

**NEVADA DEPARTMENT OF EDUCATION
BIENNUM REPORT**

**Computer Science Education
2018 - 2019**

July 31, 2019



Table of Contents

Introduction	3
Legislative Overview	3
Senate Bill 200	3
Senate Bill 313	4
Nevada’s CS Strategic Plan	4
Updated Computer Science Graduation Requirement	4
K-12 Integrated Technology Standards	5
Equity and Access: Statistics by Year	6
2015-2016 Statistics	6
2016-2017 Statistics	7
2017-2018 Statistics: SB 200 Year 1	8
2018-2019 Statistics: SB 200 Year 2	8
AP Computer Science Principles Exam – 2017-2018	9
High Schools Offering Computer Science	9
Funding Allocations and Expenditures	11
FY18 Allocations	11
FY18 Expenditures	12
FY 19 Allocations	12
FY19 Expenditures	13
Professional Development Statistics	14
RPDP Trainings	14
District/Charter Specific Trainings	14
Participation, Outreach, Curriculum, and Licensing	15
Participation	15
Outreach	15
Approved Curriculum	15
Teacher Endorsement Coursework	16
<i>Background</i>	16
<i>Coursework Available</i>	16
In the Media	16
Supporting Information	17
Work in Progress	17

Introduction

This report outlines the status of computer science education in Nevada at the end of the fiscal year 2018-2019 and the overall biennium. The goal of this report is to provide statistical analysis of our accomplishments and bring attention to the areas that still need additional supports, guidance, and resources to ensure equitable computer science instruction to all students across Nevada.

Legislative Overview

Senate Bill 200



[Senate Bill 200](#) (2017, 79th Legislative Session), unanimously passed, and publicly praised, by both houses of the Nevada Legislature and signed into law by Governor Brian Sandoval on June 15, 2017, broadens the participation of students with regards to computer science (CS) education. It outlines certain changes in Nevada’s Computer Education and Technology instruction to include computer science and computational thinking, applying credit in certain CS courses towards high school graduation, certain CS courses to fulfil requirements for Millennium Scholarship eligibility, establishment of K-12 Computer Science standards, teacher professional development (PD) requirements for computer education and technology, the appointment of a computer science subcommittee under the Governor’s Advisory Council on Science, Technology, Engineering, and Mathematics (STEM) to make recommendations concerning instruction, and to provide appropriations for districts to satisfy the requirements of this bill. Our legislators recognized the skills gap in our former “Use of Computers” instruction and drafted this bill to strengthen the new computer education and technology instruction we have in Nevada and broaden it to include Computer Science and computational thinking practices, and to increase the equity and diversity of instruction to all students in all districts, thereby giving them greater opportunities in their future college and career paths.



Senate Bill 313

[Senate Bill 313](#) (2019, 80th Legislative Session) is a continuation of the work started with Senate Bill 200. It also was unanimously passed, and publicly praised, by both houses of the Nevada Legislature and signed into law by Governor Steve Sisolak on June 6, 2019. This bill continues to support our districts and charters with additional funding for computer education and technology instruction, helps to build the teacher pipeline through grants for reimbursing teachers the cost of coursework towards an endorsement to teach computer science and computational thinking, grants for Nevada System of Higher Education universities and colleges who develop pre-service teacher programs that include training in computer science and integrated technology to teachers before they enter the classroom, and establishes an account to receive gifts and donations to further computer science education work in Nevada.

Nevada's CS Strategic Plan

A computer science subcommittee was officially created under the Governor's STEM Advisory Council in the Office of Science, Innovation, and Technology (OSIT) in July of 2017. This [Computer Science Subcommittee](#) currently has 15 members representing OSIT, the Nevada State Board, Nevada Department of Education, Regional Professional Development Program (RPDP), Post-Secondary Institutions, and K-12 educators and administrators representing Clark, Washoe, Carson City, and Humboldt Counties.

This CS subcommittee meets regularly to discuss items pertaining to Computer Science and Integrated Technology and makes decisions that impact this work. Many of these decisions are reflected in the topics to be addressed in this report. [Past subcommittee meeting minutes](#) can be accessed on the OSIT website.

In October, 2018, the subcommittee developed the [Nevada Computer Science Education 5-Year Strategic Plan](#). This plan outlines the state vision and goals for broadening participation in computing here in Nevada across K-12 and into post-secondary.

Updated Computer Science Graduation Requirement

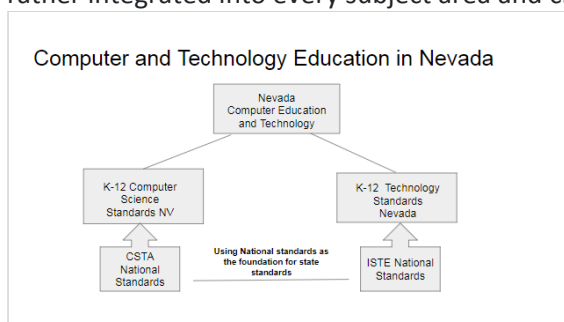


The Computer Education and Technology subject area half-credit course required for graduation, was updated and put into regulation, as addressed in Senate Bill 200. Regulation R078-18 amended NAC 389.450 (the required courses of study for graduation from a public high school) from the former *Use of Computers to Computer Education and Technology* as prescribed, and sets the percentage of instructional time for the course to include **at least** 50% dedicated to computer science and computational thinking. This regulation passed the State Board on August 30, 2018 and was codified into law by the Legislative Commission on September 27, 2018.

A Guidance Document for this semester graduation requirement was developed and distributed to assist districts and charters in implementation. A [Guidance Memo](#) from the State Superintendent of Public Instruction was sent out to notify districts and charters when this regulation was to take effect (effective date: Fall, 2019).

K-12 Integrated Technology Standards

On October 18-19, 2018, twenty-four individuals representing the majority of districts across Nevada, came together to revise the former 2010 Educational Technology standards. The team reviewed many current technology standards in the country, including the nationally recognized ISTE standards that were revised in 2016. They collaborated to design the revised set of standards that went out for public review in March, were approved by the Academic Standards Council on June 27, 2019, and go before the State Board of Education for approval at the end of August, 2019. The writing team also renamed these proposed set of standards to the [2019 Nevada Academic Content Standards for Integrated Technology](#), recognizing that technology isn't something that is necessarily taught in one course, but rather integrated into every subject area and classroom across Nevada.



Senate Bill 200, section 5 states that computer science and computational thinking standards were to be added to the Nevada Computer Education and Technology subject area. At the time of the writing of SB 200, the only standards that were in this subject area were the 2010 Ed Tech standards. Now we have both the Nevada Academic Content Standards for Computer Science and the newly proposed Integrated Technology standards that will comprise this subject area.

Following the complete approval process of the Integrated Technology Standards, both sets of standards will be housed into one document as they complement and refer to each other. This document will be known as the [*Nevada Academic Content Standards for Computer Science and Integrated Technology*](#).



Equity and Access: Statistics by Year

Computer Science is more than just computer programming. It is computational thinking, logical reasoning, critical thinking, and problem solving. “These skills strengthen local community, national innovation, and opportunities for youth. Computer Science – not computer literacy – underlies most innovation today, from biotechnology to cinematography to national security. Yet, the majority of U.S. schools require only that students use computers. Seldom do schools prepare students to innovate and create the new technologies that drive local and national economies. This ability to innovate with technology is also important for students’ future success and ability to make a difference in a global society.” (National Center for Women in Technology, NCWIT.org)

Currently in Nevada, there are over 2,305 open computing jobs, 3.3 times the average demand rate in Nevada ([Code.org’s State Facts Data](#)). The average salary for a computing occupation in Nevada is \$76,681, which is significantly higher than the average salary in the state (\$45,040). Moreover, Nevada had only 163 computer science graduates in 2017 and only 25% were female.

As the statistics below will point out, Nevada has not been providing an equitable access to computer science in the past which has created a computing skills gap for our graduating students. The following statistics were provided by the Nevada Department of Education’s Office of Data and Accountability showing an increase since Senate Bill 200 was put into place over previous years results.

2015-2016 Statistics

Nevada had only 96 computer science graduates in 2015 and only 23% were female. Only 9 schools in Nevada (8% of schools in Nevada with AP programs) offered and AP Computer Science course in 2015-2016; fewer than any other AP courses in a STEM FIELD. And finally, only 104 high school students in Nevada took the AP Computer Science exam in 2016: 21% were female, only 12 students were Hispanic or Latino, only 2 students were black, no students were Native American or Alaska Native, and only 1 student was native Hawaiian or Pacific Islander. With a total student population of 132,035 in 9-12th grades, only 1,564 were learning computer science concepts. Nevada needed to do a better job at providing equitable and diverse access to computer science education to ALL of our students.

Total State CS Enrollment	Asian	Black	Caucasian	Hispanic	Native American / Alaskan Native	Mixed Races	Pacific Islander	Female	Male	Disabled
1,564	228	129	612	460	4	105	26	334	1,220	75
	14.6%	8.2%	39.1%	29.4%	0.3%	6.7%	1.7%	22%	78%	4.8%

Total State CS Enrollment cont'd	Economically Disadvantaged	ELL
1,564	618	82
	39.5%	5.2%

Nevada Department of Education - Office of Data and Accountability

2016-2017 Statistics

The 2016-2017 school year saw an increase in our high school population by 7,635 enrolled students, yet only about 11% of those students received a computer science education (810). While the Asian population increased by 5.1% for those receiving CS education, Hispanics and Economically Disadvantaged student percentages dropped. One promising movement shows that the Female population taking computer science courses showed a 4.7% increase.

There was also an increase of 385 students taking an AP Computer Science exam over last year (160 took AP CS A and 329 took the new AP CS Principles exam).

- For AP CS A: 17% were female, 36 were Latino, 6 were black, 1 was American Indian or Alaska Native, and only 1 Native Hawaiian or Pacific Islander.
- For AP CS Principles: 30% were female, 89 were Latino, 12 were black, 2 were American Indian or Alaska native and 0 Native Hawaiian or Pacific Islanders took the exam.

Although the statistics show movement, the numbers are relatively low and may have other contributing factors associated with them. Only 27 schools in Nevada (24% of NV schools with AP programs) offered an AP Computer Science course, yet it was 18 more schools than the previous year. There are still fewer AP exams taken in computer science than in any other STEM subject area during this school year. Most disheartening is that not one college or university in Nevada had graduated a single new teacher who is prepared to teach computer science in 2017.

Total State CS Enrollment	Asian	Black	Caucasian	Hispanic	Native American / Alaskan Native	Mixed Races	Pacific Islander	Female	Male	Disabled
2,374	468	200	852	640	8	161	45	634	1,740	113
	19.7%	8.4%	35.9%	27%	0.3%	6.8%	1.9%	26.7%	73.3%	4.8%

Total State CS Enrollment cont'd	Economically Disadvantaged	ELL
2,374	837	150
	35.3%	6.3%

Nevada Department of Education - Office of Data and Accountability

2017-2018 Statistics: SB 200 Year 1

This school year will show the first set of statistics after the first year of Senate Bill 200 regulations being in place and the support and resources that were provided. Our overall enrollment at the high school level in computer science courses has increased by 691 students from last year. The data also showed a change in the Hispanic population from 27% in 2016-2017 to 31.7% in 2017-2018 and a change in female enrollees from 26.7% to 30.4%. Our black and disabled enrollees stayed steady from last year. Our economically disadvantaged student enrollment showed an increase from 35.3% last year to 37.2%. Nevada has not graduated a single new teacher who is prepared to teach computer science in 2018.

Total State CS Enrollment	Asian	Black	Caucasian	Hispanic	Native American / Alaskan Native	Mixed Races	Pacific Islander	Female	Male	Disabled
3146	462	253	1150	986	18	237	40	946	2200	148
<i>Clark-2557 Other-589</i>	14.7%	8.0%	36.7%	31.7%	0.6%	7.5%	1.3%	30.4%	69.9%	4.7%

Total State CS Enrollment cont'd	Economically Disadvantaged	ELL
3146	1169	232
<i>AP CS - 1249</i>	37.2%	7.6%

Nevada Department of Education - Office of Data and Accountability

2018-2019 Statistics: SB 200 Year 2

This school year will show the data in the second year of Senate Bill 200 implementation with the continued support and resources that were provided. Our overall enrollment at the high school level in computer science courses has increased by **2,306** students from last year. The data also showed a change in the Hispanic population from 31.7% in 2017-2018 to 39.7% in 2018-2019 and a change in female enrollees from 30.4% to 33%. Our black student enrollment showed a slight decline and disabled student enrollment a slight increase from last year. Our economically disadvantaged student enrollment showed an increase from 37.2% last year to 46.5%. We are making some strides towards equity and access through our initial funding and promotion efforts, but there is much work still to do to provide equitable access to computer science education for all of Nevada's students and teachers. Nevada still has not graduated a single new teacher who is prepared to teach computer science in 2019.

Total State CS Enrollment	Asian	Black	Caucasian	Hispanic	Native American / Alaskan Native	Mixed Races	Pacific Islander	Female	Male	Disabled
5452	704	386	1787	2165	20	320	70	1800	3652	266
<i>Clark-4279 Other-1173</i>	12.9%	7.1%	32.8%	39.7%	.4%	5.9%	1.3%	33%	67%	4.9%

Total State CS Enrollment cont'd	Economically Disadvantaged	ELL
5452	2534	417
<i>AP CS - 3440</i>	46.5%	7.63%

Nevada Department of Education - Office of Data and Accountability

AP Computer Science Principles Exam – 2017-2018

The number of AP Computer Science Principles exams in Nevada more than doubled in one year. There was a 127% increase in the number of exams, from 329 in 2017 to 746 in 2018. Female participation grew by 175%, from 99 female students taking the AP Computer Science Principles exam in 2017 to 272 taking it in 2018. The Hispanic/Latino participation grew by 179%, from 89 students taking the AP CSP exam in 2017 to 248 taking it in 2018. And finally, the black student participation grew by 217%, from 12 students taking the AP CSP exam in 2017 to 38 taking it in 2018. Nine Nevada schools were recognized by the College Board with their first ever Computer Science Female Diversity Award for our high female representation. But not only is our student AP CSP overall enrollment on the rise, but our students are learning – 59% of all AP CSP examinees in Nevada earned a passing score of 3 or higher.

Number of Students	2017	2018
	329	746
Enrollment by Gender	2017	2018
Female	99	272
Male	230	474
Enrollment by Demographic	2017	2018
American Indian/Alaska Native	2	1
Asian	61	115
Black or African American	12	38
Hispanic / Latino	89	248
Native Hawaiian or other Pacific Islander	0	3
White	4	23
Two or more races, non-Hispanic	19	74
No Response	142	244

AP College Board

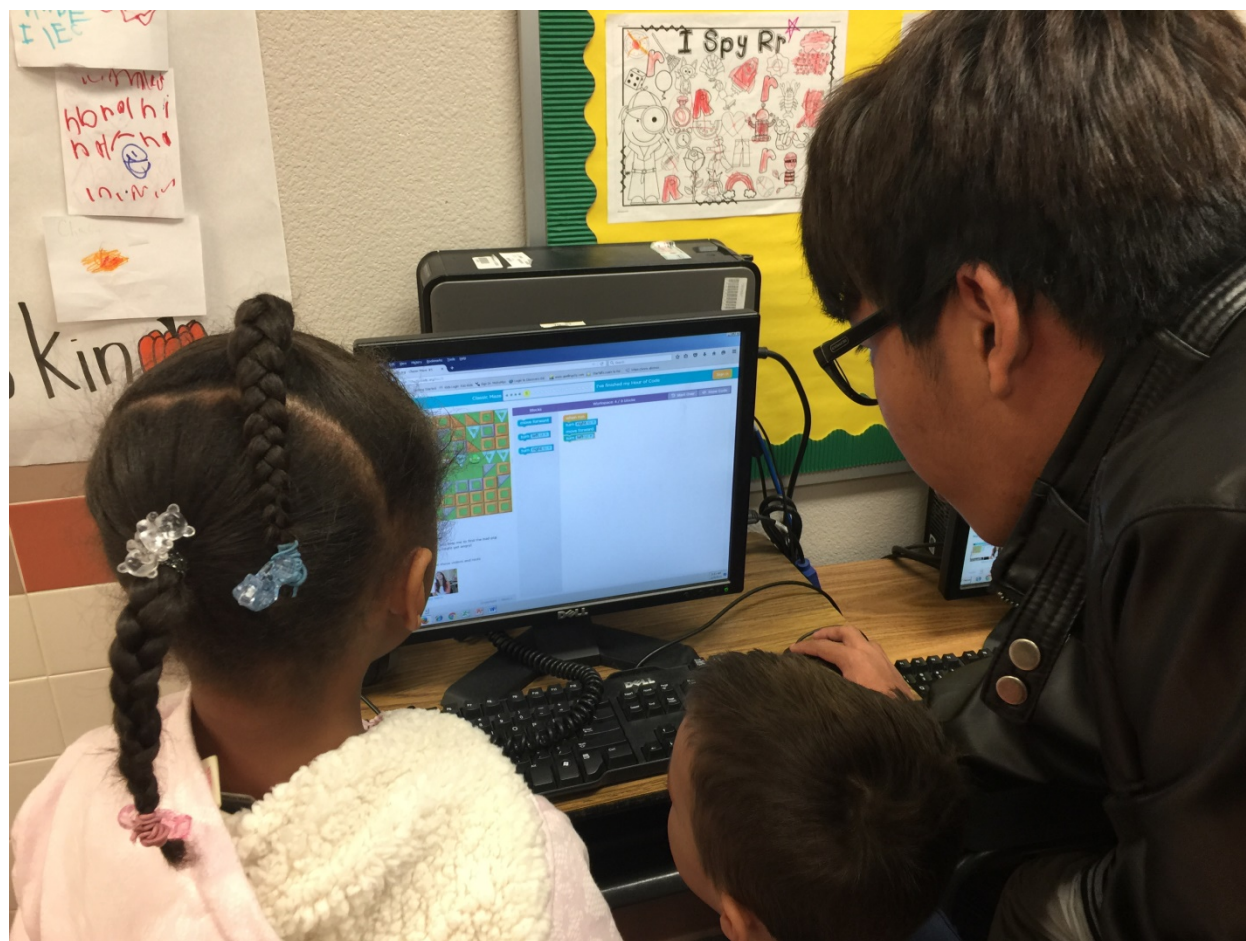
High Schools Offering Computer Science

The chart below outlines the trend for high school computer science course offering in districts from 2015 to 2019:

School Year	Total # of HS in state	Total # HS with CS	Percentage of HS with CS in the state	Percent change
2015-2016	90	19	21%	baseline
2016-2017	90	27	30%	+.07
2017-2018*	90	40	44%	+.14
2018-2019*	90	60	67%	+.23

Nevada Department of Education - Office of Data and Accountability

* denotes SB 200 funding allocation years



Funding Allocations and Expenditures

Specifics will be outlined in the sections below on FY18 and FY19 allocations and spending. There were three uses of funds that were outlined in the application to the districts and charters. Eligible use of funds included:

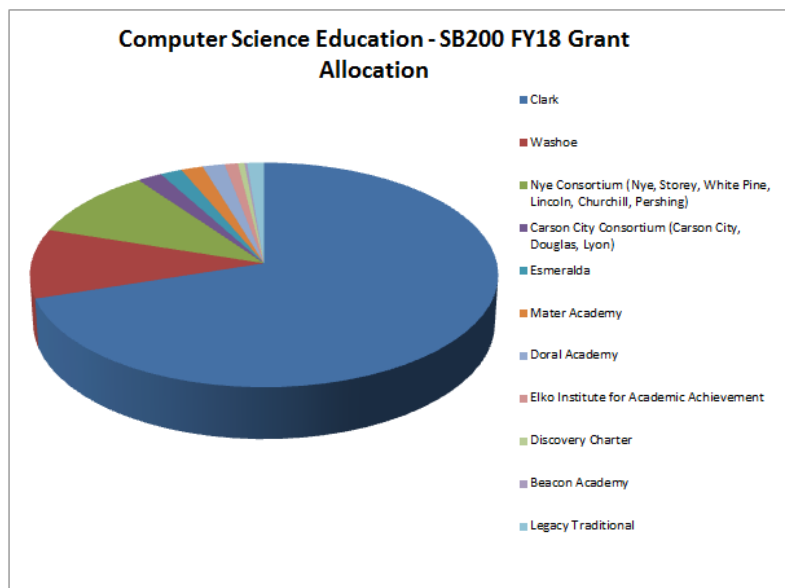
- **Professional Development** that will directly impact teachers and students in ways to teach to the standards for computer science and computational thinking in the classroom; may include teacher stipends for qualified professional development. (SB200 Section 5.5)
- **Professional Development for administrators and counselors** on new graduation and college admission requirements with regards to computer science courses, teacher licensure requirements, and efforts to increase enrollment by females, students with disabilities, and underrepresented groups in the field of computer science. (SB 200 Sections 2-3)
- **Curriculum / Equipment / Professional Development** that directly ties to computer science instruction and the expansion of computer science education in all grade levels. (e.g. Robotics kits to be used within curriculum developed to implement the new K-12 Computer Science standards in a fifth grade math class*). (SB 200 Section 2-3) **only one example of many possible*

FY18 Allocations

The graph and chart below show the allocated amounts that went specifically to Clark and Washoe, and then the non-competitive allocation to all rural districts and charter schools that applied for fiscal year 2018.

Computer Science Education - SB200 FY18 Grant Allocation

District/Charter	Allocation
Clark	\$ 700,000.00
Washoe	\$ 100,000.00
Nye Consortium (Nye, Storey, White Pine, Lincoln, Churchill, Pershing)	\$ 100,701.61
Carson City Consortium (Carson City, Douglas, Lyon)	\$ 18,886.93
Esmeralda	\$ 16,783.60
Mater Academy	\$ 16,783.60
Doral Academy	\$ 16,783.60
Elko Institute for Academic Achievement	\$ 10,195.00
Discovery Charter	\$ 5,000.00
Beacon Academy	\$ 2,000.00
Legacy Traditional	\$ 12,865.66
Total FY18 Allocation:	\$ 1,000,000.00



FY18 Expenditures

FY18 allocations were distributed late (January, 2018) due to miscommunication, but once the LEA's received their letters, they put the funding to great use and ***spent 91% of the overall funding for FY 2018.***

Expenditures as reported by the districts/charters for FY 18 included:

- Beacon Academy used its funding to expand their CS courses and increase their enrollment of Hispanics, females, and special education students in computer science by 50%
- The Consortium of Carson City, Douglas, and Lyon used its funding for extensive teacher training on the new K-12 computer science standards, in partnership with the NWRPDP - unwrapping the standards, lesson design, curricular resources, course alignment and integration.
- Clark County used its funding for technology in high need areas, coding kits for elementary, online computer science course development for locations that lack qualified teachers for CS, teacher stipends/reimbursements for endorsement courses, and extensive PD for K-12 teachers.
- Discovery Charter used its funding for technology (Lego Mindstorm Kits / Dash and Sphero robots) and extensive teacher training on how to incorporate computer science and the standards into all classrooms.
- Doral Academy used its funding for extensive teacher professional development on the K-12 CS standards, to purchase needed technology, and teacher training on how to incorporate CS into other core subject areas.
- Elko Institute for Academic Achievement used its funding for extensive teacher training on the K-12 CS standards and technology for grades K-8 (Kinderlabs Robotics, Lego WeDo and Mindstorms) to integrate the standards into STEM related areas.
- Esmeralda County used its funding on extensive teacher training on the K-12 CS standards and curriculum (CS Fundamentals and CS Discoveries), and technology for implementation (Adafruit CS electrical circuit kits used in CS Discoveries and STEAM CS kits).
- Mater Academy used its funding for extensive teacher training on K-12 CS standards and travel to inaugural Computer Science Summit in Las Vegas, and technology (laptops) for implementation in classrooms.
- The Consortium of Nye, Storey, White Pine, Lincoln, Churchill, and Pershing used its funding for developing an aligned computer science curriculum along with maps and learning guides for all grade levels, online and on-demand teacher PD that is aligned to the K-12 CS standards, and extensive teacher professional development on each of these items.
- Washoe County used its funding extensive training provided by NWRPDP on the K-12 CS standards, training and travel to the CS Summit, technology and classroom resources for implementation of standards, stipends for curriculum development across all grade levels, and tuition reimbursement for courses towards teacher CS endorsements.

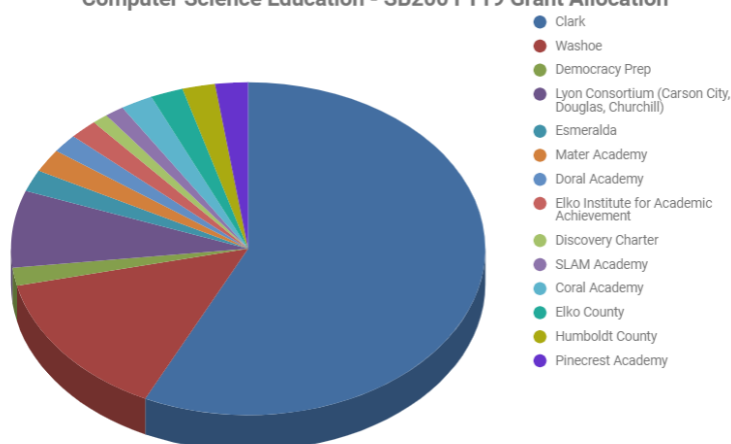
FY 19 Allocations

The graph and chart below show the allocated amounts that went specifically to Clark and Washoe, and then the non-competitive allocation to all rural districts and charter schools that applied for fiscal year 2019.

Computer Science Education - SB200 FY19 Grant Allocation

District/Charter	Allocation
Clark	\$ 800,000.00
Washoe	\$ 200,000.00
Democracy Prep	\$ 24,476.80
Lyon Consortium (Carson City, Douglas, Churchill)	\$ 104,648.41
Esmeralda	\$ 29,664.43
Mater Academy	\$ 31,299.09
Doral Academy	\$ 25,257.00
Elko Institute for Academic Achievement	\$ 26,899.00
Discovery Charter	\$ 15,000.00
SLAM Academy	\$ 18,338.00
Coral Academy	\$ 30,800.00
Elko County	\$ 31,229.09
Humboldt County	\$ 31,229.09
Pinecrest Academy	\$ 31,299.09
Total FY19 Allocation:	\$ 1,400,000.00

Computer Science Education - SB200 FY19 Grant Allocation



FY19 Expenditures

FY19 allocations were distributed July 1, 2019. At the date of this report, districts and charters have reportedly spent 88% of their funds and have until late August to submit final paperwork.

Expenditures budgeted and plans reported by the districts/charters for FY 19 include:

- Clark County budgeted its funding for technology in high need areas, coding kits for K-8, online computer science and technology half-credit for graduation course development for locations who lack qualified teachers for CS, continued teacher stipends/reimbursements for endorsement courses, and continued extensive PD for K-12 teachers in partnership with the Southern Nevada Regional Professional Development Program (SN-RPDP) and conference attendance.
- Coral Academy budgeted its funding for extensive K-12 teacher PD and computer kits, curriculum and resources.
- Democracy Prep budgeted its funding for computer science conference attendance for teachers, educator training to teach AP Computer Science, and to start a Robotics Club and Drone Club on campus, with equipment.
- Discovery Charter budgeted its funding for teacher PD and CS conference attendance.
- Doral Academy budgeted its funding for a CS teacher-leader for each of its campuses, equipment and training materials
- Elko County budgeted its funding for teacher PD in partnership with the Northeast Regional Professional Development Program (NE-RPDP).
- Elko Institute for Academic Achievement budgeted its funding for extensive teacher training on project-based learning using the K-12 CS standards.
- Esmeralda County budgeted its funding for continued teacher training on the standards and robotics equipment purchases (Lego WeDo and EV3) to support the extensive teacher training on the K-12 CS standards and curriculum given the first year of the biennium funding.
- Humboldt County budgeted its funding for extensive teacher training and Project Lead the Way curriculum to support computer science education.
- The Consortium of Lyon, Carson City, Douglas, and Churchill used its funding for continued extensive teacher training on the K-12 computer science standards, in partnership with the Northwest Regional Professional Development Program (NW-RPDP).
- Mater Academy budgeted its funding for curriculum development and teacher training on K-12 CS standards and CS equipment and curriculum (Lego Mindstorm).

- Pinecrest Academy budgeted its funding for teacher PD and endorsement reimbursement.
- SLAM Academy budgeted its funding for teacher professional development and equipment (laptops and cart),
- Washoe County budgeted its funding for development of CS connected curriculum/lessons with other core subjects (math, science, social studies, and art), robotics kits (Dot and Dash, Lego, Kano, Sphero), educational consultants and support from the University of Nevada, Reno (UNR) for CS curriculum implementation, extensive training PD, travel to support the Ed Tech standards revision workshop, and technology and classroom resources for implementation of standards.

Professional Development Statistics

Professional development has taken place through our Regional Professional Development Programs for K-12 educators throughout the state as well as district specific training. I will address both below. For calculation purposes, the total number of teachers in the state as of the date of this report is 26,515.

RPDP Trainings

Statewide Curriculum training for Computer Science Fundamentals (ES), CS Discoveries (MS), and AP Computer Science Principles (HS):

17-18: E(327) - 1% rural, M(13) - 62% rural, H(20)- 28% rural = 360

18-19: E(563) - 16% rural, M(52) - 29% rural, H(41) - 33% rural = 666

Total for biennium: **1,026**

Recent Spring/Summer PD:

ES Scheduled PD: 45 schools with approx. 25 teachers/school = **1,125**

MS/HS - Teacher PD applications for Code.org training: 52 (M), 41 (H) = **193**

2019-2020 goals:

Elementary schools: 80 schools with approx. 25 teachers per school = **2,000**

MS/HS: TBD

In addition, an [online teacher training portal](#) has been developed to assist teachers in their understanding and implementation of the new Nevada K-12 Computer Science Standards, particularly those educators in our rural regions.

District/Charter Specific Trainings

Clark District trainings specific:

Totals: MS and HS teachers and administrators = **150**

Washoe District trainings specific:

Totals: 40(E), 26 (H) = **66**

MS (half-credit grad req) = 6 piloting the course, 18 teachers initial training, 35-40 teachers in district-wide training in May

Rural District trainings specific:

Elko: 33 (CS online training portal)

Carson: 32

Douglas: 19

Lyon: 37

Storey: 1

Churchill: 28

Humboldt: 18

Total rural district level trainings: **168**

Charter School trainings specific:

Pinecrest Academy: 4 teachers

Doral Academy: 100% of staff - 126(ES), 60(US), 8(HS)= **194**

Other charter school data still coming in

Participation, Outreach, Curriculum, and Licensing

Participation

We have had considerable participation from our districts and charters in implementing the requirements of Senate Bill 200. Fourteen out of seventeen school districts have reached out for funding to support expanding computer science education in Nevada. In addition, nine charter schools have received funding and are actively working to support their teachers with CS education professional development.

Outreach

- [Byte-Size Seminar Series](#)
- [Regular CSforNV Blog updates for the state](#)
- [STEMHub Computer Science](#)

Approved Curriculum

- Computer Science Fundamentals (K-5 - Code.org)
- Computer Science Discoveries (6-8 - Code.org)
- AP Computer Science Principles (9-12 - Code.org)
- Project Lead the Way (various curriculum)

Teacher Endorsement Coursework

Background

On July 18, 2018, the Commission on Professional Standards (COPS) board unanimously approved changes to the teacher Computer Science endorsement requirements. They were presented before the Board of Education on August 30, 2018 and unanimously approved by that governing body. The 80th Legislative Session began which delayed the final ratification of the licensing changes until June 25, 2019 when the Legislative Commission completed the approval process.

Those changes were necessary to remove barriers to computer science teacher recruitment from within our current educator workforce and to provide additional opportunities for endorsement outside of taking only college coursework through taking and passing the recently updated Computer Science Praxis exam. The new endorsements take a tiered approach building off of two main courses: Methods to Teach Computer Science and Computer Science Concepts. This tiered approach will assist teachers in obtaining the necessary training to be successful but removes barriers to receiving those endorsements.

- **NAC 391.202: Endorsement to teach computer technology-based applications and computational thinking** - requires 3-credit course on Methods for Teaching Computer Science, 3-credit course on Computer Science Concepts, and 3-credit course on Methods to Teach Computer Applications
- **NAC 391.196: Endorsement to teach advanced computer science** - requires 3-credit course on Methods for Teaching Computer Science, 3-credit course on Computer Science Concepts, 6-credits on instruction in computer programming languages **OR** pass the Praxis exam in Computer Science.

Coursework Available

For initial computer science endorsement acquisition, there are numerous college and university course offerings available throughout the state, both in person and online. Please visit the stemhub.nv.gov/s/educator/page to find the up-to-date course listing for Nevada and other information.

There are currently only 104 educators who hold a computer science endorsement in Nevada.

In the Media

Computer Science education in Nevada has been mentioned in the media since our last report in July of 2018. Here are the links to those publications:

2019, March	Press Release: Nevada Department of Education - Nine Nevada Schools Earn First College board AP Computer Science Female Diversity Awards for High Female Representation
2019, March	Digital Learning Day: Student Interview - Carson City, NV Topic: CS and Technology Education for Nevada Students
2018, October	Press Release: Nevada Department of Education – Number of Girls and Latino Students Taking an AP Computer Science Course in Nevada More Than Doubles

2018, August

Press Release: Nevada Department of Education – [State Board of Education Approves Computer Science Requirement for High School Graduation](#)

Supporting Information

Providing accurate information to our constituents has been a priority since the signing of Senate Bill 200. To that end, many resources have been created and processes put into place to facilitate this communication. Those resources are listed below:

- [STEMHub Computer Science](#) pages
- [Nevada Department of Education Computer Science](#) pages
- [Byte-Size Seminar Series](#) for Teachers, Administrators, and District Leaders

Work in Progress

These items are still in working status:

- With the support of Senate Bill 313, to put systems in place in the NSHE Colleges of Education that support computer science education training for pre-service teachers, so re-training of newly graduated Nevada teachers in the field can phase out
- To put systems in place in the NSHE Colleges of Education to develop computer science education specialization degrees for teacher candidates
- Supports for K-5 educators and administrators for computer education and technology full implementation by fall 2020.
- Planning for the 2020 Nevada Computer Science Education Summit – “Achieving 20/20 Vision for CS Education” – February 8-9, 2020 (Reno, NV) and February 22-23, 2020 (Las Vegas, NV)
- Computer Science and Integrated Technology Instructional Support Guide is being developed by members of the standards writing team to support classroom educators in implementing the new standards
- Development of the Nevada Computer Science Equity and Diversity Guide to assist administrators on increasing enrollment in computer science coursework by females, students of color, and students with disabilities as directed in Senate Bill 200 by fall 2022.
- Development of an Administrator Training Guide and subsequent trainings around the implementation of computer science initiatives as referenced in Senate Bills 200 and 313, and best practices around the country.
- Policies and procedures for the review and adoption of curriculum, instructional materials, and classroom resources for computer science and computational thinking.