



STEPPING STONES: REVISITING HIGH SCHOOL GRADUATION REQUIREMENTS & STRENGTHENING COLLEGE & CAREER PATHWAYS IN NEVADA

Executive Summary

In the January 2015 State of the State address, Nevada Governor Brian Sandoval unveiled his ambitious legislative agenda, which included, among other items, an investment of more than \$800 million in K-12 education. Collectively, his legislative priorities were designed to build the infrastructure for a New Nevada, characterized by a diversified economy in high growth sectors and a skilled workforce.

Recent estimates indicate that by 2020, roughly 60 percent of jobs will require some sort of post-secondary degree or certificate, but less than a four-year degree (“middle skilled jobs”). As noted by the Nevada Department of Education, “Middle skilled jobs are the majority of the in-demand occupations and those without a high school diploma are excluded from 90 percent of the in-demand occupations.”

However, enrollment in post-secondary education and college attainment continues to lag in the Silver State. In fact, college attainment (the percentage of Nevadans with a higher education degree) is well below the national average. Only one-third of our Silver State’s population has post-secondary education short of a bachelor’s degree. Given that 60 percent of jobs in Nevada (by 2020) will require post-secondary education short of a four-year degree, which only one-third of our population has currently, the Silver State faces a significant skills gap.

Data reveals that most of our students are not graduating from high school college and career ready. Year over year, the State has reported low high school graduation rates, benchmark test scores, and college matriculation for high school graduates. Furthermore, the state’s high school graduates who do enroll in a college or university are frequently unprepared for the rigor of postsecondary academics, which has led to high remediation rates at Nevada’s institutions for higher education.

Although Nevada has implemented a variety of programs aimed at addressing these issues in recent years, college and career pathways in the state’s secondary schools continue to lack rigor and value, and the Silver State continues to lag the performance of other states in the United States. In contrast, several states have taken more innovative approaches to strengthening college and career pathways for their students, resulting in higher graduation and lower dropout rates. Data from these states have shown that these programs are succeeding in providing more opportunities to achieve college and career readiness.

This policy report describes the current high school graduation landscape in Nevada, including graduation rates, dropout rates, assessment data, and college remediation rates. It also compares Nevada to other states with similar population sizes and in the Intermountain West region. The report then identifies and discusses initiatives in other states that have strengthened college and career pathways, increasing graduation rates and bolstering postsecondary opportunities for students. The policy report concludes by offering a set of recommendations that the State’s decision makers, policy leaders, and agency officials may take under advisement.

RECOMMENDATIONS

This section of the policy report discusses possible recommendations that the State's decision makers, policy leaders, and agency officials may take under advisement in an effort to increase the graduation rate, and strengthen college and career pathways and post-secondary outcomes. The recommendations are divided into five critical areas that may benefit from new policies or revisions and expansions of existing legislation. The areas the recommendations address are as follows: (1) expand pathways to a diploma, (2) strengthen CTE programming, (3) expand pathways for students with disabilities, (4) strengthen guidance/advising systems, and (5) support dropout prevention programs.

Expand Pathways to a Diploma

1. Develop two pathways to a diploma: Academic/University and Career/Technical

Nevada currently offers only one 22.5 credit pathway that leads to a standard diploma. Many of the new industries coming to Nevada are looking for highly skilled workers trained in technical fields. The Association for Career and Technical Education reports that many of the fastest-growing industries in the United States are in CTE fields.

Several states have already adopted two pathways that lead to a high school diploma, with one pathway aimed at students planning to enroll in a four-year college or university after graduation, and the second aimed at students looking to enter a technical field. The North Carolina Department of Public Instruction summarized the reasoning for the creation of its two pathways as this, "Over the past few years, the State Board of Education has changed graduation requirements to better reflect the skills and knowledge needed for success at community colleges, colleges and universities, and in business and industry."

Therefore, in keeping with projected job growth in new industries in the State and with the trends showing early success in other states, Nevada should consider creating two pathways that lead to a single high school diploma: one for college-bound students (Academic/University Pathway) and one for CTE-bound students (Career/Technical Pathway). The diploma would need to include an endorsement that signifies which of the two pathways the student completed, but students on either pathway would receive the same diploma.

Ideally, all ninth and tenth grade students would complete a series of core course requirements in English, math, physical education/health, science, and social studies. These required courses would ensure that all students receive a solid academic foundation. Students would still be required to complete and pass end-of-course exams in English I, English II, Math I, Math II, and Science. Electives during these first two years of high school would allow students to take the opportunity to explore career opportunities in CTE, and take electives in the arts and foreign languages.

As in Louisiana, students would not be permitted to declare which of the two pathways they are looking to pursue until eleventh grade, at which time the students can commit to the academic pathway or technical pathway. Regardless of choice, students would be required to take an additional two years of English, math, science, and social studies (as is the case in Louisiana and Mississippi). Some of the selections in these subject areas can be specifically tailored toward CTE students, such as Business Writing or Technical Writing. In math, students can take Financial Literacy, Business Math, or Math Essentials. Nevada’s policy makers may want to consider requiring students in ninth and tenth grade to take one credit of CTE as a means of exploring their interests.

The purpose of requiring four years of the core academic subjects is to provide a safety net should a student on one pathway decide to pursue the other. This way, a Career/Technical Pathway student would be better prepared for postsecondary academic success if he has had exposure to more advanced concepts in these subjects during the later high school years. To further expand this safety net, all students in Nevada would still be required to take the ACT.

Under these new pathways in Nevada, credit requirements for each of the two pathways would include the following (see Table A):

Table A: Proposed Credit Requirements for High School Graduation Pathways in Nevada

Subject	Academic/ University Pathway	Career/ Technical Pathway
English	4.0	4.0
Math	4.0	4.0
Science	4.0	4.0
Social Studies	4.0	4.0
Health	0.5	0.5
Physical Education	1.0	1.0
Electives	5.0	2.0
Career Readiness/ CTE	1.0	4.0
Computer Skills	0.5	0.5
TOTAL	24.0	24.0

Currently, Nevada students seeking an advanced diploma are required to take 24 credits, which shows that the increased 1.5 credit load for all students is not unprecedented and would not require a dramatic overhaul of the current number of hours a student must take in order to graduate. Furthermore, 18 states in the United States currently require students to take 24-26 credits to receive a high school diploma. Many of the states with heavier credit requirements have higher overall graduation rates and college matriculation rates and lower college remediation rates. This more demanding schedule would better prepare students for the rigors of college or the demands of a job.

Compared with the current graduation requirements of 22.5 credits (for a standard diploma), students in Nevada would take an additional credit in both social studies and science. Currently, six states require all students to take four credits of science, and eight states require all students to take four credits of social studies.

On the Career/Technical Pathway, students would follow a four-sequence CTE program leading to an industry certification. The two non-CTE electives could either be in occupational-preparation courses or another area of interest for the student, such as the arts, foreign languages, or a core subject area. For courses in the core subject areas taken during the later high school years, school districts should consider offering courses geared specifically toward the students on the Career/ Technical Pathway.

To ensure students can achieve success both leading up to and once on their given pathway, students, parents, guidance counselors, and other stakeholders will need to be vigilant in helping students plan their courses throughout high school.

Strengthen CTE Programming

1. Expand CTE Dual Enrollment Policies across the State

Because CTE dual enrollment programs have shown success in increasing graduation rates and postsecondary enrollment rates, Nevada should consider formalizing a policy that enables students to take CTE enrollment courses at local NSHE institutions. Moreover, CTE courses should be free of charge to students and their families. This policy would likely increase the number of CTE opportunities for students, the number of students who enroll in a CTE program, and the number of students who leave high school better prepared for college and careers.

For these programs, Nevada will also need to establish clear articulation agreements between CTE programs in high schools and the NSHE institutions. These agreements should provide a minimum guarantee of credit for CTE courses taken in dual enrollment courses or equivalent high school courses for a student once upon matriculation to college. While the Nevada Department of Education and the Nevada System of Higher Education have taken great strides to streamline articulation agreements, gaps remain.

Furthermore, state and local education agencies and NSHE institutions will need to continue exploring incentives to increase the number of CTE instructors in both high schools and on community college campuses. Quite frequently, the expansion of CTE courses is limited by the lack of qualified personnel.

2. Expand CTE programs in high-growth, high wage sectors

Funding for CTE programs in Nevada comes from state funds and from Carl D. Perkins funds from the U.S. Department of Education. In 2015, the Governor's Office of Economic Development and Nevada Department of Education (NDE) completed a crosswalk between Career and Technical Education (CTE)

programs and the high-demand occupation data. In 2015-2016, NDE used GOED's analysis of high-demand occupations to help prioritize the applications submitted by school districts in Nevada to launch *new* CTE programs (using Perkins funds). Some school districts, including the State's two biggest urban districts, Clark County School District and Washoe County School District, are using GOED's analysis to evaluate applications for new and expanded CTE programs in their districts.

State and local education agencies should use real time occupation data to prioritize funding for *existing* CTE programs in high-growth, high-wage sectors. In its recent needs assessment of career and college pathways in Nevada, the Guinn Center found that students around the Silver State do not have equal access to CTE programs in strategic sectors. For example, in North Las Vegas, only one high school offers a CTE program in health sciences, one of four strategic sectors identified by GOED. (The remaining three strategic sectors include: advanced manufacturing, education, and information technology.) And in North Las Vegas' Canyon Springs High School and Mojave High School, enrollment in CTE programs that align with the four strategic sectors accounted for less than 10 percent of total student enrollment.

3. Expand CTE academies within comprehensive high schools

School districts that have undertaken initiatives to house CTE programs within comprehensive high schools (e.g., Select Schools in CCSD and Signature Academies in WCSD) should continue to explore ways to expand Select Schools and Signature Academies. Rural districts should also explore the feasibility of piloting these types of schools. As part of these Select Schools/Signature Academies, districts should develop partnerships with local businesses and industries to provide work experiences and internship opportunities to students. The purpose of these academies is to give students real-world experiences in their chosen CTE fields so that they are better prepared to enter the workforce.

Nevada could also consider developing six-year academies, such as in Colorado. This program pairs a high school with a local community college or a local high-growth industry. Students in these academies begin in ninth grade and graduate after six years in fourteenth grade, having obtained both a high school diploma and an associate's degree in a STEM field. The schools selected for participation in this program often have high populations of students with higher risks of not graduating, such as students of color and student from low-income communities. The strategic partnership between these schools and the local college or industry is designed to bolster graduation rates for these populations.

4. Revise or eliminate end-of-program assessments

Like many other states, Nevada has a higher graduation rate for students who participate in CTE programs. However, unlike many other states, Nevada has a low rate for the number of students who earn an industry certification at the end of the CTTE program. Only 45.0 percent of CTE program completers earn an industry certification by graduation in Nevada, 24.7 percent lower than the 69.0 percent of students in Florida and 13.5 percent lower than the 58.5 percent of students in Mississippi.

The low rate in Nevada suggests that the competencies taught in these programs are not aligned to the assessments.

Moreover, 55.4 percent of CTE students in Nevada are passing their requisite end-of-programs assessments. This means that 10.4 percent of students who pass these assessments do not earn the corresponding certifications, which suggests that the assessments are not necessarily aligned with industry standards, regulations and protocols or that students are not being given adequate support and guidance in obtaining these certificates. Unlike Nevada, Colorado does not require end-of-program assessment for CTE certifications. Instead, students follow the required steps to obtain an industry certification, whether that requires “an assessment, examination, or license that is administered and recognized by an industry third-party or governing board.”

In Nevada, taking the end-of program obtaining the industry certification is a two-step process that requires a student to take the end-of-program assessment and the industry certification. In addition, students must maintain a 3.0 grade point average in all CTE courses. Research indicates that the low completion rate was due in part to this GPA requirement.

The State should consider streamlining the process to eliminate the difference between students who pass the end-of-program assessment and students who obtain an industry certification. Education officials may want to consider allowing students to demonstrate proficiency on one of three ways: 1) industry certification, 2) end-of-program assessment, or 3) 3.0 grade point average in all CTE courses. In short, Nevada should make appropriate adjustments to the end-of-program assessments to ensure (1) that the curriculum and assessments are aligned to industry standards, and (2) that students are given sufficient guidance toward obtaining an industry certification.

5. Offer performance pay for teachers and school districts

To ensure that CTE programs throughout the state continue to receive necessary support accountability and continues to grow—Nevada, like Florida already has—should consider offering performance pay to teachers and school districts based on CTE end-of-program assessment data and industry certification rates. First, for school districts, the previous year’s certification rates and the rigor of the program would be considered in assigning the weights. Programs that lead to more college credit would give more weight than programs than those that lead to less college credit or no college credit at all.

Secondly, Nevada should consider awarding bonuses to CTE teachers based on the pass rates of students whom they directly taught on the CTE end-of-program assessments. Programs that lead to more college credit would be given higher bonuses than those that lead to no college credit.

Expand Pathways for Students with Disabilities

1. Limit issuance of the adjusted diploma

Nevada should consider limiting the issuance of the adjusted diploma for students with disabilities, as this current pathway does not lead to many post-secondary or employment opportunities. Louisiana, which does not offer an adjusted diploma, has two main methods of helping students with disabilities obtain a diploma: (1) the transitional ninth grade year and (2) the Alternative Pathway to a Diploma.

The Alternative Pathway does not lead to a separate diploma. Instead, the student's IEP team sets alternative goals, credentials, and performance criteria for classroom and end-of-course assessments the student must meet in order to meet the diploma requirements. This pathway can be applied toward either an Academic/University Diploma or a Career/Technical Diploma.

The transitional ninth grade year helps prepare struggling students for the academic rigor of high school. By adopting these two strategies, Nevada could likely transform the dismal graduation and career and educational attainment rates for students with disabilities.

2. Increase CTE opportunities for students with disabilities

Nevada should encourage students with disabilities to participate in CTE programs. CTE participation among students with IEPs is lower than their representation in the general population: 11.8 percent of K-12 public school students have an IEP, but only 8.4 percent of CTE students have an IEP. Nationally, 10 percent of students in CTE programs have an IEP, a 1.6 percent higher participation rate than in Nevada.

In Lyon County, a special education teacher at Dayton High School has helped students with disabilities work towards obtaining industry certifications in their areas of interest. As part of this program, students with disabilities were paired with an instructional aide who attended all CTE classes with the student and provided intensive tutoring support to the student. Two students who went through the Certified Nursing Assistant CTE program at Dayton High School successfully passed their Nevada State Board of Nursing Certifying Exam for Nursing Assistants.

To increase these opportunities for students with disabilities who are eligible for special education services, the State should (1) allow students with disabilities to take alternative performance assessments in CTE programs as needed according to the students' IEPs, (2) ensure that the articulation agreements between school districts and NSHE institutions are honored for students with disabilities who take alternative CTE assessments, (3) increase the number of special education instructional aides in CTE programs to work individually with students with disabilities, and (4) offer professional development to CTE teachers on how to adapt their programs to students with disabilities.

Strengthen Guidance/Advising Systems

1. Enforce use of the Academic Plan

Nevada statute (Nevada Revised Statute 388.205) requires that an academic plan be developed for ninth grade pupils. Research undertaken by the Guinn Center found that implementation and enforcement of this legislative requirement is absent. Interviews confirmed that high school teachers and parents of high school students have little, if any, awareness about the Academic Plan or the legal requirement that every student have an Academic Plan, which should be reviewed annually in grades 9-12. State and local education agencies are not requiring enforcement of the academic plan.

Many other states, like Colorado and Vermont, require an equivalent Academic Plan as early as seventh grade. Research indicates that Colorado and Vermont are implementing their respective versions of the Academic Plan. To ensure accountability, the Colorado Legislature authorized the Department of Education to adopt regulations to oversee the implementation. Additionally, the Department of Education established a working group to monitor implementation of the Academic Plan and share best practices.

The Nevada Department of Education should establish regulations and requirements around the use of the Academic Plan for all students. State education officials should explore ways to incorporate use of the academic plan into the Nevada School Performance Framework or the Nevada Educator Performance Framework. State educational officials could also explore ways to link completion of Academic Plans to the disbursement of state fund, such as Perkins Funds.

Over the past two years, senior officers at the Governor's Office of Economic Development (GOED) have led the development of formal career pathways in specific sectors. These career pathway frameworks indicate required coursework, qualifications, and certificates needed for different types of positions within a sector, as well as on- and off-ramps. GOED implemented the LEAP framework for advanced manufacturing and life sciences. Similar sorts of career pathways have been developed by Workforce Connections in southern Nevada, and are also being considered by JAG Nevada and CSN. These sorts of tools can help guidance counselors advise students on college and career pathways.

2. Begin use of the Academic Plan in middle school

As noted above, several states require development of the Academic Plan as early as seventh grade. Nevada lawmakers should require school districts to develop an Academic Plan for each student beginning in middle school. Some districts in Colorado have reported that following implementation of the Individual Career and Academic Plan (ICAP), high school graduation rates increased.

3. Provide professional development for counselors

Many guidance counselors may not understand the types of careers in high-growth industries or the skills required for jobs in different sectors. And historically, school districts have had limited resources with which to fund programs or professional development opportunities to expose guidance counselors to learn first-hand about workforce development needs (and opportunities). In response to this challenge and the need to strengthen awareness about different post-secondary opportunities, the Washoe County School District has started a small pilot program to expand professional development opportunities for guidance counselors. For example, working closely with the regional development authority, the Washoe County School District CTE director has started an “Ambassador program” which physically takes CTE teachers, administrators and counselors, and core academic teachers, out to local businesses to learn first-hand about workforce development needs in the region.

4. Promote completion of the Free Application for Federal Student Aid (FAFSA)

Recent research of completed FAFSA applications conducted by Data Insight Partners, a Nevada-based data analytics and research firm, found a strong correlation between the completion rate of FAFSA applications and high school graduation rates. Data Insight Partners noted that as of March 17, 2017, 11,237 FAFSA applications from Nevada students had been completed, reflecting a 33 percent increase over the same period last year (as of March 17, 2016, 8,450 applications had been completed). Previous research found that FAFSA application assistance (provided through H&R Block) “increased college enrollment rates the following school year. Enrollment rates increased 30 percent among high school seniors and 20 percent for young adults already out of high school, with particularly large results for those with annual incomes less than \$22,000. The program also increased the percentage who received a federal student grant.” Building on this research, Data Insight Partners found that “for Nevada high schools with at least 100 graduates, the correlation between graduation rates and the rate of graduates completing the FAFSA was 0.691.” As part of stronger guidance and advising efforts, district officials, education leaders, and nonprofit organizations (e.g., JAG Nevada and Communities in Schools) should expand efforts to help students complete the FAFSA.

Support Dropout Prevention

1. Support existing dropout prevention programs in the State

As discussed previously, Nevada has several programs that target at-risk populations and help prepare them for college and career: JAG Nevada, GEAR UP, and Communities in Schools, as well as others. Each of these programs has demonstrated success in supporting the students they serve. However, many of these programs are very small in comparison the number of eligible students across the State. For example, GEAR UP only serves 5,500 students in 32 schools in 10 counties. Political leaders have stated their goal of having JAG Nevada in every high school in the Silver State. Policymakers and education leaders should explore implementing a combination of evidence-based support services, such as JAG

Nevada, Communities in Schools, and GEAR UP, to improve graduation rates and increase college and career readiness.

2. Create a transitional year for struggling students (including students with disabilities)

Using information from students' middle school assessments, school districts would identify non-proficient eighth graders and place them in a transitional ninth grade year on a high school campus, in the same way that Louisiana does. These students do not begin earning high school credit during the transitional year. Rather, the time is used to help them develop the academic foundations needed to be successful with the secondary-level academic coursework in the following for years. This method is used in lieu of having a student repeat eighth grade and remain on the middle school campus, which studies have found increases the likelihood that the student will drop out.

Transitional students would not be counted in the graduation rate for the cohort that enters high school the same year they do. Rather, these students are counted in the graduation rate for the cohort that enters the following year, which is the same year these students would enroll in mainstream classes on the high school campus.

3. Offer more specialized course clusters for students to explore areas of interest in depth

Using the model from Texas, Nevada should consider creating clusters of related courses in specialized content areas that will enable a student to explore more deeply an area of interest. Students who successfully complete these clusters would be eligible for a special endorsement on their diplomas that would signify to colleges and universities that the students are proficient and highly motivated to succeed in the area. More importantly, the National Dropout Prevention Center reports that students are more likely to attend school when they are taking courses related to their interests.

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