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## Fast Facts: Policy Issues in Nevada Education

UNLV College of Education

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A black and white photograph of the Nevada State Capitol building. The image shows the ornate dome and the upper part of the facade, featuring classical architectural details like columns and arches. An American flag is flying on a tall pole in front of the building. Bare tree branches are visible in the upper left corner. The sky is a uniform grey.

UNLV | College of  
EDUCATION

Fast Facts:  
*Policy Issues*  
in Nevada Education





# Introduction

The College of Education at the University of Nevada, Las Vegas is in a particularly unique and promising position to affect and inform education locally, regionally, nationally, and internationally. The College produces more new educators for Nevada’s schools than any other provider—nearly as many as all other providers combined. Situated in the fifth largest school district in the U.S., the College is deeply and collaboratively engaged with research of and in urban settings. As the largest college of education in the state, the College’s faculty comprises the largest single, non-partisan source of information, models, and new ideas associated with educational practice, research, and policy, and understanding the unique needs of education in Nevada is a top priority for us.

The 10 issues summarized in this document have been researched and outlined with the intent of informing thoughtful policy development around particularly acute educational issues in Nevada. The faculty who researched these issues sought to provide policy makers with trustworthy and meaningful summaries on which policy decisions can be made, and legislation can follow, that allows for sustainable, high quality education in Nevada.

We hope that those who develop education policy, as well as those responsible for implementing those policies, will find these papers and the availability of the researchers who prepared them to be of benefit.

### College of Education Vision Statement

*The College of Education will achieve prominence locally, nationally, and internationally as a leading source of significant knowledge and innovative models to inform and affect policy, practice, and research.*



### For More Information...

You are invited to contact the College of Education’s communications and outreach coordinator should you seek further information or detail about any of the issues we have addressed in this publication:  
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### College Leadership



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# Higher Education Funding

Our nation's rapidly evolving, technologically oriented economy is driving a surge in demand for skilled employees; two-thirds of all jobs created in the coming decade will require some form of postsecondary education. In response, the United States has established a goal of achieving a 60 percent postsecondary degree or certificate attainment among the nation's labor force by 2025, equating to an additional 62 million Americans. Based upon the current trajectory, the U.S. will produce only 39 million such graduates, 23 million short of the goal. At the same time, funding constraints and other factors have resulted in a 20 percent decrease in total state appropriations to public baccalaureate-granting institutions. Innovative approaches to funding postsecondary education are required to meet America's demand for skilled workers.

## NEVADA FACTS & STATISTICS

- Nevada ranked 45th in the nation for per-capita higher education support in FY 2014.
- Between 2010 and 2015, per-student higher education appropriations in Nevada decreased by 34.5 percent. In response, tuition and fees at all public higher education institutions increased between 36 and 46 percent during that span.
- Recession-era budget cuts to the University of Nevada, Las Vegas reduced its faculty levels to 60 percent of peer institutions throughout the nation.
- Reductions in state allocations also caused reduced course offerings, program closures and degree

eliminations at the University of Nevada, Reno, Great Basin College, Truckee Meadows Community College, and Western Nevada College. And at the College of Southern Nevada, nearly 5,300 students were unable to enroll because funds to expand available classes and student services were insufficient.

- 23 percent of Nevada families earn \$30,000 or less annually; they would need to invest more than 60 percent of that total to attend a four-year Nevada university.

## U.S. FACTS & STATISTICS

- The 2008 recession resulted in a 25 percent reduction in average educational appropriations.

- Since 2008, college affordability has declined in 45 states as institutions have replaced state funding with increased tuition and fees.
- Reliance on net tuition to finance higher education has increased from approximately 25 percent to nearly 50 percent during the past two decades.
- By 2020, it is projected that 62 percent of jobs will require postsecondary credentials.

## RECENT ACTIONS IN NEVADA

- In fall 2015, Nevada System of Higher Education institutions collectively enrolled more than 106,500 students, an increase from the previous year.
- NSHE's "Achieving the Dream" provides broad-based assistance to community college students.
- Nevada successfully pursues external funding, such as STEM workforce training programs and health care education grants.
- The state's "15 to Finish" program encourages students to complete a full 15-credit schedule each semester for improved on-time graduation.

## CONSIDERATIONS FOR FUTURE ACTIONS

Given Nevada's desire to diversify and strengthen its economy while reducing reliance on public assistance programs, the following steps warrant evaluation:

- Analyze all state expenditures to identify opportunities to bring funding of postsecondary education up to the national average.
- Encourage full-time enrollment by providing block tuition policies that allow students to take up to 15 credit hours per semester at no additional charge beyond 12 credits.
- Provide predictable tuition policies that hold tuition constant for a full four years, or establish incremental increases that allow families to plan over multiple years.

## STATEWIDE BENEFITS OF FUTURE ACTION

- National average labor earnings of young adults with a baccalaureate degree are 60 percent higher than for high school graduates.
- Higher levels of educational attainment are associated with higher levels of employment in managerial and professional occupations.
- Higher-earning workers make greater tax contributions to the State of Nevada and have more spending power, bolstering local

economies.

- Postsecondary education is also correlated with increased labor productivity and analytical skills.
- Societally, higher education is linked to improved health, reduced infant mortality, lower public assistance use and higher voter participation.

## IMPLICATIONS OF MAINTAINING STATUS QUO

- The population of Nevada, currently reported at nearly 3 million, is projected to increase to 3.5 million by 2020. Without mitigation, this growth will only exacerbate the stresses on a system already ill-equipped to accommodate the current student population.
- Low rates of postsecondary education will inhibit Nevada's ability to diversify economically and participate in the 21st century economy.
- Despite its favorable tax climate, poor educational rankings will reduce Nevada's ability to attract business investment, especially from technologically oriented companies.



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# Career & Technical Education

Within the next decade nearly half of the employment opportunities in Nevada are projected to be categorized as “middle-skill” jobs—positions that require more education and training than a high school diploma but less than a four-year college degree. Despite open positions, unemployment and underemployment will persist if these middle-skill workers cannot be cultivated in sufficient numbers. Career readiness is generally assessed on three categories: academic knowledge, technical skills, and employability skills. While the first two categories are self-explanatory, the other two warrant a brief explanation. Employability skills refer to the suite of abilities seen as critical to success by employers; examples include critical thinking, adaptability, collaboration, responsibility and communications. Career and Technical Education (CTE), which in the past was alluded to as “vocational training,” is designed to address the second and third facets of career readiness.

## NEVADA FACTS & STATISTICS

- CTE programs in Nevada are organized into 15 career clusters and 75 distinct pathways.
- Within CTE-focused high schools, graduation rates (84 percent) were significantly higher than the overall high school graduation rate average.
- 91 percent of CTE high school graduates met performance goals for reading/language arts, while 89 percent met mathematics goals.
- 97 percent of CTE postsecondary students proceeded to the workforce, military or an apprenticeship.
- Projected demand in Nevada for middle-skill jobs through 2020 is

equal to demand for high- and low-skilled employees combined.

## U.S. FACTS & STATISTICS

- Apprenticeship is widely considered the oldest form of CTE in the United States, dating from colonial times.
- The first dedicated vocational school opened in 1823, immediately sparking broad acceptance of the adoption of this educational model.
- A 2006 federal act authorized federal funding for CTE nationally; however, the allocation formula does not favor Nevada, which receives among the lowest annual allocations.
- The 2006 legislation was

reauthorized in 2016 as the Strengthening Career and Technical Education for the 21st Century Act.

## RECENT ACTIONS IN NEVADA

- Allocations from the federal fund for FY 2017 are overseen by the Nevada Department of Education, Office of Career Readiness, Adult Learning & Education Options.
- As of academic year 2013-14, Nevada had 55,076 participants in secondary CTE programs and another 27,265 in postsecondary CTE programs. For context, California has a combined 1.9 million participants in its secondary/postsecondary CTE programs.
- In 2016, the Nevada State Board of Education approved the Nevada CTE Quality Program Standards, establishing specific responsibilities for students, teachers, counselors and administrators for maintaining effective CTE programs.

## CONSIDERATIONS FOR FUTURE ACTIONS

CTE programs have proven highly effective, both in terms of creating career-ready individuals and supporting the state’s goal of

improving high school graduation rates. To build upon this success and address the current and widening middle-skill jobs gap, leadership is encouraged to explore a number of measures, including:

- Ensure the availability of adequate funding for CTE programs at both the secondary and postsecondary levels.
- Invest in the expansion of existing CTE programs based upon projected areas of demand.
- Increase emphasis on digital literacy skills within CTE programs.
- Develop assessments to measure career and college readiness before 12th grade.
- Create comprehensive CTE work-based learning methods based upon successful models.
- Implement outreach programs that cultivate interest in CTE programs within Nevada middle schools.

## STATEWIDE BENEFITS OF FUTURE ACTION

- An increased pool of credentialed, mid-skill workers will close the existing middle-skill jobs gap, creating more and better-paying jobs for Nevada residents.
- CTE is associated with higher graduation and employment rates, reducing dependence upon government assistance programs.
- Developing certified, qualified

professionals with both technical and employability skills will position Nevada as an attractive locale for business investment.

## IMPLICATIONS OF MAINTAINING STATUS QUO

- Given the significantly higher graduation rates among high school students in secondary CTE programs, failure to expand the use of this model will inhibit overall progress in terms of overall graduation rates.
- The fields with the greatest CTE participation are technology & communications, health science, and hospitality & tourism. To the extent that enrollment in these programs does not increase to match business demand for professionals in these fields, a persistent skills gap is likely to remain and impair economic growth.
- The impending retirement of baby boomers, coupled with technological innovation, is expected to widen the middle-skill jobs gap; a lack of employees in relevant technical positions puts Nevada at a severe economic disadvantage.



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# Encouraging Students to Pursue STEM Careers

In an economy increasingly characterized by and intertwined with technology, Nevada currently possesses an inadequate supply of employees trained in the areas of science, technology, engineering and mathematics (STEM). Projects such as the Tesla gigafactory and the telecommunications hub for Switch demonstrate the potential economic benefits associated with cultivating a population with these skills. The Nevada Legislature has taken important first steps in creating a foundation for effective STEM education and towards diversifying the Nevada workforce to build health and technology sectors. However, several challenges to broader STEM adoption remain. First, the number of students who choose STEM-related careers is relatively small. Second, because STEM curricula are particularly rigorous, late stage dropout is common. Programs that encourage and reward educational perseverance and support retention are critical.

### NEVADA FACTS & COMPARISONS TO THE NATION

- Southern Nevada is ranked 97th among 100 metropolitan areas evaluated in terms of employees in STEM-related fields, with 3.6 percent of the workforce compared with 8.7 percent nationally.
- Rural areas of the state are particularly underserved. Of Nevada's 16 counties and one independent city, only four have any STEM-specific school programs and, of those, only two counties (Clark, with 13, and Washoe, with 4) have more than one STEM program.
- However, all seven NSHE institutions provide at least some academic programs that can

- contribute workers to Nevada's STEM workforce.
- STEM-related fields represent only 7.1 percent of Nevada's Gross Domestic Product, the national average is 18 percent.
- Nationally, completion rates for STEM-related bachelor level degrees are approximately 50 percent after as many as six years.

### RECENT ACTIONS IN NEVADA

- SB 345 established an NSHE-based clearinghouse to provide Nevadans a comprehensive listing of STEM-related resources and opportunities, including the Nevada STEM Coalition and Nevada STEM Pipeline.

- This legislation also established programs to reward successful STEM students and educators, as well as expanding in-school STEM programming.
- A report commissioned by SB 345 (authored by Brookings West) provided recommendations for future actions, which afford actionable proposals that could be considered during the 2017 Legislative Session.

### CONSIDERATIONS FOR FUTURE ACTIONS

Measures that could improve Nevada's STEM education pipeline and fuel workforce development include efforts to:

1. Promote choice to pursue STEM (preK-12) and
2. Continue to pursue degrees during the final phases before joining the workforce

Potential solutions can be broken into three categories, <sup>1</sup>Across Nevada, <sup>2</sup>In Nevada K-12 Schools and <sup>3</sup>In NSHE Institutions, and include:

- <sup>1</sup>Invest in digitizing existing STEM Collections at NV institutions so informal STEM learning experiences can be made available to residents

of rural counties and urban residents with limited access.

- <sup>1</sup>Promote public, private & non-profit partnerships that remove cost barriers by making STEM-related informal learning centers accessible to social service recipients (food assistance, Medicaid);
- <sup>1</sup>Science centers provide reduced/free admission to card holders\*  
*\*Base after Pennsylvania CHIP Program (NV STEM Coalition can coordinate).*
- <sup>2</sup>Supplement K-12 curricula with activities known to enhance STEM interest, efficacy, choice, outcome expectations, and engagement.
- <sup>3</sup>Invest in data analytics packages that help identify students at risk of STEM dropout and target support effort\*  
*\*Base after UT-Austin; UNLV LearningTAGs Project.*

### STATEWIDE BENEFITS OF FUTURE ACTION

- Salaries in technologically advanced fields such as telecommunications and energy are higher than for jobs in the service sector; higher incomes are correlated with increased contributions to the local economy and decreased reliance on public assistance programs.
- The growth and diversification of Nevada's economy—which based upon national business trends

are most likely to result from the importation of technology-related companies—are reliant upon a STEM-educated workforce.

### IMPLICATIONS OF MAINTAINING STATUS QUO

- With tourism providing 31 percent of the private workforce, Nevada is vulnerable to national events that impact tourism; diversifying our economy is critical, and building technology and health care sectors is particularly advantageous in terms of GDP.
- STEM-related industries generated approximately \$6 billion in Gross Domestic Product during 2015, or 7.1 percent of the total output. This compares unfavorably with the national average 17.7 percent. Cultivating a qualified employee base is a prerequisite for recruiting lucrative business opportunities.



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# K-12 STEM Pipeline

During the past several years, Nevada’s elected leaders have placed considerable focus on diversifying the state’s employment base to protect its citizens from economic instability. One key to achieving this goal is participating in the STEM-related economy, which nationally is growing significantly faster than the nation’s economy as a whole. To some extent, early efforts have been successful. Tesla’s gigafactory, the proposed Faraday Future, DroneAmerica’s unmanned aerial systems, and the Switch telecommunications hub all represent significant progress in this area. The state is, however, constrained to a large degree by its relative lack of employees educated in science, technology, engineering and mathematics (STEM) curriculum. This is important as much of Nevada’s growth potential is linked directly to those fields. To address a significant projected shortage of STEM-educated employees, Nevada must construct a “pipeline” that recruits and cultivates students in STEM disciplines.

### NEVADA FACTS & STATISTICS

- While Nevada encompasses more than 110,000 square miles, approximately 85 percent of its residents live in one of two major metropolitan areas. STEM-related programs outside the urban areas of the state range from sparse to non-existent.
- Within Nevada’s elementary schools, an average of only 15 percent of classroom time is dedicated to science instruction.
- Math is a focus item due to the adoption of the Nevada Academic Content Standards for Science.

### U.S. FACTS & STATISTICS

- The President’s Council of Advisors on Science and Technology predicts a need for a million more STEM graduates nationally during the next decade to offset a decline in domestic workers.
- The National Science Foundation has made significant investments in STEM-related grants intended to improve students’ educational experiences and impact their decisions to pursue STEM careers.
- As a nation, failing to produce domestic workers fluent in STEM disciplines poses a threat to our economy as these industries will migrate to the workforce.

- Employment in STEM-related fields has increased at three times the rate of other jobs.

### RECENT ACTIONS IN NEVADA

- GEAR UP, Gathering Genius, Math Science Partnership grants and NSHE-funded EPSCoR grants all include components that promote a stable STEM pipeline; however, all of these programs are externally funded.
- The Clark County School District has developed highly successful and sought-after robotics programs at its Cimarron-Memorial and Sunrise Mountain high schools.
- Full Options Science System materials have been adopted statewide, although not uniformly, as the primary resource for elementary science instruction in Nevada. However, the cost of kits is cost-prohibitive for some school districts.
- Both Clark and Washoe counties have begun utilizing a nationally respected curriculum called Engineering is Elementary, developed by the Boston Museum of Science.

### CONSIDERATIONS FOR FUTURE ACTIONS

Developing a stable STEM pipeline requires intervention early in the educational process, which must continue through postsecondary education to optimize graduation rates and application to the STEM workforce. Recommendations to expand and bolster this pipeline include:

- Expand professional development for K-5 teachers beyond mathematics, which are already adequately represented, to include science and engineering curricula.
- Develop a more cohesive approach to education that more effectively balances emphasis on all four STEM disciplines.
- Expand availability of STEM-related programs to encompass rural areas of Nevada.
- Initiate STEM instruction earlier, introducing and encouraging students to pursue areas of interest in order to recruit them into more advanced programs in high school.

### STATEWIDE BENEFITS OF FUTURE ACTION

- With job growth among STEM-related fields far outpacing overall expansion of the workforce, Nevada stands to reap considerable rewards from an investment in technologically literate employees.

- An attractive tax and regulatory climate make Nevada a legitimate contender in drawing new industries, as demonstrated by the Tesla gigafactory. Addressing the state’s real and perceived educational shortcomings would give it an increased competitive advantage.
- Diversifying the workforce with STEM jobs adds a more recession-resistant facet to the state economy.

### IMPLICATIONS OF MAINTAINING STATUS QUO

- While Nevada’s elected leaders have been embracing technology as a pathway to economic vitality and diversity since the late 1990s, the state still lags significantly behind the nation in terms of STEM-related employment and STEM literacy among students. Failure to effectively address the STEM workforce deficit will result in persistent under-achievement within this sector of the economy.



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# STEM Support in Early Childhood Education

Research has demonstrated that the drive to explore, interact and observe in human beings begins in early childhood, long before middle and high school, and even before elementary school. At the same time, the nation’s economy is moving toward technologically based industries, creating growth in demand for workers proficient in science, technology, engineering and mathematics (STEM). The question is, how can Nevada cultivate a generation of adults that is prepared to thrive in the 21st century economy? The answer is, begin recruiting and training them to serve in Early Childhood Education (ECE) capacities. Despite overwhelming evidence in support of this approach, high-quality STEM programming has not yet been incorporated into ECE.

### NEVADA FACTS & STATISTICS

- By 2018, STEM-related jobs are projected to increase to nearly 50,000, a 25 percent increase from 2008 levels.
- A report by the Brookings Metropolitan Policy Program in partnership with the University of Nevada, Las Vegas, *Cracking the Code on STEM, a People Strategy for Nevada’s Economy*, found that the K-12 education system is inadequate to address STEM educational outcomes.

### U.S. FACTS & STATISTICS

- During the first decade of the new millennium, the demand for STEM-related careers increased by 14 percent nationally.
- Advancing American students

from the middle to the top tiers in mathematics and science is a federal educational priority.

- The National Science and Technology Council, along with the Committee on STEM Education, the National Association for the Education of Young Children, and the Next Generation Science Standards concur the exposure to STEM during early childhood is critical to establishing an optimal educational trajectory.

### RECENT ACTIONS IN NEVADA

- In 2013, Nevada developed an economic diversification plan that explicitly called for increasing STEM-related jobs so the state is positioned to participate in that high-growth facet of the economy.

- In the 2015 legislative session, \$882 million was committed to education, including STEM instruction.
- SB 345 created an advisory council to address barriers within our state’s educational system, with the intent of improving STEM outcomes in K-12 and postsecondary institutions.

### CONSIDERATIONS FOR FUTURE ACTIONS

Producing STEM programming in ECE is both uniformly supported by the education community and straightforward to execute. Recommended measures include:

- Require high-quality teacher preparation and professional development for ECE educators in STEM methodologies.
- Utilize STEM curriculum that aligns with Next Generation Science Standards (NGSS) and National Association for the Education of Young Children recommended practices.
- Incorporate NGSS science standards as part of state early childhood standards and report these measures.
- Work with the Advisory Council

on STEM initiatives within the Department of Education to include early childhood as a component of Nevada’s statewide plan.

- Utilize existing facilities outside of formal school settings to bring STEM content to students, especially those in low-income or high-need schools (ie.; discounts for young children to museums, advertising state parks and recreation areas, etc).

### STATEWIDE BENEFITS OF FUTURE ACTION

- As tremendous growth occurred between 2000-2010 within sectors such as biomedical engineering (62 percent), systems software development (32 percent) and medical sciences (36 percent), Nevada has been missing out on opportunities to grow economically while diversifying its economy.
- Addressing this issue by broadening access to high quality STEM curriculum is also likely to improve the state’s overall educational outcomes, removing an additional obstacle to recruiting businesses.
- Professional development opportunities for educators also serve to connect teachers and families to public- and private-sector professionals and community resources.

### IMPLICATIONS OF MAINTAINING STATUS QUO

- While there has been some growth in technology-related jobs in Nevada, that growth lags far behind the national average. Barring intervening variables such as early adoption of STEM curriculum, this trend is unlikely to change significantly.
- AB 449, which enjoyed broad bipartisan support, was designed to restructure and re-energize economic development in Nevada. This goal remains a focus item at the state level, but the lack of STEM-qualified employees inhibits its progress.
- Last decade’s recession demonstrated Nevada’s susceptibility to economic downturns, especially those affecting tourism. While the leisure and hospitality industry remains critical to our state’s economic well-being, continued over-reliance upon that sector fosters continued vulnerability at the local and state levels.



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# Early Childhood Education Personnel Pipeline & Retention

Early Childhood Education (ECE) professionals, who provide services to children under the age of 5 in a variety of settings, have proven to be a valuable resource because of their ability to establish a solid foundation for children's cognitive development, academic readiness and social emotional skills. Every dollar invested in ECE has been shown to produce a minimum 13 percent return after accounting for the public costs of such programs. However, recruiting, training and retaining these professionals has proven to be a significant challenge, resulting in a shortage of ECE personnel both nationally and within the state. The turnover rate at Nevada's ECE centers is nearly three times greater than for K-12 teachers. A lack of continuity, coupled with inconsistent education/training requirements, threatens to undermine an approach that has demonstrated significant societal and economic benefits.

High-quality preschool is the key ingredient for the future success of schools and children. In order to support Nevada's youngest learners, we need to invest in high-quality preschools and the educators who work there. Children who attend high-quality childcare and ECE programs have greater life stability, employment rates, individual employment earnings, and higher IQs, as well as reduced rates of poverty, reduced crime, and reduced arrest rates. Attendance also results in less government dependence and better health outcomes.

## NEVADA FACTS & STATISTICS

- As of 2013, there were approximately 176,000 children under 5 years of age in Nevada, with more than three-quarters requiring some form of ECE care.
- In 2014, turnover rate at Nevada's ECE providers was 22 percent.
- The state's ECE providers report that nearly 2/3 of their staff were employed in their current workplace for between one and three years, a

high degree of transiency.

- Only 12 percent of Nevada's center-based childcare programs and 2 percent of family childcare homes are nationally accredited.
- Quantitative research in Nevada revealed that 74.8 percent of respondents ranked access to quality ECE as "very important."

## U.S. FACTS & STATISTICS

- National guidelines recommend that

ECE costs comprise no more than 10 percent of a family's budget; in Nevada, the percentage ranges from 18.3 to nearly 23 percent.

- Only half of ECE personnel nationwide have a post-secondary degree of any kind, with 1/4 having a four-year degree.
- ECE employees earn a salary on par with food preparation and dry-cleaning workers, with only a 1 percent increase in wages from 1997 to 2013.

## RECENT ACTIONS IN NEVADA

- Using grant funding, Nevada has increased its investment in ECE from approximately \$6 million to \$12.4 million.
- Nevada SB 515 provides all-day public kindergarten to Nevada's children.
- Nevada's DHHS Division of Welfare and Supportive Services provides childcare subsidies to low-income families, as well as funding to improve ECE facilities.

## CONSIDERATIONS FOR FUTURE ACTIONS

Nevada has demonstrated an understanding of the importance of ECE, dedicating additional resources

to ECE professional development and cost reduction measures for families. However, particularly within rural areas, available resources are inadequate to meet communities' needs. Additionally, while efforts to reduce the costs to families have been beneficial, they have done nothing to address the issue of ECE staff retention. With that in mind, the following recommendations warrant consideration:

- Adopt more stringent educational/training requirements for ECE personnel, which benefits both the children under their care due to increased competence, and the staff members themselves through the ability of educated personnel to command higher wages.
- Provide tuition assistance to students in two- and four-year programs related to ECE disciplines, as has been effectively implemented in other states.
- Develop and publish ECE learning standards for infant/toddler and 3-year-old children (Nevada has published Pre-K standards for 4-year-olds).

## STATEWIDE BENEFITS OF FUTURE ACTION

- Reducing costs of ECE programs relative to household income would improve residents' quality of life and increase participation of women in the labor force by 1 percent.

- A high-quality ECE network provides communities a competitive advantage in attracting businesses and employees.
- Research has demonstrated that ECE is correlated with increased cognitive abilities, better test scores in the K-12 system, and higher graduation rates.
- Access to ECE is associated with decreased absenteeism and tardiness among employed parents, as well as increased productivity.

## IMPLICATIONS OF MAINTAINING STATUS QUO

- Issues related to high school graduation rates, which are positively correlated with ECE participation, will remain persistent without mitigation measures.
- While Nevada's Pre-K investment is a positive step, research has shown that the ROI during early childhood is higher than efforts later in childhood, specifically among children living in poverty.
- The economic vitality of Nevada's rural communities will continue to be inhibited by the absence of accessible programs.
- As of 2013, only 14 percent of Nevada's 4-year-olds were enrolled in preschool, compared to 41 percent nationally, demonstrating a significant supply/demand gap.
- If left unresolved, the ECE gap will remain an issue of concern.



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# Recruit, Prepare & Retain Teachers of Color

Over the course of the past four decades, the face of America has changed dramatically. In 1972, whites represented 78 percent of the student population nationally. Today, no ethnic subgroup holds a plurality. In Nevada, community diversification has occurred at an increasingly accelerated rate, already surpassing 2050's projected demographic patterns. At the same time, the ethnic diversity of the teaching corps has remained relatively static. Between 2011 and 2015, the percentage of non-white teachers increased only four percentage points, to a total of 18 percent. This incongruence, known as the "diversity index," has implications for the education of K-12 students, as research has demonstrated better learning outcomes for both white students and students of color in ethnically diverse teaching environments.

## NEVADA FACTS & STATISTICS

- In the 2012-13 academic year, students of color comprised 63 percent of the student population, while teachers of color represented only 19 percent of the corps.
- Within CCSD, whites represented only 26.2 percent of the student body in 2015-16, but 72.9 percent of the teacher corps.
- Nevada's diversity index is among the largest in the nation (NV: 42 vs U.S.: 30).
- Given the acute and persistent shortage of teachers in Nevada and the state's demographic composition, non-whites represent a large, relatively untapped potential pool of teachers.

## U.S. FACTS & STATISTICS

- Diversity gaps are not inherently indelible; several other metropolitan areas in which whites represent a minority within the student population have diversity indices less than half of Nevada's.
- National research reveals improved academic outcomes among students instructed by teachers of similar ethnic and cultural backgrounds.
- Teachers of color are seen as "role models" by non-white students, resulting in higher academic performance and attendance.
- Quantitative research indicated that middle and high school students of all races, including whites, preferred a diverse pool of teachers.

## RECENT ACTIONS IN NEVADA

- The University of Nevada, Las Vegas has implemented alternative licensure programs, which enroll a larger percentage of teacher candidates of color.
- The UNLV Office of Research and Economic Development funded a research project, *Where Are Our Teachers of Color? Resilience and Diversity in K-12 Education* to conduct research from perspectives of teachers of color in CCSD regarding recruitment, preparation, and retention of teachers of color.
- The Nevada Department of Education provided a grant enabling the development of the *Abriendo Caminos/Opening Pathways* initiative, which encourages CCSD students of color to consider teaching as an educational plan in high school.
- CCSD offers professional development opportunities to increase the cultural competence of teachers from all ethnic backgrounds.
- CCSD also implemented a multi-pronged initiative to address the teacher shortage that includes, among other things, fast-track

certification options and monetary hiring incentives for teachers committing to work in lower-performing schools.

## CONSIDERATIONS FOR FUTURE ACTIONS

To reduce the diversity index, lawmakers may consider a number of measures, including:

- Increase funding for the recruitment, development and retention of teachers of color and expand upon the successful Zoom and Victory schools promoted through SB 405 and SB 432 to include support specifically for current inservice teachers of color as well as for early recruitment of teachers of color from local high schools.
- Improve working conditions within K-12 schools, which are correlated with teacher attrition.
- Recruit preservice teachers of color from within the pool of currently unlicensed staff in K-12 schools.
- Enhance the level of interaction between white teachers/administrators and teachers/students of color.
- Build upon programs to recruit, support, train and mentor teachers of color.

## STATEWIDE BENEFITS OF FUTURE ACTION

- Based upon data from other

metropolitan areas with smaller diversity indices, a greater level of teacher diversity is correlated with improved student performance and higher graduation rates.

- Non-whites represent a significant and largely untapped human resource to address the state's ongoing teacher shortage, which is particularly prevalent within urban areas that have higher percentages of students of color.
- An ongoing challenge for Nevada in attracting major employers and diversifying the economy is the national reputation of its primary and secondary educational system; measures that improve student performance and, by extension, the state's ranking will support the state's broad economic goals.

## IMPLICATIONS OF MAINTAINING STATUS QUO

- Education Week's Research Quality Counts 2016 report listed Nevada last in the nation for "student chance of success" and 38th for K-12 achievement.
- The relative lack of teachers of color within Nevada is a self-perpetuating cycle, because students of color perceive teaching to be a role reserved for whites and elect not pursue that field of study.



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# Education is the key to success

## College Pipeline Issues for Students of Color

Although the Nevada System of Higher Education (NSHE) student enrollment rates are increasing annually, the number and percentage of racial and ethnic minority students who graduate from high school and pursue postsecondary education continues to trail behind national student completion rates. Despite large numbers of racially and ethnically diverse students in Nevada's primary and secondary schools, our state's college-going population does not reflect this level of diversity, an issue characterized by educators as a "leaky pipeline" from high school to college.

### NEVADA FACTS & STATISTICS

- Hispanics/Latinos account for 41.1 percent of student primary/secondary school enrollment and are the largest racial/ethnic group in the state, followed by Whites at 35.07 percent.
- African Americans/Blacks represent 10.16 percent of Nevada's enrollment, followed by Asians at 5.51 percent and American Indian/Alaska Native at 1.1 percent.
- Of Nevada's ~21,000 high school graduates in the 2011-12 academic year, less than half enrolled in a state public institution of higher education within 16 months of graduation.
- Students of color are significantly more likely to be placed in at least one remedial math or English course compared with White and Asian students.

- Graduation rates for English language learners (ELLs) were significantly lower than for students enrolled in English mainstream courses; fewer than one-third of ELL students graduate from high school.
- 23 percent of Nevada families earn less than \$30,000 annually, and would need to commit 65 percent of that income to attend a public four-year institution.

### U.S. FACTS & STATISTICS

- The United States is transforming into a "minority-majority" nation, with the predicted population transition occurring in 2050; in Nevada, this transition has already occurred.
- The national graduation rate is 82 percent; Nevada's is significantly lower at 70.77 percent.
- The national Adjusted Cohort

Graduate Rate for public high school students for 2013-14 school year are as follows: Asian American, 93 percent; White, 85 percent; Hispanic, 76 percent; Black, 68 percent; American Indian/Alaska Native, 68 percent.

- Nationally, the percentage of enrollment in degree-granting postsecondary institutions increased between 2008 and 2013; Nevada is one of only seven states that saw a decline during that period.
- Nevada is significantly below the national average in terms of college enrollment rates, with higher discrepancies among Black, Hispanic/Latino and Asian subpopulations.

### RECENT ACTIONS IN NEVADA

- The Upward Bound program, which has more than doubled postsecondary enrollment where implemented, has been adopted by the University of Nevada, Reno; University of Nevada, Las Vegas; and Nevada State College.

### CONSIDERATIONS FOR FUTURE ACTIONS

Nevada, which has a percentage of students of color far greater than the national average, may consider the following mitigation measures to address the "leaky pipeline" between high school and college:

- Assess initiatives from other states, such as California, New York and Illinois, that have demonstrated progress in terms of graduation rates and college enrollment among students of color.
- Institute a position to manage and coordinate college readiness work across sectors at the state, agency and campus-level.
- Evaluate external funding opportunities (foundation grants, federal grants and cross-state initiatives) to augment existing state resources.
- Consider how tuition and financial aid policies either hinder or help students of color, as well as the economically disadvantaged, access higher education.

### STATEWIDE BENEFITS OF FUTURE ACTION

- Given the low graduation rate among ELLs and the correlation between income and education, it is in Nevada's economic interest to improve graduation rates among this group.

- Nevada's demographic shift indicates greater numbers of students of color, whose graduation rates currently lag behind both the overall national average and their White counterparts in Nevada; addressing this issue will draw the state closer to national graduation and postsecondary enrollment averages.
- Both dependence upon government assistance programs and crime rates are inversely correlated with educational attainment; increasing graduation rates would provide both societal and economic benefits.

### IMPLICATIONS OF MAINTAINING STATUS QUO

- Nevada currently lags behind the national average in virtually every educational category, and has a percentage of student of color and ELLs far higher than the national average.
- The rate of postsecondary enrollment may continue to decrease, bucking a national trend.
- Failure to intervene in a meaningful manner will exacerbate the societal and economic issues associated with below-average educational achievement among Nevada's students.



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# English Language Acquisition and Development (ELAD) Endorsement

English learners (ELs) refers to students who speak a native language other than English in the home, and for whom speaking, reading and writing in English is a targeted educational outcome. In mid-2016, the Nevada State Board of Education voted in favor of mandating that future preservice teacher graduates of the Nevada System of Higher Education (NSHE) be required to complete an English Language Acquisition and Development (ELAD) endorsement to better prepare new teachers to respond to the multi-dimensional needs of PK-12 ELs. This mandate is being phased in through 2022, providing a window during which incoming preservice teachers can be prepared for both ELAD-related coursework and the real-world application thereof. Opportunities include exposing preservice teachers to high quality endorsement-related coursework (e.g. curriculum development, assessment, practicum, etc.), which can be co-developed via collaborative networking among NSHE institutions, school districts and instructional leaders.

### NEVADA FACTS & STATISTICS

- In 2010-11, Nevada was identified among the states with the fastest EL demographic growth.
- Nevada is considered a “new growth state,” with an immigrant population that doubled between 2000 and 2006.
- The number of EL students in Nevada’s schools increased 208 percent between 1994 and 2005.

### U.S. FACTS & STATISTICS

- With approximately 4.7 million ELs in U.S. public schools, this constituency represents the fastest-growing group in the primary and

secondary public education system.

- By 2040, it is projected that ELs will comprise 40 percent of the U.S. school population, with Spanish-speakers constituting the fastest-growing subgroup
- Nationally, more than 25 percent of ELs speak a language that is not Spanish-dominant
- The majority of general education teachers from urban (67 percent), rural (82 percent) and centrally located (58 percent) cities report that they have never participated in professional development experiences related to EL learning.
- Many teachers admit that their

knowledge related to ELs is underdeveloped and is acquired via on-the-job experiences.

### RECENT ACTIONS IN NEVADA

- A full ELAD endorsement for Early Childhood Education (birth to grade 2) and elementary (K-8) teacher preparation programs is required by 2020.
- Secondary teacher preparation programs must include ELAD-endorsements by 2022.
- The Nevada State Board of Education’s decision was based upon input from the English Mastery Council, the Commission on Professional Standards in Education, and the Teaching English as a Second Language subcommittee.

### CONSIDERATIONS FOR FUTURE ACTIONS

During the implementation period for the ELAD endorsement, the state has an opportunity to prepare future NSHE preservice teachers by:

- Developing teacher residency programs in which expert teachers work in the university teacher education programs, participating

in interactive activities to develop their leadership competencies while supervising and organizing the preservice teacher practicum experience.

- Integrating modes of best practices into university coursework.
- Teaching university courses entirely or partially in school settings, affording preservice teachers the opportunity to observe teaching in a field environment and utilizing debriefing sessions to bridge knowledge and practice gaps between university coursework and the “real world.”

### STATEWIDE BENEFITS OF FUTURE ACTION

- The ELAD endorsement will increase the state’s capacity to provide preservice teachers with strategies to improve the quality of instruction and supports for EL students.
- Implementation of those strategies will promote quality instruction that fosters the development of academic content and language for all Nevada students.
- This additional support promotes teacher resiliency and tolerance for instructional challenges, potentially mitigating educator turnover in the state.
- Bolstering this aspect of preservice teacher education produces an

opportunity to evaluate student learning and causes for low achievement among ELs.

### IMPLICATIONS OF MAINTAINING STATUS QUO

- The percentage of ELs in Nevada’s public school system is large and projected to grow during the coming decades; failure to adopt proactive measures designed to improve academic performance among this group of students will exacerbate existing challenges.
- Addressing learning challenges faced by ELs and other student populations in a classroom setting contributes to Nevada’s high teacher turnover rate. Absent mitigation, this problem will persist, creating ongoing issues for both schools and the communities they serve.



Sharolyn D. Pollard-Durodola, Ed.D.  
Professor



# Mining for a Nevada ‘Counselor Lode’: Mental Health, Schools & Legislation

Nationally, rates of mental health concerns such as depression and psychological stress have been rising, but individuals receiving treatment remains disproportionately small. The acute shortage of mental health professionals further worsens the persistent problem of providing access to mental health services. In addition, with less than 1,000 school counselors serving Nevada’s nearly half a million students, currently, we are not meeting students’ academic, career and personal/societal development needs. National survey data shows students desire greater access to school counselors, but Nevada’s student-to-counselor ratio, 508 to one, is more than twice what is recommended by industry experts. Therefore, unmet mental health needs of children and adolescents pose a challenge to the academic success of students in Nevada’s K-12 system.

There is a strong body of research pointing to the effectiveness of clinical mental health counseling in treating, and of school counseling in affecting positive academic outcomes for students and schools. This suggests that these professions could make a much-needed positive impact in Nevada. However, the shortage of clinical mental health counselors and school counselors in a state where demand for both is rising at a faster rate than the national average, creates a culminating crisis for the state.

### NEVADA FACTS & STATISTICS

- In 2014, Nevada was ranked lowest (51st) in the nation for “access to care,” moving from 49th in 2011.
- Studies show 69 percent of adults 18+ having any mental illness did not receive any form of treatment at any point from 2009-2013.
- Nevada’s rates of mental illness are consistent with national averages, but substance abuse rates are higher in Nevada (12.6 percent) than comparable states.
- Children and adolescents’ mental health needs are even higher at 14 percent, but Nevada has considerably lower rates of access to services than for children in comparable states (NV: 29 percent versus AZ: 54; CO: 46; and FL: 41).
- There is a significant shortage of mental health care professionals, with only 1.7 licensed counselors per every 100,000 people.

### U.S. FACTS, STATISTICS & COMPARISONS TO NEVADA

- The CDC reports the prevalence of mental illness in approximately 25 percent of adults. Depression rates nationally are approximately 8 percent, with Nevada at 9 percent.
- In 2013, State Mental Health Agency (SMHA) expenditures per capita in the U.S. were approximately \$120. Nevada’s average was \$89.
- Reducing the student-to-counselor ratio parallels a 59 percent decrease in student discipline problems, contributing to fewer disciplinary incidents and higher graduation rates. And elementary schools with model school counseling programs achieved higher proficiency scores in language arts and math.
- Counseling is one of the fastest growing occupations in the US with a growth rate of 20 percent from 2014 to 2024. In Nevada, the demand and growth rate is at 17 percent. Substance abuse and behavioral disorders counselors have an even higher demand with anticipated growth of 22 percent in the U.S. and Nevada. Demand for school counselors is even higher in Nevada, projected to grow 30

percent in the same time frame (compared to 8 percent nationally).

### RECENT ACTIONS IN NEVADA

- Moving from 49th to 51st from 2011 to 2014, Mental Health America (MHA) indicates “a lack of movement at the bottom indicates continued neglect of the mental health needs of constituents.”

### CONSIDERATIONS FOR FUTURE ACTIONS

- Nevada, which has rates of mental illness consistent with national averages, but far fewer counseling/mental health professionals, may consider the following mitigation measures to address the counselor shortage in the state:
- Support federal legislation that addresses the mental health needs of adults and youth in Nevada.
  - Remove obstacles to licensure for clinical/mental health professionals coming from out-of-state.
  - Revise state mandates to provide K-8 students and schools with school counselors as well as lowering the existing, overtaxed student-to-counselor ratios to meet national recommendations.
  - Develop innovative state legislation that stimulates and supports additional students to pursue degrees in higher education in order to fill currently vacant positions.

### STATEWIDE BENEFITS OF FUTURE ACTION

- Counseling as a profession contributes to the success of other professions. Such training not only addresses mental health treatment, but also increases the likelihood of wellness in preventive services.
- Evidence has shown that counseling is a proven a cost-effective intervention. Moreover, research indicates that counseling/therapy is related to a decrease in the need for physical medical/healthcare.
- School counseling seems likely to improve college access as well as the increased academic success of English language learners and students entering STEM careers, further boosting Nevada’s output of qualified workers to service a 21st century economy.

### IMPLICATIONS OF MAINTAINING STATUS QUO

- State/national employment trends place school counseling and clinical mental health counseling as fast-growing occupations, however demand already exceeds the number of graduates from nationally accredited programs at NSHE intuitions.
- Continued low rankings will indicate that Nevada is not adequately addressing its residents’ mental health needs of its residents.



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**Ching-Chen Chen, Ed.D.**  
Assistant Professor



**Jared Lau, Ph.D.**  
Assistant Professor





# About the College

As part of culturally diverse community and within one of the largest school districts in the United States, the College of Education at the University of Nevada, Las Vegas offers its students a unique learning environment with direct preparation in PK-16 and other community settings. The College is composed of three academic departments that offer undergraduate, master's, doctoral, and certificate programs: Educational and Clinical Studies, Educational Psychology and Higher Education, and Teaching and Learning. Collectively, these programs are in early childhood education, elementary education, secondary education, special education, English language learning, clinical mental health counseling, school counseling, school psychology, educational policy and leadership, higher education, learning and technology, curriculum and instruction, and teacher education. Programs are accredited by the Council for Accreditation of Counseling and Related Programs and the National Association of School Psychologists,

The College boasts seven research centers and clinics dedicated to scholarship and best practices in literacy, autism spectrum disorders, mental health, assessment and evaluation, and multicultural, STEM, and early childhood education. In addition, the College's Education Student Services Center provides advising and career services to ensure retention, progression, and completion of undergraduate students in the College, along with those working towards initial teacher licensure in alternative routes to teacher licensure programs.

The College is committed to creating an inclusive learning environment that values and promotes diversity. Integral to this vision is a dedication to being a premier college of education that serves our dynamic and expanding community, the state, the region, and the nation.

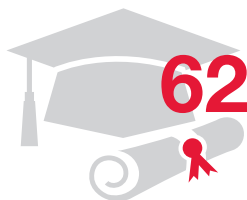
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Fall 2016  
Enrollment

2,304

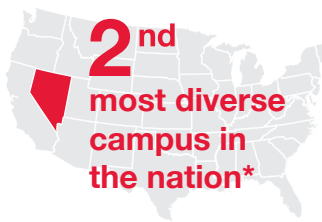


620

2015-16  
Degrees  
Conferred

Teachers Prepared  
in 2015-16

464



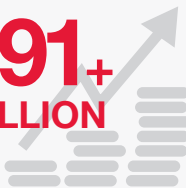
2<sup>nd</sup>  
most diverse  
campus in  
the nation\*

49% of COE are  
students of color

\*According to US News & World Report

COE's Economic  
Impact 2016-17 Annual  
Year to Date\*

\$91+  
MILLION



\*Federal and State Funded Projects, Clinical Experience, Community Partnerships



20

Master's and  
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