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The COVID-19 Pandemic and its Implications for Nevada's Future Workforce

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Abstract

Problem. Nevada's capacity for economic recovery in the pandemic's wake has been jeopardized by COVID-related educational impacts. The diversity of Nevada's student population and inequitable rates of college participation and degree attainment infer imminent skilled labor shortages. **Purpose.** Based on the assumptions of prior research, the authors suggest a multi-tiered strategy of policy triage to address workforce pipeline erosion at its weakest juncture, when students transition from high school to college. **Recommendations.** The paper outlines short-term and long-term policy options that target students and institutions. During school closures, nudge interventions are a low-cost option that sends text messages to remind students about college-related deadlines. Once campuses reopen, students will need increased access to in-person advising. To ensure advising is consistent across institutions, partnerships between K-12 and higher education can be an initial step. Yet, to safeguard the state's long-term workforce stability, state-sanctioned changes to educational structures are warranted.

Introduction

This paper responds to immediate questions about the potential impact of the coronavirus pandemic on Nevada's future workforce. Approximately 62% of Nevada's job openings require education beyond a high school diploma (Heise, 2018). Yet, the state has the lowest rate of postsecondary education attainment in the nation at 41% (Lumina Foundation, 2020). Consider, too, that the diversity of Nevada's student population raises attrition concerns in the wake of the pandemic (Clemens & Veuger, 2020). The following facts and statistics about Nevada's educational outcomes suggest the urgency of impending skilled labor shortages:

- While 43% of traditional-aged students nationwide enroll in some type of postsecondary institution, only 31% of Nevada residents are enrolled—the 2nd lowest rate in the nation.
- Less than a quarter of Nevada's adult population has attained a bachelor's degree or higher compared to 32% of U.S. adults nationwide.
- Including certificates and certifications, Nevada has the lowest postsecondary educational attainment rate in the nation at 41%.
- Nevada has a minority-majority public higher education system with approximately 100,000 students. Two of four community colleges are Hispanic Serving Institutions, and the University of Nevada, Las Vegas is ranked as the nation's most diverse university.

- Adopted in 2016, the Learn and Earn Advanced-Career Pathways (LEAP) framework was established to strengthen the state's workforce pipeline, but COVID-related budget cuts and online learning setbacks will preclude progress.
- Implemented in 2017, Nevada Promise was enacted to ensure college affordability, but mixed results suggest the policy inadequately addresses college socialization inequalities that stratify by parent educational attainment and race/ethnicity.

The paper identifies opportunities to triage pipeline erosion at its weakest juncture, when students transition from high school to college. In what follows, we first discuss national and state demographic trends in the workforce from an equity perspective. We then identify three key assumptions that center on how the COVID-19 pandemic may serve to worsen future workforce trends, particularly for Nevada's diverse population. We conclude with policy recommendations.

National and State Demographic Trends in the Workforce

At the same time skilled labor demands are increasing, the nation's population is experiencing sociodemographic shifts (Kezar et al., 2014).

United States. More than 65% of the nation's jobs require education beyond a high school diploma

(Carnevale et al., 2013). However, because college participation rates stratify along sociodemographic lines, economists warn that an increasingly diverse population is a threat to keeping pace with educated workforce demands (Bound et al., 2010). Prior to the pandemic, approximately 66% of the nation's high school graduates transitioned to postsecondary education, but that rate is not stable (U.S. Bureau of Labor Statistics, 2020). Consider, for example, that one of the fastest growing segments of future students are those who aspire to be the first in their families to go to college (Cataldi et al., 2018). Yet only 21% of students who grow up in households without college educated parents earn a bachelor's degree in 6 years (Holland, 2020). Because these students—often referred to as first-generation—are disproportionately of color and low-income, their low rates of college participation mirror larger racial, ethnic, and income inequalities (Flores & Oseguera, 2013). Whereas postsecondary degree attainment is 43% nationally, for African Americans and Hispanics, the attainment rates are 32% and 25%, respectively (Cahalan et al., 2020). Further, only 22% of low-SES students earn an associate degree or higher within 8 years of high school completion, compared to 39% and 67% for middle- and high-SES students (Husar et al., 2020).

Nevada. Nevada's traditional-aged student population is even more diverse than the rest of the country. Sixty-nine percent of Nevada's K-12 students are of color, indicating the vulnerability of the state's skilled workforce pipeline (Nevada Board of Education, 2020). Given that parent educational attainment is the leading predictor of postsecondary success, most telling of Nevada's workforce challenges is that its percentage of adults with a bachelor's degree is 23%, the fifth lowest in the nation. Meanwhile, more than 60% of the Silver State's jobs already require education beyond a high school diploma (Carnevale et al., 2018). Including certificates and certifications, the state has the lowest postsecondary educational attainment rate in the nation at 41% (Lumina Foundation, 2020). College outcomes reflect public high school graduation rates, which are also amid the lowest nationwide (Cahalan et al., 2020). Correspondingly, high-school-to-college enrollment rates are also among the lowest in the nation, well below the national average of 63% (Brune et al., 2017; Cahalan

et al., 2020). Contributing to the state's low rate of college participation is student transience, which exceeds 40% in Clark County. In Nevada, as in the country, skilled labor shortages are inevitable unless education's root inequalities are addressed.

Increasing Equity Nationwide. Despite a 6% increase in the national rate of college enrollment since 2000, postsecondary participation in the U.S. still stratifies by race, ethnicity, income, and parent attainment (Melguizo et al., 2020). These statistics raise questions about the effectiveness of college readiness and remediation reforms that have been the dominant trend across K-12 and postsecondary systems for more than a decade. High profile examples of K-12 college readiness initiatives include the Common Core Standards (Hess & McShane, 2013) and Advanced Placement coursework (Kolluri, 2018). Higher education, in turn, has sought to increase college affordability and to improve remediation for the third of incoming freshmen who are academically underprepared for college-level coursework (Relles & Tierney, 2013). Dual-credit programs (Taylor et al., 2015) and early college high schools (Duncheon, 2020) are examples of partnerships between K-12 and higher education. Although these reforms may have cumulatively increased college access, findings demonstrate their failure to overcome educated workforce barriers related to equity. In brief, while the economy requires that more workers than ever before have postsecondary experience, our educational systems are failing to serve students of color and low socioeconomic status.

Key Assumptions to Strengthen the Workforce Pipeline

Although recent studies infer that modern college access and remediation reforms have been unsuccessful, there are several areas of consensus that offer a starting place from which to consider Nevada's next steps.

Assumption #1: College guidance in high school increases postsecondary participation. With limited exposure to college socialization at home, at-risk students are shown to rely on their high schools for guidance with college-related decisions (Tichavakunda & Galan, 2020). The immediate transition from high school to college greatly increases the odds of postsecondary success (Bozick & DeLuca, 2005; Goldrick-Rab & Han, 2011). However, the skills needed to navigate this tran-

sition are not just academic. Necessary skills also include social behaviors and dispositions (Conley & French, 2014). Unlike their privileged peers whose college-educated parents are on hand to provide support, first-generation students often are left to complete tasks such as obtaining fee waivers or writing personal statements on their own (Cox, 2016). Without mentorship to help translate web-based information, self-guided internet searches about colleges have been shown to be liabilities (Brown et al., 2016). This finding is consistent with college access studies that suggest first-generation students can become overwhelmed by too much information (Duncheon & Relles, 2019).

To increase postsecondary participation, intensive advising in high school demonstrates large effects on college enrollment and persistence (Barr & Castleman, 2017). Individualized forms of college guidance—especially in-person mentorship—help students complete many pre-college tasks that are hidden prerequisites for college matriculation (French & Oreopoulos, 2017). Whether help focuses on meeting application deadlines or filing for financial aid, no other form of support rivals personalized “guidance via human interaction throughout the lengthy college application process” (Gurantz et al., 2020, p. 1). Even informal access to teachers and administrators can make a difference, especially for college-aspirant students at Title I high schools (Pallais, 2015).

Assumption #2: COVID-19 conditions stand to reduce postsecondary participation. COVID-related conditions exacerbate workforce pipeline concerns, as economic, health, and digital inequalities intersect. Nevada’s high school students are facing heightened exposure to crisis-related consequences at the same time they are attempting to keep up with virtual coursework and apply to college (Enarson et al., 2018). According to a Massachusetts Institute of Technology report, the “pivot to online learning could most negatively affect students living in households that are also most vulnerable to negative effects of recession, food and housing insecurity, and limited access to healthcare” (Reich et al., 2020, p. 2). Indeed, majority-minority students are more likely to face socioeconomic repercussions such as housing and food insecurity (Peek & Domingue, 2020). Relatedly, a disproportion of youth exposed to community crises experience grief, depression, and anxiety, which further com-

promise their academic outcomes (Bolin & Kurtz, 2018; Bonanno et al., 2010; Enarson et al., 2018).

Digital divide issues linked to COVID-related distance-learning have compounded educational risk. Yet, access to the internet and reliable computer hardware are not the only sources of digital inequity (Van Deursen & Van Dijk, 2013). As a temporary fix, online learning was fortuitous. However, the protracted nature of this solution raises concerns about academic regression, as achievement gaps widen when students are not in school (Gershenson & Hayes, 2018). Of specific concern to Nevada’s student population, distance-learning undermines the quality of college guidance that would otherwise occur in-person. Research shows that online college guidance outcomes are not on par with in-person formats (Olszewski-Kubilius & Clarenbach, 2012). A recent study, for example, reported null effects from digitally-mediated college advising (Gurantz et al., 2020). One explanation for the difference is that virtual meeting spaces change social interactions and the quality of communication within them. We know that “skilled face-to-face teachers do not necessarily make quality online teachers” (Borup & Evmenova, 2019, p. 1). We also know that digital spaces engender “feelings of isolation among distance learners” (Woods & Baker, 2004, p. 1). Online feelings have offline consequences, as alienation is shown to deter first-generation students from seeking out individualized support on college-related tasks (Conley & French, 2014).

Assumption #3: K-12 and higher education partnerships can address the weakest segment of the workforce pipeline. The separation of K-12 and higher education policymaking is a barrier to providing comprehensive student support during the high-school-to-college transition, when pipeline attrition is highest (Searby & Armstrong, 2016). To explain persistent inequalities in the high-school-to-college pipeline, recent studies suggest that separate systems of educational governance favor patchwork policy solutions (Hallett et al., 2020). Arguably, separatist policies may do more harm than good, as duplicate advising systems increase taxpayer costs. Moreover, advising inconsistencies within and across institutions can be costly to students, delaying time to degree (Bahr, 2008).

The term “middle space” calls attention to the consequences of separatist education policies

on postsecondary equity (Dynarski & Scott-Clayton, 2013). To support college opportunity for all, middle space partnerships aim to bridge this jurisdictional gap with “collaborative efforts between school districts and higher education institutions” (Collins et al., 2009, p. 294). In addressing policy misalignments between K-12 districts and postsecondary institutions, state-sanctioned partnerships have shown promise. Studies suggest that states inviting system leaders to “the [policy] table generates a huge amount of buy-in and increases overall commitment to the collaboration” (Davis et al., 2019, p. 10).

Recommendations for Nevada

In the wake of the pandemic, efforts to stabilize postsecondary participation for the state’s majority-minority student body will require innovation. Our recommendations for Nevada rely on the assumptions of prior research to improve the efficiency and effectiveness of high-school-to-college transitions. In what follows, we identify specific program interventions to support students, as well as specific policy development strategies to reform institutions.

Student Supports. To triage pipeline erosion at its weakest juncture, we suggest providing high school students with the guidance they need to transition to college. To this end, studies unilaterally confirm the effectiveness of college-related advising (Bahr, 2008; Gurantz et al., 2020; Venegas & Hallett, 2008). In consideration of cost and effectiveness differences between online and offline delivery, we recommend sequential short-term and long-term actions. Nudge interventions are a low-cost option for immediate deployment during school closures, whereas in-person college guidance is appropriate once campuses reopen.

Nudge interventions. Nudge interventions use text messaging to motivate students to take action towards a desired outcome. At a time when students’ physical ties to school are severed, nudge interventions can provide personalized college guidance to offset the isolation of remote learning. A nudge intervention might, for example, issue periodic text messages reminding eleventh and twelfth graders to complete college-related activities before deadlines. This relatively low-cost category of support has shown promise in reducing attrition over the summer for high school students who have been accepted into college, file paperwork expressing

desire to enroll, but do not actually attend college in the fall (Castleman & Page, 2015). This attrition, referred to as summer melt, suggests the adverse consequences that can occur when students are socially distanced from everyday school interactions (Kraft & Monti-Nussbaum, 2017). Nudge interventions are a way to mitigate the distance.

In-person college guidance. When schools reopen, more aggressive reforms will be necessary. While nudge interventions are an apt interim solution during COVID, personalized text messages are not a replacement for in-person college guidance (Barr & Castleman, 2017). If Nevada is to repair long-term economic growth, more aggressive reforms will be necessary. To meet skilled labor needs, counseling services are indispensable (Barr & Castleman, 2017; Brown et al., 2016; Martinez et al., 2020; Mimura et al., 2015; Walley & Knight, 2018). Over the past 10 years, Nevada’s student-to-counselor ratio has dropped by 8% (American School Counselor Association, 2015). While the recommended proportion is 250:1, Nevada’s numbers are nearly double that at 485:1 (Clinedinst & Patel, 2018). Although improving college advising in high schools is vital, no single policy fix will solve Nevada’s long-term workforce pipeline problem. Systemic changes are needed.

Institutional Reform. The diversity of Nevada’s students suggests that skilled labor shortages are guaranteed without structural changes. In a state where the majority of students are of color, innovation must therefore be aggressive and immediate.

Middle space innovation. College under-preparation and postsecondary attrition, are not isolated problems, but symptoms of the same inequalities, albeit manifested at different levels of schooling (Duncheon & Relles, 2020). Whereas policy analysts recommend K-12 and postsecondary institutions collaborate to improve pipeline equity, Nevada’s separate governance systems have led to a patchwork of well-intended, but stand-alone policy solutions. Recent studies suggest that the patchwork approach is insufficient to improve equity (Goldhaber et al., 2020). In Nevada, where skilled labor shortages are imminent, efforts to suspend the deepening of student inequalities across the middle space will require building both policy partnerships and cross-system infrastructure.

Restructuring is practical not only to improve pipeline productivity, but also to consolidate the

state's limited fiscal resources. The duplication of efforts under siloed education systems is a budgetary excess that the state can no longer afford (Levin & Calcagno, 2008). Consider the upsides of information-sharing and joint accountability for student outcomes. Together, the Department of Education and Nevada System of Higher Education (NSHE) could streamline advising services. The same personnel would counsel students not just across the middle space to college, but to gainful employment. Consistent academic and social guidance as students transition from one institution to another can reduce inefficiencies, such as the start-up time it takes for a new advisor to service a new student case (Holland, 2015). While reforms such as increasing student-to-counselor ratios are often cost-prohibitive (Robinson & Roksa, 2016), individualized college guidance may be economically viable under a unified system that promotes cost-sharing.

Future Directions

As Nevada's economic structures struggle un-

der the weight of COVID, policies that span—as opposed to work around—the middle space are warranted. Specific reforms that made sense even a year ago arguably are not aggressive enough to curb the inequitable impacts of COVID on Nevada's diverse student body. The scope of the crisis warrants coordinated efforts not just to support students, but to restructure institutions. To this end, we have outlined a multi-tiered strategy of policy triage. Adaptable to health-related socialization mandates, student support in the form of individualized college guidance can begin with text messages and transmute to in-person advising. Concurrently, institutional reform can begin with legislative encouragement for middle space partnerships, but structural innovation is needed to safeguard the state's long-term economic interests. To repair the pandemic's damage to Nevada's workforce pipeline, state-level leaders will need to plan ahead. Mobilizing K-12 and postsecondary cooperation now is essential to ensure economic recovery and stability later.

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