College Readiness: Addressing the Gaps for Underserved Students

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Abstract

Only 19 out of 100 high school graduates are ready for college (Royster et al., 2015). For some students (e.g., first-generation, immigrants, urban college students), social and economic constraints have created barriers to postsecondary education. In this integrative literature review, we answer questions related to college readiness programs and how gaps can be addressed. Recommendations are presented for college and university professionals to address these gaps for underserved students (e.g., policy revisions, support programs).

Keywords: advanced placement, African American, college access, college-readiness gaps, college-readiness strategies, dual credit, early college, English Language Learners, first generation, Hispanic, TRIO, underserved

College Readiness: Addressing the Gaps for Underserved Students

In 2018, 69% of high school students in the United States earned their diploma, yet only 39% went on to complete a bachelor's degree or higher (Hussar et al., 2020). The annual earnings differ by more than $20,000 for high school completers as compared to those with a bachelor's degree (Hussar et al., 2020). This gap has been of interest to researchers studying college preparedness, especially for students who make up underserved groups (Moore et al., 2010). For the past 50 years, college readiness has been measured using admissions examination scores (e.g., SAT, ACT) and high school GPAs (Combs et al., 2010; Geiser 2009). Seeking a working definition of college readiness, Conley (2012) defined students ready for college as those who "can qualify for and succeed in entry-level, credit bearing college courses . . . without the need for remedial or developmental coursework" (p. 1). Unfortunately, some U.S. students do not meet this definition (Moore et al., 2010), particularly those who have been labeled as *underrepresented* or *underserved* (e.g., first-generation, Hispanic, African American, English Language Learners).

To address gaps in college preparation, high school educators have embraced programs such as the Advanced Placement (AP) program, dual credit courses in the form of concurrent enrollment with community colleges, and early college high schools (ECHS). Even so, students from various ethnic/racial groups and lower SES statuses are often underserved in these programs (Borg et al., 2011; Jeffries & Silvernail, 2017). After extensive searches, no literature reviews were located to answer questions about preparing underserved students for college. As researchers have given this topic more attention in the past decade, more information is needed for educators who are supporting these students and for educational leaders who are making decisions about these programs. Thus, the purpose of this literature review was to explore the

research literature related to underserved students, their readiness for college, and the programs

being used in U.S. schools. Specifically, our review focused on these guiding research questions:

1.   What are the most studied programs used to prepare high school students for

college?

2.   How do these college-ready programs assist underserved students?

3.   What strategies can educators implement to address underserved students and

college readiness?

Method of Search

We conducted an integrative qualitative literature review (Cooper, 1988) to answer the

research questions for this study. Although there are other types of literature reviews (e.g.,

systematic, meta-analysis), an integrative review is "the most comprehensive methodological

approach of reviews" (Souza et al., 2010, p. 103) and can assist practitioners to apply findings

and researchers to follow new lines of inquiry. The goal of our review was to integrate

qualitative and quantitative research studies from the past 20 years and provide best practices for

higher education staff and faculty to support retention of underserved students.

Using Cooper's (1984) framework as a guide, we followed five steps in the review of

literature (i.e., problem forming, data collection, data evaluation, analysis, presentation). Before

the problem formulation stage, the research team collected and read articles related to issues and

trends in college readiness. With this broad view and our experiences as higher education

administrators, we focused the problem on underserved students and their college readiness. For

this review, we defined *underserved* students as first-generation college students, Hispanic,

African American, or English language learners. In the second phase of Cooper's framework,

data collection, we conducted a search for literature as described in the next paragraph. In the

third phase, data evaluation, we used descriptive codes to describe the contents of the studies.

During the analysis and interpretation stage (Step 4), we examined the codes and organized them

into themes. The interpretation is presented in the next sections of the paper and organized by

program name (e.g., Advanced Placement). For the public presentation phase or Step 5, we

shared the data at a regional research conference attended by other higher education

professionals.

Data Collection

Regarding coverage, we selected to do what Cooper (1988) calls an "exhaustive review

with selective citation" (p. 109) to answer the research questions. During the data collection

stage (Step 2), we accessed the following library databases: Education Source, OmniFILE

Fulltext Mega, Education Fulltext, ERIC, Academic Search Complete, Professional

Development Collection, Teacher Reference Center, MasterFILE Complete, APA PsycInfo,

Educational Administration Abstracts, and Psychology and Behavioral Sciences Collection. For

this study, we excluded literature that was written before 2000 or was not peer-reviewed. To

delineate the search terms, the research team located names of college readiness programs. After

some discussion, we selected the key terms shown in Table 1.

Table 1

Search Terms used in Integrative Literature Review

Key Term	Hits or Results
advanced placement in TI	1,100
college readiness in TI	1,000
early college in TI	500
dual enrollment in TI	460
advanced course in TI	200
dual credit in TI	190
early college high school in TI	34
early college and underrepresented in TI	16

Upward Bound in TI	15
TRIO and program in TI	8

Note: Limited by last 20 years and peer-reviewed. TI = Title

As shown in Table 1, the most frequently mentioned college preparation programs in the research literature were AP, dual credit, and ECHS. After we selected articles, we recorded data from each article using a standard note-taking guide. Then our team assigned descriptive codes to the notes. Next, we grouped these codes by themes. The themes for this integrative literature review were *Advanced Placement, Dual Credit, Early College High School, TRIO,* and *Barriers to Access* and follow in the next sections.

To answer our first research question, the AP program appears to contain the most hits in the specified search (see Table 1) and be the most studied college preparation program in the literature we reviewed. Following AP in frequency was early college and dual credit. TRIO and Upward Bound contained few hits in our results. Although there are likely other preparation programs, we did not identify them in this search. Answers for the second research question will be addressed in the next sections: How do these college-ready programs assist underserved students?

Advanced Placement (AP) and Underserved Students

An option to help underserved populations (e.g., first-generation college students, Hispanic, African American, or English language learners) to better prepare for college is to encourage their enrollment in advanced courses. As part of the academic preparation for college, some high school students can take AP classes to obtain college credits. These classes are designed with a more rigorous academic structure. If students perform well on standardized AP exams (score of 3 or higher), they can sometimes receive college-level credit. In fact, the popularity of this test is such that more than 4.5 million AP exams were taken in 2020. Although

AP is a popular program, Black and Hispanic students appear to be underserved (College Board, 2021). For example, in 2020, 49% of the test takers identified themselves as White, 21% Hispanic/Latino, 16% Asian, and 6% Black (College Board, 2021).

Another problem noted in the literature is that most of the research applauding the success of the AP program has been conducted by researchers associated with the College Board, the organization that manages the exam. Independent researchers have questioned results and conducted studies to verify the accuracy of the College Board's claims (e.g., Sadler & Tai, 2007; Warne, 2017). Warne (2017) questioned if the use of AP test scores of 3 or higher can be considered the equivalent of a passing grade in first year college-level courses. Warne claimed that several previously conducted studies were inconclusive due to variables that were not considered. In a previous study, Sadler and Tai (2007) investigated claims that AP courses in high school improve academic performance in college. The researchers studied the correlation between AP exam grades in high school and entry-level science course grades in college to investigate the hypothesis that higher AP exam scores would correlate to higher science course grades. The results were mixed. Sadler and Tai discovered students who scored at the lower levels (scores of 1 to 2) on AP exams did not perform any better in their entry-level college science courses compared to non-AP students. Students who scored midrange (scores of 3 to 4) on AP exams earned higher than typical grades in their entry-level science courses in college. Students who scored at the high level (a score of 5) on the AP exam scored below the expected level in their entry-level science course. Despite the popularity of AP courses and examinations, there is an enrollment disparity when it comes to first-generation students, students of color, immigrants, and other underserved students.

A reason why AP courses and exams have been popular could be related to economics. For instance, students who can use the AP score as college credit save on tuition such that taking AP courses can be an attractive option for both students and their parents (Warne, 2017). Social and economic constraints have created challenges to postsecondary education for underserved students due to lack of access to college-readiness programs. It is a mistake to assume that a high school diploma is a suitable indicator of a student's preparedness for college-level work (Conley, 2007). Several authors have conducted research to verify how the AP program is assisting underserved students and helping them to be better prepared for college (Borg et al., 2011; Jeffries & Silvernail, 2017; Kanno & Kangas, 2014; Means et al., 2019; Solorzano & Ornelas, 2004).

As the United States continues to grow more diverse, the importance of U.S. universities to become more culturally aware is imperative for educators. The vast diversity of cultural backgrounds creates difficulties for teachers to understand and meet student needs. Means et al. (2019) examined the structural and systemic beliefs of first-generation students about their college pathways. Data were used from a high school AP course created to serve the needs of low-income/working-class students of color. All students enrolled were identified as first-generation, underserved youth from low socio-economic backgrounds (Means et al., 2019). The authors identified two themes regarding their perceived barriers in pursuit of a postsecondary education: (a) the lack of financial funding needed to pay for basic needs and college tuition; and (b) the lack of AP courses needed to achieve college level readiness. Solorzano and Ornelas (2004) investigated the educational inequalities in AP courses availability and college admissions barriers for Hispanic and African American students. The authors found that although most students enrolled in the selected Los Angeles Unified School District identified as

Hispanic or African American (83%), only 14% were enrolled in AP courses; 8% of students

identified as Asian in the district with 53% of them enrolled in AP courses; and 10% identified

as White in the district with 32% of them enrolled in AP courses.

To understand the underrepresentation in AP courses, Jeffries and Silvernail (2017)

investigated factors that influenced Black students to opt-out of enrolling in upper-level classes

such as honors or AP courses. The authors discovered that perceptions of course rigor and

feelings of not being prepared were among the highest factors for their decision. Despite the

students' high placement scores and teacher recommendations, the feelings of "not good

enough" still ranked high in the analysis. Most students also stated that peer pressure and

parental involvement played a role in their decisions to not enroll in upper-level classes. The

social capital pertaining to lack of diversity in the classroom setting was a contributing factor in

which students felt they would be out of place and not accepted. Jeffries and Silvernail (2017)

concluded a lack of diversity in AP course enrollment and cultural patterns of influence deprive

Black students of obtaining academic advantages even if their high testing scores deemed them

eligible for AP. Borg et al. (2011) conducted a multiple case study with Hispanic students who

qualified for AP courses and did not enroll. The authors wanted to explore students' perceptions

about AP courses and identify the individuals involved in helping students select future courses.

The authors discovered that students' relationships with peers and family were an imperative

factor for students determining if they were going to take AP courses, as lack of parental

knowledge and teacher support were reported as reasons for not enrolling in AP courses.

In a study about English Language Learners (ELLs), Kanno and Kangas (2014)

investigated the reasons for the limited enrollment of ELL students in advanced, honors, and AP

courses (high-track courses) in high school. The authors conducted interviews with teachers,

counselors, administrators, and ELLs to investigate the students' progress from sheltered classes (only for ELLs) to low-track courses (remedial and regular courses), but rarely to high-track courses (Kanno & Kangas, 2014). A consequence of this course sequence is that most ELL students did not have time to advance to honors or AP courses before finishing their high school studies. The authors noted that administrators and teachers tended to discourage ELLs from taking advanced courses to "protect" them from the challenge, a recommendation which parents and students were likely to follow. The fact that ELL students did not receive the advanced preparatory courses needed for college-readiness added to their limited proficiency in English and posed challenges for ELLs to score high on standardized college entrance exams.

Dual Credit and Underserved Students

Compared to AP, dual credit is the most widely utilized college readiness program (Tobolowsky & Allen, 2016). Most U.S. states have dual credit programs and policies (Bragg et al., 2006; Zimmerman, 2012). Dual credit began in the 1990s offering high school students the opportunity to earn college credits. Dual credit courses can be taken at the high school or local community college (U.S. Department of Education, Institute of Education Sciences, 2017). Proponents of dual credit argue the program improves college readiness, exposes students to college rigor, provides the ability to earn college credit, and reduces tuition cost (Tobolowsky & Allen, 2016; Zimmerman, 2012). Dual credit students were considered to be more college ready than their non-dual credit peers in the areas of cognition, subject-matter content, and study strategies (An & Taylor, 2015). The dual credit program was considered more effective for improving college readiness than simply taking more advanced courses in high school alone (Giani et al., 2014). As such, dual credit students are twice as likely to enroll in college (Struhl & Vargas, 2012; Taylor, 2015) and less likely to have taken remedial courses than students who did

not take dual credit (An, 2013). Dual credit students also have higher GPAs in their first year of college compared to other students. The more dual credit courses students took in high school, the higher their GPAs and graduation rates were in college (Ganzert, 2014). Simply taking just one dual credit course positively impacts GPA in college (Allen & Dadgar, 2012).

Related, high school students who take dual credit had higher persistence rates (Allen & Dadgar, 2012) and were up to 50% more likely to graduate from college within six years than those who did not take dual credit (Struhl & Vargas, 2012). No matter the race or socioeconomic status, dual credit students were more likely to attend college and persist (Struhl & Vargas 2012; Taylor, 2015). When compared to AP, dual credit students completed college at similar rates (Bowers & Foley 2018). Researchers reported students taking dual credit in any subject were significant for college completion, with math being the most impactful (Giani et al., 2014). Nonetheless, even students taking dual credit in career and technical education courses earned more credits and had higher GPAs than students who had not taken these courses (Karp et al., 2007).

Although the benefits of dual credit have been numerous, dual credit has been criticized for not being as authentic as coursework taken at a college campus (Zimmerman, 2012). Some argue that high school students do not have the soft skills and/or maturity level required for the rigor of college work (Tobolowsky & Allen, 2016; Zimmerman, 2012). Furthermore, Allen and Dadgar (2012) noted the positive effects of dual credit may be attributable to other factors like aptitude and drive. Students who did well on standardized tests or completed higher-level English and math classes were more likely to take dual credit courses (Giani et al., 2014).

Arguably, dual credit may be unintentionally excluding some student populations. Dual credit programs can be limited based on social and economic resources (Bragg et al., 2006).

African American, nonnative English speakers, and students receiving special education were less likely to take dual credit (Giani et al., 2014). Similar to AP programs, White students were often overrepresented among dual credit students, whereas African American students and Latinx students were underrepresented (Tobolowsky & Allen, 2016; Young et al., 2013). Moreover, students with low-socioeconomic status were less likely to participate in dual credit enrollment compared to their peers from a higher socioeconomic status (An, 2013). Lack of awareness, finances, parental knowledge, preparation, and motivation were identified as barriers to dual credit enrollment, particularly for underserved student populations (An, 2013; Young et al., 2013).

Early College High School (ECHS) and Underserved Students

In addition to AP or dual credit, another program that has an economic incentive component is the ECHS initiative, which offers the possibility of a student earning an associate degree while still in high school (Sáenz & Combs, 2015; Song & Zeiser, 2019). The Melinda and Bill Gates Foundation kickstarted the ECHS initiative in 2002, with the goal to help students of color, first-generation students, and low SES students graduate from high school and receive 2 years of college credit or an associate degree, all within 4 years and tuition-free (Hoffman & Webb, 2009; Song & Zeiser, 2019; Webb, 2014). Since its conception, over 280 ECHSs have opened in the country, enrolling more than 80,000 students (Song & Zeiser, 2019). According to Webb (2014), although the national average of students who graduate high school is 78%, data showed that 90% of ECHS students successfully completed their high school education, and 30% of them received an associate degree or years toward their college degrees.

The success of the program can be attributed to its academic rigor, as well as the financial advantages of attending an ECHS: "early colleges were established to help double the number of

low-income young people who earn a postsecondary credential" (Hoffman & Webb, 2009, para.

7). Despite skeptics' belief that the program only takes gifted underserved students, the ECHS

initiative is committed to preparing students who are not college-ready to pursue the program. As

an example, Hoffman and Webb (2009) reported that one school in Georgia accepted only sixth-

grade students who fell below the 50th percentile on their state tests. However, more information

is still needed as to the success of these underserved students.

Research shows that ECHSs are attempting to close the college-readiness gap for

underserved high school student populations, as 74% of students enrolled are students of color

and 56% of students come from a low SES background (Hoffman et al., 2009). Furthermore,

these schools also serve first-generation college students. In one study, Sáenz and Combs (2015)

examined the history, barriers, and resources of the Hispanic, first-generation students attending

an inner-city ECHS. The authors sought to uncover students' perception of interpersonal

relationships and student success. Sáenz and Combs (2015) incorporated a three-phase approach

to elicit students' responses on their experiences and perceptions to academic challenges and

student achievement related to the influences of social networks with staff, peers, and family.

The authors noted social capital was a key component to these students' success. The option to

earn an associate degree prior to graduation and attendance in a safe and supportive environment

served as motivators for many of the student participants. The participants also identified the

development of both intra and interpersonal skills as aids to their successful college transition.

Family involvement, peer groups, and teacher guidance were other factors deemed as important

for degree completion. The researchers concluded that attending ECHS provided marginalized

student populations a predisposition for future college enrollment, improved academic readiness,

and the ability to earn college credentials (Sáenz & Combs, 2015).

Edmunds et al. (2017) studied college readiness and resources among ECHS students in North Carolina between 2005 and 2009. The findings showed early college students took and successfully completed more college prerequisites than students who attended traditional high schools. Graduation rates showed a 3.6% increase of ECHS to traditional high schools, but the increase was not statistically significant. Faculty members reported that early college students appeared to be more prepared for college and had a greater motivation for learning than traditional college students. However, faculty members also reported less maturity and lower writing abilities among ECHS students.

In addition to the financial advantage and the focus on underserved students, Hoffman et al. (2009) noted that the pursuit of college-level work while still in high school allows students to acquire skills needed to succeed in higher education coursework toward degree completion. Programs such as ECHS create a link between K-12 and postsecondary institutions, which can use standardized curricula to promote a smooth transition for students moving from high school to college. Programs such as ECHSs are helping to close the gap in college readiness for underserved students, giving them a chance to earn an associate and/or a bachelor's degree (Hoffman et al., 2009). Webb (2014) noted that "a postsecondary credential is increasingly a prerequisite for economic well-being" (p. 1) and that a well-educated citizen can contribute to the economy of the country, while also supporting their own families.

TRIO and Underserved Students

Compared to AP and ECHS programs, fewer studies were located for TRIO in this review. TRIO was specifically created to help increase college readiness and completion for underserved students. It consists of eight different federal programs that provide outreach services. Some of the programs are available through college campuses and others are available

through organizations that serve local high schools. Students in the program must be first

generation college students or from low socioeconomic statuses. Services include academics,

tutoring, mental health services, job skills, and financial literacy. Studies published by Myers et

al. (2004) and Seftor et al. (2009) found the impact of the program to be inconclusive. Both

studies showed participation in TRIO related programs was not statistically significant for

postsecondary enrollment and persistence. However, a study conducted by Myers et al. (2004)

showed students with the highest academic risk were more likely to enroll in college after

participating in the program and Seftor et al. (2009) noted that the program increased the

likelihood of completion for students in certificate programs. Cahalan and Goodwin (2014) later

challenged the inconclusive findings of both Myers et al. (2004) and Seftor et al. (2009) citing

research design flaws. More research is needed to determine the impact of TRIO on college

readiness.

Barriers to Access

In this integrative literature review, several themes have emerged to understand reasons

why underserved students may not have access to college-ready programs. Poe et al. (2018)

explained that due to social and economic constrains, underserved students do not always have

access or do not participate in college-ready programs at the same rates as other students.

Therefore, underserved students may be prevented from enrolling in college-ready programs

before their high school graduation (Reid & Moore, 2008). Although, some researchers have

suggested that traditional college-readiness programs (e.g., AP, Dual Credit, ECHS, and TRIO)

are effective, some underserved students are not fully prepared and are lacking the ability to fully

participate in these programs.

College readiness programs may vary from state to state, and it is usually difficult for teachers to meet student needs, especially the needs of underserved students (Means et al., 2019). Reid and Moore (2008) recommended that both secondary and postsecondary school systems work together to create and support educational curricula that include college readiness programs and skills to benefit all students to close the educational gaps. In like manner to Reid and Moore, other researchers concluded that participation in college-ready programs can positively influence underserved students who are high academic achievers during their secondary education (Borg et al., 2011; Jeffries & Silvernail, 2017; Kanno & Kangas, 2014; Means et al., 2019; Solorzano & Ornelas, 2004). However, social and economic constrains and bias are often factors that work against underserved groups to maintain the unequal distribution of opportunity (Poe et al., 2018).

According to McNair et al. (2016), in higher education, college administrators speak about their desire to increase student enrollment, serve their community, and provide the ultimate student experience. Yet, higher education administrators sometimes fail to objectively identify the needs of underserved students, often placing the burden of college readiness and preparation on the student, when it should be a shared responsibility (McNair et al., 2016). The researchers asserted that social class bias and ethnic bias negatively impact diversity in higher education. As student populations become more diverse, negative attitudes regarding under-preparedness and unpreparedness of underserved students grow among higher education faculty and administration. To combat these biases, higher education leaders should understand disparities in education and identify conditions that deter underserved students from becoming college ready (McNair et al., 2016).

In this era, rapid development and expansion of information and communication technologies are in the forefront of education as leverage for expanding learning opportunities

and increasing the quality of learning (Kozma, 2003). Research shows that both K-12 and higher

education can benefit from information and communication technology as a diverse population

of students continues to increase, so that learners can develop important competencies and skills

needed in a knowledge-information society (Vrasidas et al., 2009).

Recommendations

Based on this integrative literature review of college preparatory programs, researchers

concluded that access to college-ready programs help underserved students prepare for college

(Borg et al., 2011; Jeffries & Silvernail, 2017; Kanno & Kangas, 2014; Means et al., 2019;

Solorzano & Ornelas, 2004). This synthesis supports the need to reexamine current college-ready

programs and integrate new initiatives that provide academic support strategies to underserved

students and help close the educational gap among peers. To address the third research question

in this review, we offer several strategies in which colleges and universities could better support

underserved students. The following recommendations are about building an ecosystem for

underserved students. In these recommendations, we use Bronfenbrenner's (1979) model of

merging micro-, meso-, and macro- solutions with an individual's environment, which might

influence the acquisition of college-going skills and behaviors.

Brofenbrenner's (1979) ecological environment model defines the microsystem as the

connections and interactions one builds within a specific environment, at various stages, among

faculty, staff, and peers. The mesosystem is described as two or more microsystem structures in

which an individual is fluidly moving between settings and developing interconnections among

diverse groups such as classmates, work colleagues, family, peers, faculty, and staff. Last, the

macrosystem can be defined as the organization's culture, which acts as the foundational

blueprint to provide strategies to colleges and universities that provide access to programs that work holistically to increase college-going skills for underserved students (Brofenbrenner, 1979).

Provide Access to College Preparation (Or Readiness) Programs. K-12 and community college partners interested in implementing strategies to address college-ready gaps among underserved students can explore options of offering student success courses as an open-access dual credit option. Traditionally, the student success course is offered in the first semester at most community colleges. The purpose of this course is to provide first-time in college students with a variety of information about academic and career planning, along with general skills needed for college success. Offering this course to all high school students starting in the 10th grade could open up college preparation access to all student groups and reduce college preparation access gaps by providing students an opportunity to experience a college-credit course.

In addition, this course can shift the current curriculum using Conley's (2007) transition skills by highlighting specific education plans focused on college awareness and expectations, program and career exploration, financial aid, and student support services. According to Allen and Dadgar (2012), merely taking just one dual credit course impacts college GPA. Additionally, several early college high schools across the nation utilize the concept of "scaling up" through access to summer bridge programs. This term is a technique used to introduce underserved students to postsecondary education curriculum and college practices during high school (Vargas & Miller, 2011). Using the "scaling-up" design post-high school, faculty and administrators can implement a summer bridge program for underserved college-bound students during the transitional period of summer before fall starts. This summer bridge program can provide

tutoring sessions covering math, English, writing, and study skills to help build their context knowledge skills and help them feel more prepared for college.

Revise College Admissions Policies. By expanding admissions policies**,** colleges and universities can explore a multi-pronged approach in which they use non-academic variables to measure college readiness beyond standardized tests, student GPAs, and or grades. In addition, by expanding admissions policies, colleges and universities increase access options for underserved students. For example, utilizing real-life and current experiences such as volunteer opportunities, prior learning assessment, work experience, or leadership and club participation can be used as quantifiable measures in place of traditional admissions standards. In some cases, revision of polices might be considered in alignment with curricula reform.

Implement Curricula Reform. Using Conley's (2007) Key Cognitive Strategies framework, colleges and universities can develop a student success corequisite course that integrates concepts and purposeful tasks addressing college expectations of grit, resilience, self-regulation, research, adaptability, and learning strategies on how not to be stigmatized by failure. This course could be connected to the students' first-year English or math courses and taught by an academic advisor, career counselor, or other staff professional. Providing direct access to a college representative during students' first semester might improve college persistence rates for underserved students. In addition, this option could create an ecosystem within the college or university that provides ongoing support for underserved students by improving their understanding of college expectations.

Incorporate Supplemental Programs and Peer to Peer Mentoring. The second component of Conley's (2007) college-ready model that colleges and universities can utilize to address underserved students is contextual skills and contextual awareness. Conley (2007)

describes contextual skills as a comprehensive understanding of how a college or university

system operates and defines contextual awareness or *college knowledge* as the ability to navigate

and maneuver through college spaces with confidence. Colleges and universities can bolster

these experiences for underserved students by hosting events to teach students how to complete a

college application, enroll in courses, complete a FASFA and apply for financial aid, understand

the GPA, communicate with faculty, and seek out college and university services.

Second, using an early alert system, educators and academic advisors can identify

students who might be struggling to complete their introductory core classes. Based on this

information, educators can immediately introduce an option to attend a supplemental instruction

course. This course, taught by a peer who successfully navigated the class, can enhance students'

social and academic confidence. Building on vital subject-based concepts, this course could

benefit ELL, international, or urban college students who need to build social and supportive

connections with their peers while enriching their course content understanding for academic

success.

Bolster Family Capital, Community Mentors, Teacher Guidance, or Peer Groups.

Colleges or universities can also consider creating a college-going campus by facilitating

ongoing programs and initiatives to build social capital. Several studies mentioned that lack of

family involvement, peer groups, or teacher guidance were among the barriers experienced by

underserved students being prepared for college-level work. Using various technology methods

such as live or recorded webinars, various social media outlets, or peer tutoring sessions,

colleges and universities can actively create an ongoing communication hub, informing students

of college-linking programs pertaining to the college process. Gaining access to programs such

as TRIO and various outreach programs can allow students various opportunities to gain social

capital by developing a network, and by creating a college-going culture in which the structures built embolden students to utilize their resources to combat various challenges experienced during their academic journey. Last, educators should assess the programs established to serve underserved students on campus by conducting a climate survey. Using the results, educators should adapt current programs and initiatives based on the data and invite students who identify as underserved to be part of the process of invoking change.

Conclusion

Using these suggestions, colleges, universities, state and federal policymakers, and educators can implement and revise current college-ready programs at the K-12 and postsecondary level to make them more equitable and accessible for underserved students. In addition, Conley (2007) recommended a more comprehensive approach to college readiness that redefined what it means to become college-ready and incorporates inclusive measures that emphasize essential cognitive skills, academic knowledge, habits, and behaviors, as well as awareness and action. One limitation of this current review is that other college-ready programs may exist and may not have shown up using our search criteria.

For several underserved students, their initial exposure to college-ready programs will be the first day they arrive on a college or university campus. Therefore, high school and college administrators must work together to create and implement measurable initiatives to identify underserved students attending their programs and provide a communication path that discusses accessible opportunities for students to become college ready.

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