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Addressing college access and success gaps in traditionally underrepresented populations: The North Carolina early college high school model

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The push for increased democratization of higher education in the United States coupled with the rising costs of college have led many institutions to turn to dual enrollment models as a means to increase access for students. Most states now allow qualifying high school students to take college courses free, or at a reduced rate, while still enrolled in secondary education, saving students and their families tens of thousands of dollars. Increased access, however, has not necessarily led to increased student success in terms of academic achievement and completion rates, especially among students from traditionally underrepresented populations. Racial and ethnic minorities, first-generation students, and students from low socio-economic status (SES) families continue to have lower than average college completion rates. One dual enrollment model, the early college high school, focuses specifically on these groups in an effort to improve academic performance both at the high school and college levels. The North Carolina early college model, in particular, has demonstrated effectiveness in improving high school graduation rates and college readiness among traditionally underrepresented populations.

Keywords: college access, dual enrollment, underrepresented students, completion rates

In the past few decades, dramatic changes in American public policy and cultural norms about education have caused the undergraduate segment of higher education to resemble much more closely the demographics of the country as a whole (Goldrick-Rab & Cook, 2011).

However, increased college access has not necessarily led to increased student success in terms of academic achievement and completion rates. Financial barriers and lack of academic preparation in many traditionally underrepresented populations have meant lower graduation rates (Goldrick-Rab & Cook, 2011). Racial and ethnic minorities, first-generation students, and students from low socio-economic status (SES) families are

all much less likely to complete college (Goldrick-Rab & Cook, 2011). America needs to commit not only to increasing college access to these populations, but to improving their academic success as well.

My goal in this paper is to demonstrate how dual enrollment programs can benefit students, in particular, those from traditionally underrepresented populations. While these are the populations that potentially gain the most value in the economic transformative properties of higher education, they are also the least likely to cash in due to the rising costs of college (Renn & Reason, 2013). I will examine the tremendous college cost savings that dual enrollment programs offer to students. In addition, students from underrepresented populations are often more academically ill prepared for college (Goldrick-Rab & Cook, 2011). I will also discuss the role dual enrollment programs have in acclimating these students to college expectations. Finally, I will focus on one dual enrollment model, Early College High Schools, which gives attention specifically to underrepresented populations to increase both access to and success in the college environment. In particular, initial success with the North Carolina (NC) Early College High School model, which combines the benefits of early college high school design with 100% college tuition waivers, could mean it will provide a nationwide model for dual enrollment programs in the future.

Addressing the Access Gap: Economic Implications of College Attendance

The disparity between average wages for full-time workers with a bachelor's degree and those with a high school diploma, or less, continues to widen (Goldrick-Rab & Cook, 2011). More and more, students need to obtain a college degree to remain competitive in the workplace market, yet college costs remain a huge consideration for many students.

Return on Investment for a College Degree

Over a lifetime, college graduates earn significantly more than workers with high school diplomas only (Carnevale, Rose, & Cheah, 2011). Specifically, according to Abel and Deitz (2014), "workers with a bachelor's degree on average earn well over $1 million more than high school graduates during their working lives, while those with an associate's degree earn about $325,000 more" (p. 4). Despite the promise of increased earnings associated with a college degree, rising college costs can be prohibitive to low SES populations. Students and their parents may wonder if the increased salary benefits are really worth the rising costs of higher education. Even when factoring in the cost of college with the expected increase in annual salary, a graduate with an associate's degree can expect a 13-15% annual return on investment while someone with a bachelor's degree can expect a return of 14-15% (Abel & Deitz, 2014). To put that in perspective, consider that during the same time in which this study examined return on investment for college costs, average return on investment for a portfolio of stocks and bonds showed only half that rate at 7% (Abel & Deitz, 2014). Clearly, a college degree represents a solid financial investment that produces lifelong economic benefits. This prospect of increased earning power is particularly attractive to students from lower SES groups.

Rising Cost of College

Decreased State Government Contributions.

Democratic governments have a vested interest in educating their citizenry. Educated citizens are more civically engaged; in fact, increased civic engagement is one of the responsibilities of higher education (Poulos, Hamilton, Jovanovic, & Moretto, 2015). In addition, because college graduates have higher earning power over their lives (Abel & Deitz, 2014), they are better able to contribute to the local, state, and federal economies. However, in the wake of a struggling economy, state appropriations to public higher education have been decreasing nationwide for over a decade (Kirshstein & Hurlburt, 2012; McGuinness, 2011). As states experience tremendous budgetary shortfalls, resulting from high unemployment rates and slow economic growth, the subsequent reduction in support to public universities and community colleges has led to an increase in tuition rates (Geiger, 2011; Mumper, Gladieux, King, & Corrigan, 2011). Furthermore, analysts expect this trend to continue in the future, leading to potential program closures and ever-increasing reliance on adjunct faculty (Johnston, 2011). For example, the University of North Carolina Board of Governors voted in May of 2015 to shut down 46 degree programs and consolidate ten more programs across the university system (Stancil, 2015).

Impact of Increased Cost to Students.

The offloading of costs directly to students via tuition hikes serves only to exacerbate the effects felt by lower SES students. Furthermore, academic ability does not necessarily compensate for financial barriers since "students from lower-income families are less likely to attend college than equally talented peers from higher- income families" (Renn & Reason, 2013, p. 12-13). Low SES students who do attend college are five times less likely to graduate than students from more affluent backgrounds (Goldrick-Rab & Cook, 2011). Often lower SES students work while attending college or rely heavily on student loans (Goldrick-Rab & Cook, 2011). On the surface, student loans do appear to provide greater access to college for this population, but the evidence connecting loans to completion rates is mixed (Min, 2014). Loans of less than $10,000 are associated with increased graduation rates (Min, 2014). However, loans in excess of $10,000 are actually related to a decline in graduation rates, indicating that the financial burden becomes unmanageable (Min, 2014). More than ever, rising tuition rates have become a major issue for students and their parents. In fact, the percentage of freshman indicating that cost played a significant role in their choice of where to attend college is at an all-time high (Goldrick-Rab & Cook, 2011).

Cost Savings for Dual Enrolled Students

Although the United States has historically been a leader in higher education, our graduation rates are now lower than more than a dozen countries, and "national commitments to rectify this situation will need to overcome the high price of tuition and

an excessive reliance on student loans" (Geiger, 2011, p. 64). Dual enrollment programs in traditional high schools provide students the opportunity to earn college credits while still enrolled in high school. A greater percentage of community colleges than universities serve as the post-secondary education partner to high schools with dual enrollment programs (Marken, Gray, & Lewis, 2013). Because of the difference in the total cost of community colleges and universities, students and their parents can realize huge savings by participating in dual enrollment programs linked to community colleges.

The U.S. Department of Education produces an annual publication entitled *The Condition of Education* (2015). The most recent report indicates that the average annual cost for first-time, full-time college students at four-year, public institutions is $13,690; this figure balloons to $22,190 when room and board are included (Kena et al., 2015). At two-year, public institutions, the average annual cost (not including room and board) for first-time, full-time college students is $8,530 (Kena et al., 2015). Considering most students at four-year institutions do require room and board and dual enrolled students do not require room and board since they live at home, the savings a dual enrolled student could see by earning a year's worth of college credit during his or her high school career while living at home is $13,360. For students who walk away from high school with the full two-year, associate's degree, the savings would double to $27,320.

However, the savings in *total cost of attendance* only tells part of the picture. Many students qualify for various types of financial aid: grants, scholarships, and work study. The *net cost of attendance* is the out-of-pocket expense after these monies are applied. Unlike students at four-year institutions who have an average net annual price of $12,890 (Kena et al., 2015) and may, therefore, need to use student loans, the average net annual price at community colleges has been negative (Rose, 2013). In other words, the average community college student gets a refund check instead of a bill.

This savings model applies to dual enrolled students in states where students and their parents pay college costs. Some states employ a model in which the high school covers those costs. Other states, like North Carolina, offer a full tuition waver to dual enrolled students. In North Carolina, many high schools even purchase textbooks for their students to use in college courses. States with funding models such as these offer an even greater monetary benefit. Students in these states can potentially realize the full savings of the average cost for a year ($22,160) or potentially two years ($44,320). One specific dual enrollment model, the Early College High School (ECHS), makes this level of savings possible as early colleges have the "goal of ensuring that all students graduate with a high school diploma and two years of university transfer credit or an associate's degree" (Unlu, Edmunds, Fesler, & Glennie, 2015, p.1). To illustrate the level of savings possible, the principal of JP Knapp Early College in Currituck, NC recently presented a symbolic check to the local Board of Education in excess of $200,000. This figure represents the estimate that students graduating in the Class of 2015 aggregately saved by earning college credits, and even full associate's degrees, while still in high school. (S. Basnight, personal communication, June 24, 2015). Even more impressive is that JP Knapp administrators based this estimate solely on the direct savings with the community

college partner, and not the savings that will be realized as these credits are transferred to universities.

Addressing the Academic Success Gap: College Readiness Implications

Legislators and higher education administrators should examine funding models and the need to cut costs to future generations of students (Geiger, 2011). However, they must also address a decline in funding by increasing the productivity of higher education (Johnstone, 2011). Among several strategies to enhance the productivity of learning, Johnstone (2011) argues for policy that will "maximize the potential of college-level learning during the high school years" (p. 337). In addition to financial barriers, preparation barriers exist in the new college going population. As the landscape of American higher education moved towards a more inclusive environment, average levels of academic preparation saw a decline (Goldrick-Rab & Cook, 2011). Much research attributes this phenomenon to a greater influx of first-generation students, a population that is more likely to experience difficulty transitioning to college (Inkelas, Zaneeta, Kristen, & Leonard, 2007) in large part because neither parent attended college and, therefore, lacked the knowledge and guidance to help their children be successful (Goldrick-Rab & Cook, 2011). If first-generation problems exist for students already enrolled in college, then they certainly exist for students who seek to maximize college-level learning while in high school. Dual enrollment programs can help compensate for lack of household experience navigating the world of college, leading to better outcomes for underprepared students.

Beyond earning transferable college credits, dual enrolled students also experience socialization to college culture. Such socialization is critical to academic success and degree completion since it exposes "students to the rigor and expectations of college-level courses enables students to transition more adeptly to full college workloads" (Ganzert, 2014, p. 789). In essence, students with previous experience in dual enrolled programs can hit the ground running at their four-year institutions because they have already learned to navigate the world of college. Participation in dual enrollment programs carries many benefits in terms of college success.

Increased Academic Success for Dual Enrolled Students

Research associates prior participation in dual enrollment programs with increased success in the first year of college in terms of GPA and persistence. First-year, full-time college students with experience in dual enrollment programs have higher GPA's (Allen & Dadgar, 2012; Jones, 2014) and first year persistence rates than their counterparts with no dual enrollment experience (Jones, 2014). Researchers are finding this kind of success across different states. For example, in a study of one North Carolina dual enrollment program, students who took no dual enrollment courses in high school averaged a 1.63 first-year GPA while students who took six or more dual enrollment courses averaged a 2.08 first-year GPA (Ganzert, 2014). Students in the same study graduated at higher rates

if they had prior experience with dual enrollment, at a rate of 34.8%, than if they had no prior experience, a rate of 22.5% (Ganzert, 2014). In another study, students in both Florida and New York saw similar results to North Carolina; prior dual enrolled students in these states had higher first-year GPA's but also persisted longer (Karp, Calcagno, Hughes, Jeong, & Bailey, 2007).

Faster Time to Degree Completion for Dual Enrolled Students

Students with dual enrollment experience see reduced time to bachelor's degree completion when compared to students with no dual enrollment experience (Allen & Dadgar, 2012; Ganzert, 2014). Moreover, other researchers have found the same results, and even reported that students with prior dual enrolled experience have an advantage in this category over students who earn college credits through other programs such as Advanced Placement (AP) classes in high school (Klopfenstein & Lively, 2012). While offering the opportunity to earn college credits, AP classes are still high school classes, so no socialization to college culture takes place. In addition, to earn college credit, AP students still have to pass the AP exams with certain scores, and the scores required as well as the college credit awarded vary by institution. Probably, because of a combination of not having been socialized to college previously and not automatically earning college credits by taking AP classes, these students don't graduate any faster with the four-year degree than students who took no college-level courses in high school whatsoever (Klopfenstein & Lively, 2012). However, college students who were dual enrolled while in high school graduate with their bachelors' degree significantly faster than either former AP students or students who didn't participate in either program (Klopfenstein & Lively, 2012). Certainly, advantages to taking AP classes exist for some students, but completing the four-year degree faster, on average, does not seem to be one of them.

The Early College High School Model

For much of the discussion thus far, I have focused on the benefits of dual enrollment in general, but many models only seem to provide opportunities for students deemed college ready by measures such as high school GPA and college entrance test scores. However, low-income, first-generation, and/or racial and ethnic minority students are less likely to be college ready (Goldrick-Rab & Cook, 2011). Of postsecondary institutions with dual enrollment programs, only a small percentage, 15% of public two-year schools and 6% of public four-year schools, specifically target these at risk populations (Marken et al., 2013). Higher education institutions need to do more to serve these students. The Early College High School Initiative (ECHSI) established by the Bill & Melinda Gates Foundation in 2002 aims to do just that (Berger et al., 2014).

Early College Highs Schools: Addressing the Access Gap in Underrepresented Populations

While the ECHSI helped create the infrastructure of early college high schools in many states, it does not allow for long term funding of the programs. In most cases,

continued operational funding is cobbled together from a variety of sources, including student fees, grants, and in-kind contributions (Rennie Center, 2015). Most states do commit to institutional funding of both the community college partner and the high school in the form of Full Time Equivalency (FTE) and per-pupil funding for each institution, respectively (Karp, Hughes, & Cormier, 2012). However, states vary on how they address the cost to students. Often, states allow the higher education partner to decide whether or not to waive tuition for these students, or the states may elect to waive only a percentage of tuition and fees, leaving the remaining cost to be paid by students and their parents (Karp et al., 2012). This partial funding model can still create a significant barrier to access, especially in lower SES families like those served by early college high schools.

Early College Highs Schools: Addressing the Success Gap in Underrepresented Populations

Getting at-risk students ready for college is part of the basic mission of early college high schools:

> Early college high schools put a priority on serving students who are typically under- represented in college, including students who are the first in their families to attend college, students from low-income families, those who are members of minorities underrepresented in higher education and those at risk of dropping out of conventional schools (North Carolina New Schools, 2014, p.7).

The American Institutes for Research performed an impact study to determine if early college high school students saw improved access to and success in college (Berger et al., 2014). In a sample of ten schools across the nation, the researchers found that early college high school students were more likely to enroll in college after high school than the comparison group and were significantly more likely to earn a college degree than the comparison group (Berger et al., 2014). In addition, the researchers reported that minority and low-income early college high school students were much more likely to obtain a college degree than similar students in the comparison group (Berger et al., 2014).

The North Carolina Early College High School Model

Access. Like many other states, North Carolina provides institutional funding to both the higher education and secondary education partners for early college high schools. (Karp et al., 2012). In addition, unlike some other states, North Carolina waives 100% of college tuition for all dual enrollment programs, including early college high schools (Karp et al., 2012). Students must still pay for college fees and books, but these are often covered by the secondary education partner. For example, JP Knapp Early College covers these costs for their students attending College of the Albemarle (COA). As the higher education partner, administrators at COA try to be mindful of book costs to not only these students, but to the general population as well, in textbook adoption

practices. Furthermore, COA is also beginning the conversation of potentially providing textbook scholarships to dual enrolled students whose school districts do not cover this cost.

Success.

NC Early Colleges put a premium not only on high school success, but college success as well. This commitment to the success of traditionally underrepresented populations is evident in the sheer number of early college high schools in the state. With 77 such schools, as of 2013-14, NC has more early college high schools than any other state (North Carolina New Schools, 2014). But are these schools achieving their goal of increasing academic success for these populations?

The SERVE Center (2015) at the University of North Carolina at Greensboro conducted independent research to address this question. To control for motivational level and level of academic preparation, researchers used a control group and experimental group, which were both comprised of members who had already been deemed eligible applicants to attend an early college high school. Of the eligible group, some students were randomly assigned to then attend early college high school while others were randomly assigned not to attend. The experimental group demonstrated several benefits of attending early college high schools.

First, participants graduated from high school at a greater rate, and more early college students took and succeeded in college preparatory classes (SERVE Center, 2015). In addition, more early college students then went on to enroll in college and took more college credits with them. Early college students averaged twenty-two college credits earned in high school compared to an average of three college credits received by students in the control group. (SERVE Center, 2015). Increased performance in high school, accumulation of college credits, and increased likelihood of enrolling in college are all positive outcomes for these traditionally underrepresented populations. However, the ultimate goal is increased academic success and graduation rates at the bachelor's degree level. While other studies I referenced in this article make those claims, research continues at the SERVE Center as researchers follow these two cohort groups on into their four-year college careers to determine lasting effects of participation in dual enrollment programs. What we do know is that 55% of early college graduates in North Carolina finish high school with an associate degree or two years of transferable college credit (North Carolina New Schools, 2014). The outlook for similar success at four-year schools is promising.

The success of NC early colleges results from a partnership between the public school system and North Carolina New Schools, a large public school innovation agency which provides professional learning services for educators and administrators (North Carolina New Schools, 2014). Six core design principles undergird the support New Schools provides to educators: a common set of standards that ensure every student graduates ready for college; rigorous instruction that promotes powerful teaching and learning; a high degree of personalization for students; ongoing professional development and staff responsibility for student success; purposeful design in which best practices are used in terms of time, space, and resources; and empowered, shared leadership rooted in

a collaborative work environment (North Carolina New Schools, 2016). In addition, New Schools places an emphasis on active engagement in the classroom. "Students must do four things – read, write, think, and talk – every class, every day. No exceptions." (S. Basnight, personal communication, June 24, 2015). Other states now hope to emulate the success of New Schools' partnerships. Under its umbrella "national brand", Breakthrough Learning, New Schools' innovative approach will soon be utilized in Illinois, Indiana, Mississippi and South Carolina as a part of the Rural Innovative Schools initiative (North Carolina New Schools, 2015).

Conclusion

In the past few decades, more students from traditionally underrepresented populations have begun to attend college (Goldrick-Rab & Cook, 2011). However, these students are often financially and academically ill prepared for the cost and rigors of college and, therefore, graduate at lower rates (Goldrick-Rab & Cook, 2011). Attention must be given to this population not only in terms of increased access, but improved academic success in terms of college GPA and graduation rates as well.

Financial aid is not always enough to cover the costs of a college education. As states contribute less money to public, higher education institutions, increased college costs are then redirected to the students in the form of higher tuition (Geiger, 2011; Mumper et al., 2011). Dual enrollment programs offer some relief to students and their parents in that these programs are often run through community colleges, which have much lower tuition than universities.

However, financial constraints are not the only barriers to college success. Because the influx of traditionally underrepresented populations are often first-generation students, they are more likely to struggle academically due a lack of parental knowledge and guidance (Goldrick- Rab & Cook, 2011; Inkelas, Zaneeta, Kristen, & Leonard, 2007). These students require interventions to improve their chances at success. Dual enrollment programs can help students transition better to college as exposure in high school to the expectations of college-level work given them an idea of what to expect (Ganzert, 2014). Yet, many dual enrollment programs only cater to students who have already been deemed college ready by virtue of high school GPA and/or college entrance tests.

The Early College High School, and particularly the North Carolina model, offers an opportunity to those underrepresented populations who may not necessarily be college ready. Because dual enrolled students in North Carolina pay no tuition, this model saves students and their parents tens of thousands of dollars. In addition, North Carolina early college high schools focus on an atmosphere to create college readiness (SERVE Center, 2015). Participants in this dual enrollment program not only graduate high school at higher rates, they also accumulate more college credits and enroll in college at higher rates (SERVE Center, 2015).

As longitudinal studies on this population continue, researchers hope to see this increased college readiness correlate with increased college graduation rates. Given that North Carolina is already a leader in the nation in terms of number of early college high schools (North Carolina New Schools, 2014), the noted increase in college readiness and potential increase in college graduation rates could very well mean other states will adopt or, at least, adapt the North Carolina model to their own secondary educational systems. The prospect of improving college graduation rates in underrepresented populations nationwide certainly warrants keeping a close eye on the North Carolina data as well as that of new states which now hope to duplicate its success.

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