CCRC), state-based efforts to local, and internally-organized, single-campus initiatives—but it has originated from the same source material.

Redesigning America's Community College's: A Clearer Path to Student Success (Bailey et al., 2015) outlined four clear initiatives that were necessary for community colleges to shirk previous ways of thinking that limited student success. The book—and the resulting Pathways movement—is based in four key principles: (1) clarifying educational and career paths for students (program mapping), (2) improving guidance and advising that helps students identify their own paths (onboarding), (3) improving ongoing support to keep students on their paths (advising), and (4) emphasizing and assessing student learning.

According to CCRC (2024), nearly 400 community colleges have implemented or are in the process of implementing Guided Pathways. Given the U.S. Department of Education's count of 1,076 community colleges in the United States (De Brey et al., 2021), this suggests at least 40% of community colleges have engaged in this work (given an assumption that some schools implement Guided Pathways initiatives without directly working with CCRC or other organizations).

Guided Pathways is a critical movement. As Bailey et al. (2015) note, the primary theme underlying the initiative is the tension between access and success. That is to say, community colleges have historically been a mechanism of capacity and access. While the original emphasis on community colleges ("junior colleges" at the time) was on separating general education so that universities could focus on research (see Drury, 2003), the influx of more than two million military veterans following World War II, funded by the GI Bill, elevated the importance of community colleges nationally. The extant postsecondary infrastructure at the time simply could not fit this influx of students, and community colleges were identified as one mechanism that could accommodate them.

Today, community colleges host a population of students that is immense—8.9 million students in the 2021-22 academic year, according to CCRC (2024)—comprising more than 40% of all undergraduate students in the United States and diverse with regard to their backgrounds, experiences, skills, and goals. As one example, Beer (2017) demonstrated that—based on nationally representative data from the U.S. Department of Education—community college

students are more likely to be eligible for Pell grants, enrolled part-time, older than 18-24, students of color, and first-generation college students.

Along the path between World War II and today, this mission of access resulted in several impediments to success. According to Bailey et al. (2015), in an effort to be open and accommodate students regardless of background and desired goal, community colleges avoided placing restrictions on student enrollment behaviors, even those that might improve their probability for success (e.g., mandated advising, full-time enrollment). Guided Pathways' emphasis on onboarding, advising, and assessment is intended to provide some guiderails that can help the diverse student population better navigate community colleges and the paths beyond.

While vital, these broad strategic charges can be difficult for institutions to manage without specific tactical recommendations for best practice. For example, with many models available (e.g., Pardee, 2012), how should institutions structure onboarding and advising to provide better advising and coaching to students? This article seeks to provide guidance to institutions looking to implement Guided Pathways or other success-focused initiatives. Here, the author proposes the resurrection of a once-maligned practice—course placement—infused with lessons learned from the past two decades of research into student success.

Ineffectiveness in Placement and Remediation

Prior to the Guided Pathways movement, community colleges were already undergoing a rather drastic change: the redesign of course placement and developmental education. In the fall of 2011, the National Assessment Governing Board (NAGB) conducted a survey of colleges and universities seeking to understand the use of placement tests across the higher education landscape (Fields & Parsad, 2012). The results showed nearly unanimous use of placement tests among community colleges. Fully 100% of the 410 two-year public institutions surveyed reported using a standardized placement test for decisions in math, with 94% indicating use in reading placement.

In addition, placement tests were almost solely relied upon. NAGB asked respondents if indicators such as high school graduation tests, high school grades, AP or IB courses, faculty recommendations, or any other criteria were used to make placement decisions. Only 27% of public two-year institutions indicated using *any* other criteria for placement into math courses, with even fewer colleges (19%) using alternative measures for placement in reading (Fields & Parsad, 2012).

As of 2024, however, placement tests, course placement processes, and developmental education, as a whole, are under fire. Criticisms of the tests themselves—ACT's COMPASS and the College Board's Accuplacer tests being, by far, the most popular assessment tools at the time—were rampant.

Objections to placement tests initially focused on their validity, specifically their ability to predict success in college-level courses. Belfield and Crosta (2012) and Scott-Clayton (2012) wrote notable, large-scale studies for the Community College Research Center. From their

research, it was concluded, "Assessment scores are not highly predictive of subsequent student performance" (CCRC, 2013, p.1). Moreover, research by CCRC (2013) showed that placement decisions themselves were inaccurate, often leading to one of several negative outcomes for students. Bailey et al. (2010) reported that 30% of students who were placed in remedial courses never enrolled, suggesting that mere action of placement may be detrimental to success.

Using data from one, large urban community college system, Scott-Clayton (2012) found that 24% of students in math and 33% of students in English were severely misplaced. This includes students who were "underplaced" (18% in math and 29% in English), meaning that they were placed in a remedial course, but were predicted to have a B or better in the college-level course. Additionally, "overplaced" students (6% in math and 5% in English) were placed into a college-level course, failed, but their failure could have been predicted based on a more holistic assessment model.

Further, these studies demonstrated that a sequential, course-based system of remedial education simply did not work. If we accept the goal that developmental education is intended to remediate insufficient academic preparation to help students enroll in and complete college-level courses, the work of Baily et al. (2009) exposed that these outcomes were clearly not being met. As Baily et al. (2009) stated, "Our results indicate that only 3 to 4 out of 10 students who are referred to remediation actually complete the entire sequence to which they are referred" (p. 2). Moreover, a large portion of attrition came at the moment of placement, with students failing to enroll in any course following a recommendation of remediation.

If we consider a medical context, a new treatment is created for a condition that generally leads to hospitalization. Upon evaluating the efficacy of that treatment, we found out only 30-40% of patients got better. But almost an equal number, upon hearing of the treatment, left the hospital altogether. In addition, a startlingly high percentage saw no benefit after the course of treatment. Unless the alternative (i.e., no treatment) was near-universal fatality, it would be difficult to consider this treatment effective. Indeed, the conclusion of many across the community college world was as such: placement and remediation needed to be drastically reconsidered, if not abandoned.

Reforming Developmental Education

Researchers, practitioners, and policy makers suggested several reforms. For one, the notion of expanding the assessment space beyond the extant model focused on academic content (i.e., placement tests) was a popular one. In addition to CCRC's (2024) examination of placement validity, burgeoning research supported the role of noncognitive skills in student success (see Poropat 2009; Richardson et al., 2012; Robbins et al., 2004). Thus, one possible solution was to include measures of factors such as critical thinking, learning strategies, motivation, and self-efficacy (Levine-Brown et al., 2008; Saxon et al., 2008). Conley (2007) argued that such holistic assessment models would support a "more comprehensive conception of college readiness" (title).

Ultimately, two initiatives drastically changed the landscape of course placement and developmental education. Interestingly—and in alignment with Guided Pathways—these initiatives focused on the structural barriers to success embedded within the community college.

In some cases—and like other sectors of education—states and colleges have simply "opted out" of testing, though what follows that action has varied. Some states have used high school grades as a primary measure of readiness (Zinshteyn, 2016). Other states, such as Texas, have created numerous options for being exempt from placement testing, such as SAT/ACT requirements, completion of a college preparatory course, or military service (College Board, 2020).

These phenomena could be referred to as "test-less" initiatives—referring to both the removal and reduction of test use—in order to avoid confusion with the existing "opt out" movement in testing (e.g., Shuffelton, 2020). Given research on the impact of placement, lack of placement accuracy, and the effectiveness of developmental education as a whole, it is quite likely that removing placement and/or directly placing a larger number of students into college-level courses had improved student success outcomes.

Whereas test-less initiatives focused on structure and process, the other major movement to affect developmental education addressed the ineffectiveness of remedial interventions. Corequisite models (Adams, 2020; Adams et al., 2009; Emblom-Callahan et al., 2019; Vandal, 2014) removed the barrier of sequential, semester-based remediation that costed students time, money, and arguably success as a whole. With corequisites, remediation occurred simultaneously with college-level instruction, saving time and money and—based on the research cited here—drastically improved student success outcomes, particularly for those students with the lowest levels of academic preparation.

Though both are excellent, necessary initiatives that have improved student success, there is one opportunity cost associated with test-less initiatives and corequisite models. The aforementioned placement reforms focused on assessment scope and content were not just about improving the validity of placement exams. They also represented a shift in understanding student potential. Whereas those models based on traditional, standardized placement tests represented an understanding of students based solely on academic content, holistic assessment models also brought with them a broader understanding of students. As many of the authors cited here noted, such assessment moments could not only support improved course placement decisions, but also broader conversations and interventions with students to improve their success. Such an assessment model could not only place students in the most appropriate courses, but also provide connections to co-curricular supports (e.g., Markle et al., 2013). Such a model could have longer lasting impacts on student success beyond just those gateway courses.

This article is based on the hypothesis that course placement and remediation, in and of themselves, are not detrimental to student success. Rather, it was the ways in which we assessed, placed, and supported students that were ineffective. Others also call for reconsidering the role of placement. In a recent paper presented to the Northeastern Educational Research Association, Dr. Kurt Geisinger (2023), Director of the Buros Center for Testing, has suggested that placement processes would help four-year universities struggling with a changing world of admissions (namely the test-optional movement).

The goal of this article is to reconsider the role of placement in the community college. Incorporating research into student success, there are three ways in which placement might be revitalized in order to help foster success among community college students, particularly those who have not succeeded in the past (i.e., academically underprepared students and traditionally underserved populations). Interestingly, while much of the discussion to this point has focused on the Guided Pathways movement's role in placement's demise, it can be argued that these revolutions in placement would support many of Pathways' goals, particularly those around onboarding and advising.

Redesigning Placement

In many ways, the notion of placement is intuitive and appealing. Given a population of students that is diverse in preparation, strengths, challenges, needs, and goals, a system for assessing, understanding, and addressing those various characteristics seems vital. However, as discussed, there were multiple faults in the way course placement was traditionally conducted.

There are three key aspects of placement that will require redesign in this new model of placement. By infusing an understanding gained through the past several decades of student success research, placement could be reconsidered as a positive mechanism for success by focusing on the following principles:

1. Placement should provide an opportunity to establish a connection between the student and the college ("connection").
2. Placement should focus on a holistic set of student characteristics ("holistic understanding").
3. Placement should connect students with resources that improve success within and outside the classroom ("holistic intervention").

Connection. Vincent Tinto's (1975) research on retention is almost universally known across the higher education landscape. While some individuals note this work's importance in highlighting student retention, persistence, and completion as an important focus for colleges and universities, it is also noteworthy for changing fundamental assumptions about students. According to Tinto (2005):

> This view of retention began to change in the 70's. As part of a broader change in how we understood the relationship between individuals and society, our view of student retention also shifted to take account of the role of the environment, in particular the institution, in student decisions to stay or leave. (p. 1)

This shift to an understanding of "environment" eventually led to an understanding that student retention was a social phenomenon, not just an academic one. One theoretical model that has both articulated this concept well and been popularly accepted among researchers and practitioners in higher education is that of *sense of belonging*.

Bollen and Hoyle (1990) were among the first to articulate sense of belonging as part of their theory of *perceived cohesion*. By studying groups in both educational and occupational settings, they showed that perceived cohesion was formed by two distinct factors: (1) "feelings of morale," which refers to an individual's attitude toward the

organization (e.g., school, company) as a whole, and (2) “sense of belonging,” which refers to affiliation with individuals within that organization.

This distinction was a keen insight for educators, given that most retention theories that had elaborated on Tinto’s (1975) work (e.g., Bean, 1980; Pascarella & Terenzini, 1980) tended to conflate organizational and social connections under the umbrella of “institutional commitment.” This approach more often emphasized the institutional aspect rather than the social. For example, in their 1993 study, Nora and Cabrerra defined two tenets of institutional commitment: (1) certainty of choice/fit/prestige of the institution, and (2) perceived similarity of values. Notably, this model lacked reference to perceived social connection or disconnection with other students, faculty, and/or staff at the institution.

However, later theories would articulate the value of these social connections. For example, *mattering* (Elliot et al., 2004; France & Finney, 2010) is one measure of social connection defined by three specific factors: awareness, importance, and reliance. *Awareness* refers to a student’s perception that others pay attention to them. *Importance* is a student’s belief that others are concerned about their well-being. Finally, *reliance* refers to the feeling that a student is needed within a system (e.g., “people ask me for help”).

Given the community college’s orientation toward access and the subsequent avoidance of requirements that might limit that goal, placement was previously one of the few moments in which students shared a point of connection with the college. Placement has not been the only connection point lost amidst college reforms. With orientation programs increasingly moving to online formats (Chan, 2017), the opportunities to establish an interpersonal connection with students are limited.

One paradigm that may support both social connections and redesigned placement—while also being a key focus of Guided Pathways—is advising. Advising is a critical part of any college’s student success efforts. As community college scholar Terry O’Banion (2019) once said:

> Academic advising is the second most important function in the community college. If it is not conducted with the utmost efficiency and effectiveness, the most important function in the college—instruction—will fail to achieve its purpose of ensuring that students succeed in navigating the curriculum to completion. (p.1)

In addition to O’Banion’s work, others have suggested the importance of advising, particularly for connecting with students to foster their success. For example, Cuseo (2003) articulated multiple roles for advisors that included scheduling, information brokering, cultural guidance, and guiding students in their development. Johnson (2022) articulated “transactional” and “transformational” advising approaches, with the former referring to more traditional, curriculum based “academic” advising approaches, and the latter including holistic, development-focused advising strategies.

In summary, the role of social connection in student success has been well established. While institutions struggle to find moments to interact with students in a direct and

meaningful way that might facilitate these social interactions, redesigning placement may be one possible approach to finding a common point of connection in the onboarding process. By including advising as a potential framework and resource for this interaction, institutions can create a meaningful relationship with students that supports two central tenets of Guided Pathways (onboarding and advising).

Holistic Understanding. Another key flaw in previous placement models was the limited paradigm used to articulate and assess student potential. As mentioned, not only was this approach focused solely on academic preparation, but usually on single measures thereof. Indeed, one of the most significant recent advancements in educational research is the understanding of the role of noncognitive skills in both academic success and persistence.

Specifically, three findings have emerged that articulate the value of noncognitive skills. First, they are strongly correlated with student success outcomes, even when controlling for measures of previous academic achievement, as demonstrated by multiple meta-analyses across many populations both within and outside of higher education (Poropat, 2009; Richardson et al., 2012; Robbins et al., 2004). Second, when predicting retention outcomes, noncognitive factors are at least as strong, and often much stronger predictors of student success than measures of academic preparation (e.g., ACT/SAT, HSGPA; Markle et al., 2013; Robbins et al., 2004).

Finally—and perhaps most relevant for any student success intervention—noncognitive factors have been shown to hold particular emphasis for understanding the success of students from those populations that most colleges are trying to support. For example, Li et al. (2013) studied the role of academic preparation (i.e., placement test scores) and classroom engagement (faculty ratings of behaviors such as attendance, participation, timeliness, and assignment completion) among students in developmental math courses. While both preparation and engagement were related to successful course completion, there was also an interaction whereby the effect of engagement was stronger depending on initial preparation.

For students with high incoming preparation, the difference between high engagement (92% passing rate) and low engagement (59% passing rate) was significant, but weak in comparison to the effect between low preparation, high engagement (74% passing rate) and low preparation, low engagement (19% passing rate). In other words, showing up to class and effectively engaging—those non-academic expectations of college-level courses—is important, but it is even more important for those students who enter underprepared.

Similarly, Markle (2016) examined how noncognitive factors predicted success across diverse, multi-institutional samples of first-generation and continuing-generation college students. When predicting academic success (i.e., first-year GPA), results showed correlations to be similar for both samples. However, several social and emotional factors had drastically different relationships with retention outcomes depending on first-generation status.

These findings show that noncognitive factors can be helpful in articulating the strengths, challenges, and key experiences of various student subpopulations. But so-called "noncognitive" factors include a wide array of characteristics (Heckman & Rubenstein, 2001) and can be defined

in various ways, depending upon their use. Fortunately, several models have been developed to guide both articulation and assessment of noncognitive skills in higher education (e.g., Markle et al., 2013; Robbins et al., 2004;). Generally, these models seek to articulate the behavioral, motivational, emotional, and social aspects of student success, including factors such as goal commitment, persistence, time management, and—keenly relevant to the previous section—sense of belonging. Moreover, several studies have demonstrated their particular value in making course placement decisions (e.g., Markle et al., 2013; Rikoon et al., 2014).

Thus, a redesigned model of placement can provide an opportunity to connect with students and establish their sense of belonging at the college. Noncognitive skills could be used as a framework to holistically understand student potential, improving upon previous, ineffective, academically-based paradigms. However, this new approach has yet to address one major point of effectiveness from previous course placement models: sequential, course-based approaches to intervention.

Holistic Intervention. Given that many institutions of higher education still lack a cohesive framework of noncognitive skills to articulate key student noncognitive skills, it is understandable that intervening to improve those skills might seem out of reach. However, psychologists David Yeager and Greg Walton, in a 2011 article, used a title that seemed to demystify such interventions: “Social-psychological interventions in education: They’re not magic.”

Yeager and Walton (2011) reviewed several studies across educational settings, each showing how strategically developed and placed interventions can have significant impacts on student learning and success, particularly for traditionally underserved populations. Through their review, they identified three common tenets among these effective interventions: (1) they were well-grounded in psychological theory; (2) they actively engaged students (i.e., not through didactic lecture); and (3) from the student’s perspective, they did not directly address the construct at hand, but rather the underlying perceptions that affected that construct.

The potential for impactful interventions has been more broadly supported by research into *social and emotional learning (SEL)* (Catalano et al., 2004; Durlak et al., 2011). SEL refers to a movement, mostly focused on primary and secondary education, that seeks to add outcomes such as self-determination, self-efficacy, and positive identity to traditional curricula emphasizing literacy and numeracy.

The Catalano et al. (2004) and Durlak et al. (2011) meta-analyses showed that SEL interventions not only increased student social-emotional outcomes, but they also decreased negative outcomes such as absenteeism, class misconduct, teenage pregnancy, and substance abuse. Perhaps most surprisingly, the effect of SEL-focused interventions improved academic achievement at least as much as, and in many cases more than, interventions focused specifically on academic skills.

Efficacy, however, is not the biggest challenge for including more of these interventions within community colleges to improve student success. Most likely, the issue is redesigning our systems, culture, policies, and practices to be oriented around holistic understanding and

intervention. Yet doing so might just help understand and proliferate resources that we already identify as best practice.

In 2006, George Kuh and others published a literature review entitled, *What Matters to Student Success*. Kuh et al. (2006) addressed a host of potential topics and frameworks for answering the question, including sociological, psychological, organizational, cultural, and economic theories. Interestingly, when reviewing several "high-impact practices," such as orientation programs, learning communities, and student success courses, the authors concluded that results of their effectiveness were mixed. In some studies, these practices were demonstrably effective in improving student success, while in others, there was no effect.

Perhaps these lessons from social-psychological and SEL interventions can assist in the design and implementation of our student success programs like orientation, advising, and the first-year experience. Noncognitive frameworks (e.g., Markle et al., 2013; Robbins et al., 2004) could be used to articulate program impact. Guidelines—such as those put forth by Yeager and Walton (2011)—could help colleges better design the content and interactions within such programs. In doing so, community colleges may be better positioned to replicate the results of those studies from Kuh et al.'s (2006) review where such practices were effective.

As demonstrated by the previous section on "connection," placement itself could be one of those programs redesigned to better align with student psychology. But placement also has an additional, almost multiplicative value in this research-based world of student success. In addition to being an intervention in-and-of itself (i.e., by establishing a social connection with students, fostering sense of belonging), placement supported by a holistic understanding of student potential can also help connect students with well-designed interventions.

This is the third improvement to placement: changing the intervention to move away from sequential, course-based (i.e., academically focused) interventions. Admittedly, the potential recommendations of this article have now begun to extend beyond placement itself, into broader student success interventions. However, that is exactly why placement is an important tool for implementing Guided Pathways.

Discussion

Previous course placement only had one intervention at its disposal: the remedial course. Not only was this intervention identified by insufficient measures of student potential (see Belfield & Crosta, 2012; Scott-Clayton, 2012), but it did essentially nothing to help remediate student needs and prepare them to succeed in college-level courses (Bailey et al., 2010).

However, this article shows that placement has great potential for improving student success. This argument demonstrates that traditional means of placement were dismantled because they were rooted in false assumptions about student success (e.g., academic preparation is the primary determinant of success; sequential, course-based remediation would be effective). Indeed, it was those same erroneous assumptions that Guided Pathways sought to address. Thus, if we rebuilt placement, keeping in mind the tenets of Guided Pathways and adding the lessons of decades of student success research, it can serve as a valuable tool for community colleges.

As Guided Pathways has taught us, however, such a shift cannot come without a clearly articulated strategic vision and resources to support community colleges in their transition. While the latter is beyond the scope of this article, there are several areas that can be identified as key partners in articulating and disseminating that strategic vision.

Implications Across the Community College

First, testing and advising offices would need to reconsider ways of onboarding and connecting with students. In viewing placement as a potential resource for all students, this will likely create a burden in places where "test-less" initiatives have limited placement interactions across the student population.

Second, community colleges would need to actively adopt a model of student potential that is holistic in nature. Several assessment models mentioned here (e.g., Markle et al., 2013; Robbins et al., 2004) have gained limited traction in the higher education community, perhaps because of their perception as supplemental (i.e., secondary) to academic preparation. Colleges could benefit from creating a truly holistic model for assessing students, including measures of academic and noncognitive preparation.

Third, student affairs professionals working in community colleges would benefit from reconsidering student programming in alignment with guidelines cited here, redesigning them as effective, theory-based interventions. In addition to the work cited here, resources that can support these ways of thinking include *program theory* (Pope et al., 2019), which emphasizes thoughtful alignment between extant theory and program development, and *implementation fidelity* (Hulleman & Cordray, 2009), which helps practitioners align the amount of intervention with desired outcomes.

Conclusion

Guided Pathways is a critical movement for community colleges. Its emphasis on strategic principles focused on success over access is a message that is not only necessary, but structured in a way that colleges can readily adopt. However, one of the challenges to bringing something like Guided Pathways to life is the identification of practices and tools that embody these strategic shifts.

At its face, course placement does not seem like one of these tools. Community college researchers spent the better part of two decades demonstrating that course placement was not particularly accurate, ineffective at remediating academic deficiencies, and generally detrimental to student success.

However, this is not the fault of the practice of placement, but the assumptions that guided our previous ways of doing things. If reconsidered as an intervention for social connection, based in a holistic understanding of students, and connected with a framework of well-built interventions, placement could be the first step in the pathway down which we guide students toward postsecondary success.

References

Adams, P. (2020). Giving hope to the American dream: Implementing a corequisite model of developmental writing. *Composition Studies*, *48*(2), 19-34.

Adams, P., Gearhart, S., Miller, R., & Roberts, A. (2009). The accelerated learning program: Throwing open the gates. *Journal of Basic Writing*, 50-69.

Bailey, T., 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

Bailey, T., Jaggars, S. S., & Jenkins, D. (2015). *Redesigning America's community colleges: A clearer path to student success*. Harvard University Press.

Bean, J. (1980). Dropouts and turnover: The synthesis and test of a causal model of student attrition. *Research in Higher Education, 12*(2), 155-187.

Belfield, C. R., & Crosta, P. M. (2012). *Predicting success in college: The importance of placement tests and high school transcripts*. CCRC Working Paper No. 42. Community College Research Center, Columbia University. Retrieved from https://ccrc.tc.columbia.edu/media/k2/attachments/predicting-success-placement-tests-transcripts.pdf.

Catalano, R. F., Berglund, L., Ryan, J., Lonczak, H. & Hawkins, J. D. (2004). Positive youth development in the United States: Research findings on evaluations of positive youth development programs. *The Annals of the American Academy of Political and Social Science*, *591*, 98–124.

College Board. (2020). *Texas success initiative assessment 2.0 student informational guide.* Retrieved from https://accuplacer.collegeboard.org/accuplacer/pdf/tsia2-student-informational-brochure.pdf.

Community College Research Center. (2013). *Frequently asked questions about CCRC's assessment validity studies*. Retrieved from https://ccrc.tc.columbia.edu/media/k2/attachments/designing-meaningful-developmental-reform-faq.pdf.

Community College Research Center (2024). https://ccrc.tc.columbia.edu/research/guided-pathways.html#:~:text=Guided%20pathways%20is%20a%20whole,education%20goals%20efficiently%20and%20affordably.

Conley, D. (2007). *Towards a more comprehensive conception of College Readiness. A report prepared for the Bill and Melinda Gates Foundation*. Educational Policy Improvement Center. https://docs.gatesfoundation.org/documents/collegereadinesspaper.pdf

Cuseo, J. (2003). *Assessment of academic advisors and academic advising programs*. https://www.shawnee.edu/sites/default/files/2019-01/Assessment-of-academic-advisors-and-academic-advising-programs.pdf.

De Brey, C., Snyder, T.D., Zhang, A., and Dillow, S.A. (2021). *Digest of Education Statistics 2019 (NCES 2021-009)*. National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

Drury, R. L. (2003). Community colleges in America: A historical perspective. *Inquiry*, *8*(1),1-6.

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, *82*(1), 405-432. https://doi.org/10.1111/j.1467-8624.2010.01564.x

Elliott, G., Kao, S., & Grant, A. M. (2004). Mattering: Empirical validation of a social-psychological concept. *Self and Identity*, *3*(4), 339-354. https://doi.org/10.1080/13576500444000119

Emblom-Callahan, M., Burgess-Palm, N., Davis, S., Decker, A., Diritto, H., Dix, S., Parker, C., & Styles, E. (2019). Accelerating student success: The case for corequisite Instruction. *Inquiry: The Journal of the Virginia Community Colleges*, *22*(1), 129-138. https://commons.vccs.edu/inquiry/vol22/iss1/12

Fields, R. & Parsad, B. (2012). *Tests and Cut Scores Used for Student Placement in Postsecondary Education: Fall 2011.* National Assessment Governing Board.

France, M. K., & Finney, S. J. (2010). Conceptualization and utility of university mattering: A construct validity study. *Measurement and Evaluation in Counseling and Development*, *43*(1), 48-65. https://doi.org/10.1177/0748175610362369

Geisinger, K.F. (2023, October). *Admissions testing for selective admissions in higher education*. Paper presented at the annual conference of the Northeastern Educational Research Association (NERA). Trumbull, Ct.

Heckman, J. J., & Rubinstein, Y. (2001). The importance of noncognitive skills: Lessons from the GED testing program. *American Economic Review*, *91*(2), 145-149.

Hulleman, C. S., & Cordray, D. S. (2009). Moving from the lab to the field: The role of fidelity and achieved relative intervention strength. *Journal of Research on Educational Effectiveness*, *2*(1), 88-110.

Kuh, G. D., Kinzie, J. L., Buckley, J. A., Bridges, B. K., & Hayek, J. C. (2006). *What matters to student success: A review of the literature* (Vol. 8). National Postsecondary Education Cooperative. Retrieved from: https://nces.ed.gov/npec/pdf/kuh_team_report.pdf.

Levine-Brown, P., Bonham, B. S., Saxon, D. P., & Boylan, H. R. (2008). Affective assessment for developmental students, part 2. *Research in Developmental Education*, *22*(2), 1-4.

Li, K., Zelenka, R. Buonaguidi, L., Beckman, R., Casillas, A., Crouse, J., Allen, J., Hanson, M., Acton, T. & Robbins, S. (2013). Readiness, behavior, and foundational mathematics course success. *Journal of Developmental Education*, *37*(1), 14-36.

Markle, R.E. (2016). *Academic achievement, noncognitive skills, and student success in first-generation college students.* Paper presented at the annual meeting of the American Educational Research Association, Washington, DC.

Markle, R.E., Olivera-Aguilar, M., Jackson, T., Noeth, R., & Robbins, S. (2013). *Examining evidence of reliability, validity, and fairness for SuccessNavigator*. (ETS RR–13-12). Educational Testing Service. https://files.eric.ed.gov/fulltext/EJ1109981.pdf

Nora, A., & Cabrera, A. F. (1993). The construct validity of institutional commitment: A confirmatory factor analysis. *Research in Higher Education*, *34*(2), 243-262.

O'Banion, T. U. (Ed.). (2019). *Academic advising in the community college*. Rowman & Littlefield.

Pardee, C.F. (2012, November 20). *Organizational models for advising*. NACADA: the Global Community for Academic Advising. https://nacada.ksu.edu/Resources/Clearinghouse/View-Articles/Organizational-Models-for-Advising.aspx.

Pascarella, E. T., & Terenzini, P. T. (1980). Predicting freshman persistence and voluntary dropout decisions from a theoretical model. *The Journal of Higher Education, 51*(1), 60-71.

Pope, A. M., Finney, S. J., & Bare, A. K. (2019). The essential role of program theory: Fostering theory-driven practice and high-quality outcomes assessment in student affairs. *Research & Practice in Assessment*, *14*(1), 5-17.

Poropat, A.E. (2009). A meta-analysis of the five-factor model of personality and academic performance. *Psychological Bulletin, 135*(2), 322-338. https://doi.org/10.1037/a0014996

Rikoon, S., Liebtag, T., Olivera-Aguilar, M., Robbins, S., & Jackson, T. (2014). *A pilot study of holistic assessment and course placement in community college: Findings and recommendations*. ETS Research Memorandum (No. RM-14-10. Educational Testing Service. Retrieved from: https://www.ets.org/Media/Research/pdf/RM-14-10.pdf.

Robbins, S. B., Lauver, K., Le, H., Davis, D., Langley, R., & Carlstrom, A. (2004). Do psychosocial and study skill factors predict college outcomes? A meta-analysis. *Psychological Bulletin, 130*(2), 261-288. https://doi.org/10.1037/0033-2909.130.2.261

Saxon, D. P., Levine-Brown, P., & Boylan, H. R. (2008). Affective assessment for developmental students, part 1. *Research in Developmental Education*, *22*(1), 1-4.

Scott-Clayton, J. (2012). Do High-Stakes Placement Exams Predict College Success? CCRC Working Paper No. 41. *Community College Research Center, Columbia University*. Retrieved from: https://ccrc.tc.columbia.edu/publications/high-stakes-placement-exams-predict.html.

Shuffelton, A. B. (2020). Opting out or opting in? Test boycott and parental engagement in American public education. *Educational Theory*, *70*(3), 317-334. https://doi.org/10.1111/edth.12427

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, *45*(1), 89-125.

Tinto, V. (2005). *Student retention: What next?* Paper presented at the 2005 National Conference on Student Recruitment, Marketing, and Retention, Washington, D.C.

Vandal, B. (2014*). Promoting gateway course success: Scaling corequisite academic support*. (ED558791) ERIC https://eric.ed.gov/?id=ED558791.

Yeager, D.S., & Walton, G.M. (2011). Social-psychological interventions in education: They're not magic. *Review of Educational Research, 81* (2), 267-301. https://doi.org/10.3102/0034654311405999

Zinshteyn, M. (2016, March). Getting rid of placement exams. *The Atlantic*. Retrieved from https://www.theatlantic.com/education/archive/2016/03/the-problem-with-college-placement-exams/472944/

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