Literature Review and Best Practices

Fewer than half of community college students who enter school with the goal of earning a degree or other credential have attained that goal, transferred to another institution or are still enrolled six years later (AACC, 2012; Martin, Galentino & Townsend, 2014; Scrivener & Coughlan, 2011). Meaningfully addressing this problem requires an understanding of its root causes as well as a research-based understanding about what makes some interventions successful. Given its complexity, there is little consensus among researchers about either. As an explanation for the lack of consensus, Sara Goldrick-Rab (2010) identifies three categories of variables that affect student success: (1) macro-level opportunity structure (state and local funding, financial aid, etc.), (2) institutional practices (remedial education, teaching, curriculum, programming, etc.), and (3) the social, economic and academic attributes students bring to college. She argues that none of these variables, in isolation, can adequately describe or predict student success and that a successful intervention must have an impact on all three levels.

Goldrick-Rab's framing allows us to bypass a common debate in educational research about whether the primary predictor of student success is academic preparation (Astin, 1993; Adelman, 1999) or characteristics over which students have no control, like family income (White House Task Force on Middle Class Families, 2015). Without taking a stand on root causes, Goldrick-Rab's framing explains why these student attributes are inextricably linked and, in so doing, reinforces what we all know – that low-income, first-generation students are vulnerable (Horn & Nevill, 2006; Bailey, Leinbach & Jenkins, 2006; Martin et al., 2014). Even though some of the variables Goldrick-Rab isolates (e.g., financial aid) are designed to create more opportunity for low-income students, most of the variables interact with each other to create greater obstacles for this population. For example, low-income, first-generation students are more likely to live in communities with a lower tax base and less political power, so it is no surprise that they are likely to have less well-funded K-12 schools, live in states with less funding for higher education or to

have their basic needs (food, shelter, childcare, etc.) met in a way that best supports learning (Martin et al., 2014; Goldrick-Rab, 2010).

Given that this literature review relates to an institutional initiative rather than systems change, it will focus on research related to Goldrick-Rab's latter two variables – institutional practices and student characteristics, particularly as they relate to low-income, first-generation students. While all institutions of higher education need to be concerned with the challenges of these students as a subset of their populations, community colleges must prioritize their challenges given that low-income, first-generation students comprise such a significant portion of their student bodies (AACC, 2015). Although not all community college students are low-income, Thayer (2000) suggests that strategies for supporting student success should be created with this population in mind:

> Strategies that are designed for general campus populations without taking into account the special circumstances and characteristics of first-generation and low-income students will not often be successful for the latter… [However,] strategies that work for first-generation and low-income students are likely to be successful for the general student population as well. (p. 3)

Social, Economic and Academic Attributes Students Bring to College

It is not news that students who attend two-year colleges are more likely than their four-year counterparts to be from low-income families and to be the first in their families to go to college (Goldrick-Rab, 2010; Bailey et al., 2006). It is also unsurprising that low-income and first-generation students are less likely than their counterparts to participate in academic and social behavior (e.g. study groups, faculty office hours, peer engagement, extracurricular activities and using support services) that correspond to success in college (Engle & Tinto, 2008). In order to move beyond this statement of the problem, however, colleges need to better understand why this relationship exists. "Doing so," Goldrick-Rab (2010) suggests, "increases the potential for

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acting on those underlying inequalities" (p. 451). Kareem Abdul-Jabbar may have answered this question most succinctly when he said:

> I think the biggest barrier is poverty because poverty makes it impossible for people to have the money and time to become first-rate students…Usually, they are struggling to put food on the table and keep a roof over their head, so they miss out on the opportunities that are extended to them to get into the middle class. (Abdul-Alim, 2016)

Research supports Abdul-Jabbar's observation. Nearly all (79 percent) community college students work while attending school and many (41 percent) work full time (Horn & Nevill, 2006; Goldrick-Rab, 2010), significantly limiting the amount of time they are able to spend on campus and increasing the likelihood that they will take classes part-time instead of full-time (Engle & Tinto, 2008; Martin et al., 2014). But financial and time constraints are not the only challenges for students. A lack of financial resources creates additional challenges that impede a student's ability to learn. Multiple studies estimate that half of community college students are food and housing insecure (Goldrick-Rab, Broton, & Eisenberg, 2015). And nearly half also show symptoms related to mental health conditions like depression, anxiety and eating disorders (Eisenberg & Goldrick-Rab, 2016), with only a small percentage of those ever receiving any kind of mental health services. One in four female community college students have children and the majority of student parents who drop out of community college cite childcare and financial difficulties as their primary reasons for doing so (St. Rose & Hill, 2013).

Although access to information about college is available through high school guidance counselors, low-income, first-generation students are also at a disadvantage with regard to "college knowledge." Martin et al. (2014) speculate that this may be due to variation in access to these resources within schools – "The best students tend to get more resources, and these students are often the ones with the highest income and socioeconomic status." But Martin et al.

also suggest that parents of first-generation students are unable to assist their children in college admissions processes and in setting high educational aspirations.

While most researchers agree that it is not the primary cause of disparities in college success, academic preparation is also a factor. Goldrick-Rab (2010) found that low-income and minority high school students were more likely to take vocational rather than academic tracks as well as to "take fewer science and math courses; and attend schools with fewer resources, less-qualified teachers, and a lack of college prep coursework." She cites research that finds that these disparities are especially problematic given that low-income and first-generation students are more likely than their counterparts to benefit from strong high school preparation.

And, finally, low-income and first-generation students are more likely to struggle with self-doubts about whether or not they belong in college at all. Even if colleges were able to address students' financial and academic needs, these fears and self-doubts need to be addressed to see any meaningful changes in success rates, particularly in community colleges. (The College Transition Collaborative, 2016)

Institutional Practices

Many student success strategies are influenced by the involvement theory of Alexander Astin who, in 1984, posited that student involvement is key to student success. "Student involvement," he said, "refers to quantity and quality of the physical and psychological energy that students invest in the college experience" (p. 528). Astin's research was largely based in more traditional four-year institutions. Given students' challenges, community colleges are not usually in positions to do much to increase the *quantity* of involvement time for most of their students – particularly those who are low-income and first-generation – but they can try to improve the *quality* of student involvement. Indeed, Pace (1984) distinguishes between the time (how often) that a student engages in an activity and the effort (how fully or thoroughly the student engages in that activity)

and argues that the effort put forth by students is more significant in terms of academic outcomes than the quantity of time invested.

Webber et al. (2013) suggest that increasing the quality of engagement can be done most effectively during time students are already engaged -- in class and other required activities. One of their studies evaluating engagement efforts of one large unnamed university showed that useful practices that resulted in increased student success outcomes (GPA, completion and satisfaction levels) included a first year experience with shared reading and small discussion groups, a campus day of service, and faculty development. Timing, they say, is critical, as evidenced by the significance of that first year experience.

The emphasis on timing is supported by the work of Completion by Design practitioners who have developed the Loss/Momentum framework (Completion by Design, 2016). This framing provides a useful tool for identifying institutional practices and policies that may be contributing to low retention and student success rates by breaking up the student experience into four phases: (1) connection (interest to application); (2) entry (enrollment to gatekeeper courses); (3) progress (entry to area of study to 75 percent requirements completed); and (3) completion (finishing the requirements to attaining the credential). While all of the phases are significant, research shows that, for low-income, first-generation students, the second (enrollment to gatekeeper courses) is the most difficult hurdle to clear (Jenkins & Cho, 2012).

Engle and Tinto (2008) explain that low-income, first-generation students are almost four times more likely to leave higher education after the first year than students who had neither of those risk factors. Even after six years, nearly half of low-income, first-generation students had left college without earning degrees and two-thirds of them did so after their first year. Interventions designed to increase student engagement are most useful when they are implemented early in the student's college career (Dugan, 2013). This is in part because it is in the early college semesters that students can be most effectively influenced in terms of goal setting, taking remedial courses early, and community building/socialization.

First Semester Orientation/Seminar/Advising

Surveys of community college students show again and again that their institutions provide ample opportunities through numerous services and extensive course catalogs, but – according to some – "insufficient information with which to guide students through choosing among opportunities" (Goldrick-Rab, 2010, p. 450). As an example, many students are unaware that, although they may be required to take remedial courses in order to complete their chosen program of study, those courses do not count toward their degree. Needless to say, academic advising is critical to all students' success, but particularly to first-generation and low-income students (Goldrick-Rab, 2010). But because academic advising is often not *required* for students, the challenge for colleges is to figure out how to integrate that resource into already-required programs.

Engle and Tinto (2008) identify six strategies for promoting college access and success for low-income, first-generation students. One is to ease the transition to college through early intervention orientation programs, a structured first-year experience, an emphasis on academic support, an intrusive approach to advising, and a combination of incentives and requirements for students to make use of the services. They say all of these efforts should be integrated across campus seamlessly and have strong support from college leadership (Engle & Tinto, 2008). Cuseo (1997) says that participation in a freshman seminar which incorporates these elements has "dramatic effects on academically at-risk students" including improved retention rates and elevated academic performance (p.3). And Pascarella and Terenzini (1991) conclude that such a seminar is positively linked to both first year persistence and to degree completion.

Joseph Cuseo (1997) researched first-year and orientation programs at community colleges and determined that they could have a significant positive impact on student retention and completion rates. He identified the following five primary purposes of such successful programs:

1. Providing students with "education-for-life skills that contribute to lifelong learning and holistic development" (p. 3)

2. Promoting curriculum development by introducing students to the range of curricula available to them.

3. Stimulating faculty development by increasing faculty awareness of: "(a) institutional mission and support programs; (b) the needs and characteristics of today's learners; and (c) instructional strategies that promote effective teaching and learning" (p. 4)

4. "Fostering institutional development by (a) enhancing enrollment management (e.g., maintaining or increasing enrollment by reducing student attrition), and (b) promoting institutional effectiveness" (p. 4)

5. "Building campus community by (a) connecting students to each other and to key student-support agents, and (b) forging partnerships between members of different divisions of the college who are involved in the training for, and teaching of the freshman seminar (e.g., between faculty from different academic disciplines; between faculty and student affairs' professionals)" (p. 4)

Cuseo (1997) also identified the following common student-centered concepts that are generally incorporated into first-year experience/seminar programs:

- College experience – its meaning and value (e.g. difference between high school and college, "college knowledge," resources);

- Academic skill development (learning how to learn);

- Academic and career planning (e.g. connecting the college experience with future life plans, transfer information); and

- Life-management: education-for-life skills and holistic development (e.g. self-assessment of interests and abilities, goal setting, self-efficacy).

Goal Setting

Multiple studies have demonstrated the important relationship between degree and transfer goals and student success rates (Bailey et al., 2006; Martin et al., 2014; Alfonso, Bailey & Scott, 2005). Martin and colleagues (2014) offered a simple explanation:

> With well-defined visions for their futures, and the understanding of how success in college can lead to the realization of those visions, successful students follow distinct academic tracks, as opposed to just experimenting with different course offerings…Successful students align their curricular choices with their goals and interests and seek out opportunities for personal growth and development along the way. They are able to use strategic decision making regarding course selections and academic integration with the institution.

Indeed, students with more ambitious academic goals (bachelor's degree and beyond) tend to earn higher degrees; students with modest goals tend to pursue less education, persist less and earn fewer degrees; and students who had no degree goals were not likely to complete any degrees (Bailey et al., 2006).

Complicating this explanation is further research that shows a link between family income and education level and student goals. Alfonso et al. (2005) found: "after controlling for academic achievement and other demographic factors, low-income high school students had lower educational aspirations than high-income students…one of the most important mechanisms through which social class influences college outcomes is the pre-college goal formation process" (p. 19). Furthermore, Alfonso and colleagues add, family income continues to be strongly related to the probability of completion for students who enter postsecondary education through community colleges, even after controlling for high school test scores, other personal characteristics, and stated degree goals.

With this in mind, Bailey (2006) warns, it is inadvisable for colleges to take student expectations as a given. Instead, community colleges should recognize that they can have an

influence on raising or lowering student goals. Positive interventions, according to Bailey, include counseling, career planning and "good teaching that inspires students to gain confidence and causes them to raise their goals" (p. 16). They go on to make the following proposal:

> If this finding represents systematic difficulties faced by lower income and minority students, then colleges should try to do something about those difficulties. Alternatively, if it represents systematic differences in expectations, even after controlling for high school academic record, then we should ask why such students have lower expectations. For these reasons, it might be argued that even when students state that they do not seek degrees, community colleges should strive to raise their aspirations, including helping them recognize the economic benefits of additional education and their potential for success in postsecondary education…Colleges have a responsibility to work with students to help them understand the implications of their long-term goals, to make the goals more concrete, and to help their students achieve them more effectively. (pp. 20-23)

Community Building/Socialization

While much attention is focused on meeting the academic needs of, in particular, first-generation and low-income community college students, research also points to the significant role of meeting non-academic, affective needs, often through relationship and community building (Sparkman, Maulding & Roberts, 2012; Bryan & Simmons, 2009; Dugan, 2013; Astin, 1996). A growing number of researchers find that while student engagement with faculty and staff is of value to students, peer engagement may be even more significant in terms of student success outcomes (Dugan, 2013; Astin, 1996; Sparkman et al., 2012).

A study of first-generation Appalachian students emphasized the importance of socialization and relationship building for these students. Bryan and Simmons (2009) found that this group is primarily influenced by parents and other extended family members and, when forced to choose, will tend to prioritize family over education. They explain that, before college, both

parents and their first-generation students lack information about college processes, etc., and that improving such "college knowledge" for the student without the parent only drives a wedge between the student and the parent. They conclude that institutions serving first-generation Appalachian students would do well to provide programming for first-generation students and parents in order to increase communication and ultimately improve retention and graduation rates. They recommend that colleges implement early intervention programs (before the beginning of the formal first semester) because they acclimate students to the college environment and help them to meet key staff members and classmates before college starts. They also ease anxiety for students about belonging on a college campus and allow them to focus on academic challenges when classes begin.

Another study on the non-cognitive predictors of student success found that the leading emotional intelligence predictors of success were social responsibility and empathy. Sparkman et al. (2012) say that these traits can be taught through college courses and activities, specifically suggesting that service-learning projects be incorporated into first year seminars or major specific courses.

Best Practices

The following three models represent some of the most effective research-based interventions for improving student success outcomes with low-income, first-generation community college students. Collectively, they incorporate the themes outlined above with regard to a focus on the first semester, goal setting, completing remedial courses early and socialization/community building.

ASAP at City University of New York (Accelerated Study in Associate Program)

Although many interventions across the country have made short term improvements in student success, the research institution MDRC's research (Scrivener, et al., 2015) shows that the ASAP program in the CUNY system, launched in 2007, is the only community college intervention program that has been proven to improve completion rates substantially in the long term, nearly doubling graduation rates within a three year period. The intervention is comprehensive. ASAP students participate in blocked classes and learning communities for their first year, take their developmental/remedial courses early, receive intensive advising and enhanced tutoring, and are enrolled full-time. In exchange for meeting these standards, students are provided with tuition (any gap between financial aid and college tuition and fees), free use of textbooks, and a monthly Metrocard for free use of public transportation options.

MDRC identified three key takeaways from this study for other institutions: (1) requiring students to take advantage of supports like advising and tutoring and then providing substantial benefit for having done so (e.g. Metrocard) is key to the program's success; (2) monitoring student participation in the program is key to its success and this requires a somewhat sophisticated data management system; and (3) encouraging students to take developmental courses early is also key.

College Transition Collaborative

Based at Stanford University, this group of researchers and partner institutions is piloting simple interventions designed to help students overcome doubts about whether or not they belong in college. The interventions vary from institution to institution, but generally involve new students being exposed to stories from older students about how they initially felt like they did not belong in college and then came to feel differently. Many of these interventions take place online before students even attend an in-person orientation session. And research is showing that these simple,

inexpensive interventions, in combination with other more meaningful ones, can have a significant impact on student retention and completion rates (The College Transition Collaborative, 2016).

Valencia College LifeMap and Atlas

Over the past fifteen years, student retention and completion rates at Valencia College in Orlando, Florida, have dramatically improved. College leaders attribute this improvement to the school's LifeMap and Atlas systems. LifeMap is the school's developmental advising system that incorporates social and academic integration, education and career planning, and study and life skills. Because it is a touchpoint for all students, it creates an expectation for all students to establish career and educational plans early in their enrollment, and it integrates a system of resources that engage with students to constantly update and monitor those plans. Atlas is an online learning portal through which students engage with faculty, staff and peers to explore, monitor and build on their learning goals. It includes a "My LifeMap" tool and was initially developed in-house at Valencia College to support the LifeMap programming (Romano & White, 2012).