

Nevada P20 to Workforce Research Data System (NPWR) Research Priorities

Many state and national reports highlight the fact that more jobs today require postsecondary education than ever before. For Nevada, by 2020, 58 percent of the jobs will require a career certificate or college degree.

Currently, 30 percent of Nevada’s young adults have an associate degree or higher; thus, there is a 28 percent “skills gap.” This skills gap must be addressed as Nevada’s economy continues to diversify and advanced technology plays an ever more important role in the 21st century’s “knowledge economy.” Upward mobility of Nevada’s citizens, and by extension the economic competitiveness of the state, are therefore directly tied to the educational attainment levels and capability of workers to learn new skills. In addition to the growth of jobs requiring some postsecondary education, Nevada’s population demographics are changing rapidly. NSHE institutions report annually on initiatives to meet the current and future social, economic, and workforce needs of a highly diverse state. These initiatives depend largely on the continuation rate of students from Nevada high schools. The Nevada P-20 Workforce Research Data System (NPWR) enables the State to address goals identified in NRS 400.040 that are important to achieving the education and workforce outcomes necessary for the economic diversification.

NPWR Research Outcome and Current Reports	NRS 400.040 Powers and Duties [of the P-20W Advisory Council in part]
	1. The Council shall address:
	(a) Methods to increase the number of students who enroll in programs at the System to become teachers, including, without limitation, financial aid programs for students enrolled in those programs.
ECE data not available	(b) Methods to ensure the successful transition of children from early childhood education programs [ECE] to elementary school, including, without limitation, methods to increase parental involvement.
3.1, 3.2, 5.1, 5.2, 5.3, 5.2C	(c.) Methods to ensure the successful transition of pupils from: (1) Elementary school to middle school; (2) Middle school to high school; and (3) High school to postsecondary education or the workforce, or both, including without limitation, methods to increase parental involvement.
2.1, 5.4, 5.5, 2.1C, 5.1C	(d) Methods to ensure that the course work, standards and assessments required of pupils in secondary schools is aligned with the workload expected of students at the postsecondary level.
1.1, 1.2, 1.3, 1.4, 2.2, 1.2C, 1.3C	(e.) Methods to ensure collaboration among the business community, members of the academic community and political leaders to set forth a process for developing strategies for the growth and diversification of the economy of this State.
1.1, 1.2, 2.2, 1.3C	(f) Policies relating to workforce development, employment needs of private employers and workforce shortages in occupations critical to the education, health and safety of the residents of this State.
All research priorities	(g) The development and oversight of a statewide longitudinal data system that links data relating to early childhood education programs and K-12 public education with data relating to postsecondary education and the workforce in this State.
All research priorities	(h) A plan for collaborative research using data from the statewide longitudinal data system developed pursuant to paragraph (g), including, without limitation, research that assesses:
2.1, 2.2, 3.3, 5.3, 5.1C	(1) The efficiency and effectiveness of the use of state resources to improve the readiness of pupils in this State for postsecondary education and the workforce;
4.1	(2) The effectiveness of the preparation of teachers and administrators in this State; and
1.3, 1.4, 5.3, 5.3C	(3) the return on investment of educational and workforce development programs paid for by this State.
	(i) Other matters within the scope of the Council as determined necessary or appropriate by the Council.

NPWR Research Priorities	NPWR Research Outcomes	NPWR Research Outcome Description	Agency Responsible for Report Development	Agencies Involved	Status
1. Education to Workforce Alignment	1.2 Work Force Supply Projections	The workforce supply projections extend the supply and demand data described above to project future supply by taking into account the individuals we have working in various industries, and merging it with current enrollment data from NSHE. Extending the use of current data to historical outcomes, combined with current NSHE enrollments by program and current employment by industry would provide a projection of workforce supply.	DETR	DETR & NSHE	DETR will let us know when ready to discuss
	1.3 Education & Wage Outcomes	Examine the annual median, 25th percentile, and 75th percentile wages by industry and degree level (skills certificate (less than one year), certificate of at least one year, associate's, bachelor's, master's, etc.).	CIT	DETR & NSHE	In Progress
	1.4 Certificate/Licensure Outcomes	Track employment outcomes for occupations/industries that require certification or licensure using data obtained from Occupational Employment Statistics and Burning Glass/Labor Insights specific to positions that require licensure/certification, along with the data on certificates awarded by NSHE that lead to licensure/certification, we could track these individuals into the workforce to determine the number employed, the salary, and employment retention outcomes.	DETR	DETR & NSHE	DETR will let us know when ready to discuss
2. College Readiness	2.1 High School Math Pathways	In addition to the impact of high school math pathways on postsecondary math enrollment, NPWR will provide insights on the following related to college readiness: 1) NSHE remedial instruction is delivered in many high schools throughout the state. What is the impact of delivering these courses at the high school level versus taking an additional year of high school math and at what level. 2) Is Algebra II the appropriate benchmark for eligibility criteria for scholarships? National data often defines Algebra II as the minimum to achieve college and career readiness. Does Algebra II at each of Nevada's school districts result in success in postsecondary mathematics placement and performance (college level math completion, persistence, graduation)? (Filters will include course type (i.e., AP), 12th grade only (versus hs pathway).	CIT	NDE & NSHE	In Progress / Waiting for NDE to approve part I.
	2.2 STEM	Examine the impact of STEM on student achievement, high school graduation, postsecondary readiness/success, and workforce outcomes.		DETR, NDE & NSHE	See Notes Below*
	2.3 Dual Enrollment	All NSHE institutions offer dual enrollment opportunities to high school students. Are the students who are taking advantage of these opportunities to take math courses at NSHE institutions more successful in terms of college math enrollment and completion, persistence and graduation?		NDE & NSHE	

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3. Student Success Indicators	3.1 Early Warning System	Develop an early warning system to help improve instruction. Identify data points throughout the student's K-12 and postsecondary educational cycle that can be used to: 1) Inform K-12 best practices and help in the creation of a possible college and career early warning system. 2) Identify successful pathways through K-12 education and into postsecondary education and the workforce. 3) Identify areas of concern for targeted interventions to include educational and environmental help. 4) Identify predictors of postsecondary and workforce success. 5) Identify the types of course work completion throughout the K-12 school experience and corresponding assessment exam scores (CRT, HSPE, EoC, CTE, ACT) correlate to a graduate that obtains a job or college degree that leads to a successful career track. 6) Develop predictive claims between Smarter 3-8, End of Course Exams, and ACT results. 7) Inform the state's K-12 accountability system and influence the presence and/or weight of school accountability measures currently in place. Educators will need to see up to date information on their students for this snapshot in a user friendly application. Early warning systems are in place throughout the country and are a proven cornerstone of successful SLDS systems. Include all day kindergarten and access to health care.		DETR, NDE & NSHE	NDE gathering information on available data and data sources. Include Kim Regan in future discussions.
	3.2 Study of Positive Deviance	Identify strategies, curriculum or structures that are in place at high minority, high poverty, high achieving K-12 schools in Nevada that are not in place at high minority, high poverty, low achieving K-12 schools in Nevada will inform scalable practices to improve the performance of Nevada's most struggling schools and continuation into postsecondary education. Include all day kindergarten and access to health care.		NDE & NSHE	Report design established. NDE following up on various variables to include. Definitions of high and low poverty being determine. Some variables may need to be added to NDE dataset.
	3.3 Charter Schools	Examine student achievement at charter schools including characteristics and performance of students (including post-secondary continuation metrics) that is in an accessible format suitable for parents and other non-researchers to easily understand without the necessity of pulling data from various sources and deducing the comparability of performance between schools from which they may choose.	NSHE, NDE, & State Public Charter School Authority (SPCSA)		Per NDE, the data is available using other sources. Nevada School Performance Framework and Nevada Report Card. The SPCSA points to those two sources from its webpage. Factors for HS: % advanced diplomas, AP/IB exam proficiency or credit, % students enrolled remedial, SAT and ACT participation rates (current data is not available because of testing irregularities). Measures being re-designed currently (ACT, AP/IB, dual credit, CTE, etc.).
4. Teacher Preparation	4.1 Teacher education programs	Identify the correlation between student assessment outcomes and the type of teacher education program (traditional, Teach for America, alternate route) completed by the educator to pinpoint best teacher preparation practices that result in positive student assessment outcomes and improve teacher education			Data is not accessible at this time.

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5. Pipeline	5.1 High School Feedback Reports	Provide high school feedback reports to the high schools that provide information concerning the post-secondary continuation and success of high school graduates. (Leverage data from other NPWR reports including college continuation, ACT benchmarks, math pathways, etc.)		NDE & NSHE	Create working group to discuss content of this report.
	5.2 College Readiness & Continuation by Diploma Type	College continuation, persistence, and completion of a postsecondary award by the following categories: 1) Standard diploma (minimum requirements to graduate from HS). 2) Advanced diploma (additional course and GPA requirements beyond the standard diploma including four years of math in high school). 3) Honors diploma (additional course and GPA requirements beyond the advanced diploma including two years of a foreign language). Honors diplomas are awarded by some districts but not all. For those districts that do not award the honors diploma we would like to evaluate the success of students who complete the advanced diploma with two years of a foreign language.	NSHE	NDE & NSHE	In Progress
	5.2C Nevada College Continuation Rate	The College Continuation Rate Report measures the total number and percentages of students continuing from high school to postsecondary enrollment within and outside Nevada. The report provides data by district and race and ethnicity. High school data is also available directly to the school districts. This report uses data from the Nevada Department of Education, the Nevada System of Higher Education, and the National Student Clearinghouse. Filter on race/ethnicity.	NSHE	NDE & NSHE	In Progress. Pending data from NDE to submit Clearinghouse request and to update report.
	5.3 Postsecondary continuation & degree attainment	Identify the number of 9th grade students who graduate from high school, continue to postsecondary education, are retained in postsecondary education, and complete a certificate or degree program. What high school performance indicators (e.g., enrollment in rigorous courses, performance on state and college entrance tests, diploma type, and other factors that may influence progression through secondary and postsecondary education) are the best predictors of students' postsecondary continuation, course placement (remediation), first-year retention, completion, and time to completion? Include factors such as geography (district), race/ethnicity, FRL, ESL.		NDE & NSHE	Expand inclusion of NDE dataset to include non-graduates.
	5.4 High School Rigor	Do students meeting state standards, end-of-course criteria, and high school graduation requirements need remediation? In what subject area(s) are students deficient? Are students academically prepared to enter college and complete their program or degree in a timely manner?		NDE & NSHE	Data not yet available.
	5.5 Validation of postsecondary remedial placement benchmark scores	Secondary and postsecondary curricula alignment and implementation of a statewide 11th grade assessment tied to the new standards necessitates updating the way student college readiness is evaluated at the higher education institutions. The implementation of assessments including end of course assessments (Math 1, Math 2, ELA 1 and ELA 2, Science) and ACT provide an opportunity to validate the scores used by postsecondary institutions for placement into English and mathematics courses. As a result of the new 11th grade college and career readiness assessments, programs can be developed to help with academic deficiencies.		NDE & NSHE	Pending ACT and other high school assessments loaded to SLDS dataset.

NPWR Research Priorities	NPWR Current Report	NPWR Current Reports Description	
		<i>The following are reports that have been completed and are available online on the NPWR Reports web page.</i>	
1. Education to Workforce Alignment	1.1 Workforce Demand	Determine the demand of occupations within Nevada by NSHE institution and program. NSHE programs are mapped to DETR occupational projections using the NCES CIP to SOC occupational mapping. Students will be able to determine if there is a statewide demand for their program of study, institutions will be able to determine occupational demand for their program, and employers will be able to determine the pipeline of potential employees by occupation. (NSHE & DETR)	
	1.1C Average Wage by Industry	The Average Wage by Industry report measures the highest average wages earned across Nevada. This report drills through to show wages by county and by industry for a given year. This report is created using data from the Department of Employment, Training and Rehabilitation. (DETR)	
	1.2 Work Force Supply	Determine the current enrollment by level as they compare to the workforce projections for occupations to which they map using the NCES CIP to SOC occupational mapping. Employers needing to fill positions in specific occupations will be able to utilize this report to determine if the students enrolled in related NSHE programs of study will be able to meet the demand. (NSHE & DETR)	
	1.2C Most Common Degree by Industry	The Most Common Degree by Industry Report shows the most common degree held by NSHE graduates by industry and county. In addition, statewide and county average wages earned are shown for all employees by industry. (NSHE & DETR)	
	1.3C Student Completion and Workforce Part II	The 2011 Nevada Legislature passed Senate Bill 449 (Chapter 397, Statutes of Nevada 2011), which requires the Board of Regents of the Nevada System of Higher Education (NSHE) to compile a biennial report concerning completion of degree and certificate programs and employment within the field of study (codified under Nevada Revised Statutes (NRS) 396.531). Part II of the Student Completion and Workforce Report includes the number and percentage of students who have obtained employment within their field of study in this State, and the average starting salary, reported by institution within the System and by each academic program at the institution. (NSHE & DETR) Adding county filter.	
5. Pipeline	5.1C Remedial and Development Report	In 1997, the Nevada Legislature approved Senate Bill 482 (Chapter 473, Statutes of Nevada 1997) directing the Nevada System of Higher Education (NSHE) to provide certain information to Nevada school districts on enrollments in remedial courses within the NSHE and the costs associated with providing that instruction. Codified in Nevada Revised Statutes (NRS) 396.548, the following must be reported: (1) Number of pupils who graduated from a high school in the district in the immediately preceding year and enrolled in remedial courses in reading, writing or mathematics at a university, state college or community college within the System; and (2) Costs incurred by the System in providing remedial instruction pursuant to subsection 1. The data necessary to satisfy this requirement are made available to the NDE via the SLDS to prepare their accountability report. CIT working on District access as mandated by SB482 to make data available to the school districts. The public remedial <i>placement</i> report is prepared by NSHE and made available on its website.	
	5.3C Student Completion and Workforce Part I	The 2011 Nevada Legislature passed Senate Bill 449 (Chapter 397, Statutes of Nevada 2011), which requires the Board of Regents of the Nevada System of Higher Education (NSHE) to compile a biennial report concerning completion of degree and certificate programs and employment within the field of study (codified under Nevada Revised Statutes (NRS) 396.531). Part I of the Student Completion and Workforce Report includes: 1. By institution within the System and by each academic program at the institution, (a) The number of students who enter the academic program; (b) The percentage of students who complete the academic program; and (c) The average length of time for completion of the academic program to obtain a degree or certificate. The report also provides, for each program of study, 1) data on the percent of students who complete any degree, in any field (i.e., a business student who earns a degree in biology or a student who was enrolled in an associate's degree program but earned a bachelor's degree), and 2) data on the percent of students who complete a degree in the program of study declared their first term of enrollment. (NSHE)	

***STEM Reporting Ideas:**

Math and science assessment proficiency (NAEP, ACT, course end, CRT, etc.) / % take and pass or fail math, science, computer science courses in K-12 (also AP credit) / Low performing elementary schools have cut science to focus on math; track to high school and postsecondary science performance and postsecondary science majors / STEM schools, charter schools, subject-focused schools – track students to proficiencies in STEM / Track high school math and science courses to postsecondary and workforce (include math and science combos such as calculus and physics) for math/science proficiency, persistence and graduation in STEM majors. / Track postsecondary majors in STEM backwards: HS courses, proficiency tests, remedial placement, etc. to determine commonalities among STEM majors and project future STEM graduates. / Leverage existing reports to focus specifically on STEM. / Project STEM graduates by degree level. / DETR certificate data (current certificate report planned; include STEM option)