MINUTES OF THE
SENATE COMMITTEE ON EDUCATION

Seventy-ninth Session
February 28, 2017

The Senate Committee on Education was called to order by Chair Moises Denis at 4:07 p.m. on Tuesday, February 28, 2017, in Room 2134 of the Legislative Building, Carson City, Nevada. The meeting was videoconferenced to Room 4412 of the Grant Sawyer State Office Building, 555 East Washington Avenue, Las Vegas, Nevada. Exhibit A is the Agenda. Exhibit B is the Attendance Roster. All exhibits are available and on file in the Research Library of the Legislative Counsel Bureau.

COMMITTEE MEMBERS PRESENT:

Senator Moises Denis, Chair
Senator Joyce Woodhouse, Vice Chair
Senator Tick Segerblom
Senator Pat Spearman
Senator Don Gustavson
Senator Scott Hammond
Senator Becky Harris

STAFF MEMBERS PRESENT:

Todd Butterworth, Policy Analyst
Asher Killian, Counsel
Shelley Kyle, Committee Secretary

OTHERS PRESENT:

Mark Newburn, Vice President, State Board of Education
Brian Mitchell, Director, Office of Science, Innovation and Technology, Office of the Governor
Craig M. Stevens, Clark County School District
Joshua J. Hicks, Microsoft Corporation
Cindi Chang, Clark County School District
Lisa Mayo-DeRiso, Break Free, Clark County School District
Sharon Pearson
Chris Daly, Nevada State Education Association

Mary Pierczynski, Nevada Association of School Superintendents; Nevada Association of School Administrators
Brent Legg, Vice President of Education Programs, Connected Nation
Constance Brooks, Vice Chancellor, Government and Community Affairs, Nevada System of Higher Education
Michael Flores, Director of Communications & Government Relations, College of Southern Nevada, Las Vegas
Nick Di Archangel, Director of Communications, Nevada State Education Association
Ray Bacon, Nevada Manufacturers Association
Ed Gonzalez, Clark County Education Association
Matt Morris, Legislative Director, Office of the Governor
Anna Slighting, HOPE, Honoring Our Public Education

CHAIR DENIS:
We will begin the meeting with Senate Bill (S.B.) 200 presented by Senator Woodhouse.

SENATE BILL 200: Revises provisions relating to instruction in computer education and technology. (BDR 34-266)

SENATOR JOYCE WOODHOUSE (Senatorial District No. 5):
I am representing Senate District No. 5 in Clark County and am presenting S.B. 200 to you today. You may remember, during the 78th Legislative Session, I brought forward similar legislation. One of the reasons for doing so, and continues to be so, was and is to heed the call to action that many of us responded to in the Brookings Institution's "Breaking the Code" report of several years ago. This bill is expanded beyond that. I will read from my written testimony (Exhibit C).

MARK NEWBURN (Vice President, State Board of Education):
Senator Woodhouse asked me to talk about what has now become a national movement known as Computer Science For All. I will also talk about the work of the Nevada Science, Technology, Engineering and Mathematics (STEM) Advisory Council task force and give the rationale of what we are trying to accomplish. I will read from my written testimony (Exhibit D).

SENATOR HAMMOND:
Section 2, subsection 2 talks about making efforts to increase the enrollment in the field of computer science of female pupils and pupils who belong to ethnic and racial groups. What are you expecting out of this?

This push was made a few years ago. The result was less females were getting involved. Have we found what went wrong and what needs to be changed?

MR. NEWBURN:
There has been extensive research over the last few years to analyze what the roadblocks are. The starting curriculum for computer science has been completely revamped. This is a result of the book, *Stuck in the Shallow End: Education, Race, and Computing* By Jane Margolis, et al. A normal computer science course teaches programming language. The curriculum has been turned sideways. Now, it is more problem solving curriculum.

What has been discovered is girls and children of color are not enticed to take a class to learn Python. The students want a class that shows how they can be empowered to solve a problem. One might say to the student, "Since you care about shelter pets, you are going to learn how to build a Website that will match sheltered dogs with seniors living alone that need a companion." The course is structured differently in terms of solving problems which have been shown to increase participation by girls and children of color.

There is an effort to change how computer science is presented. There is a lot of knowledge on how to recruit the different classes of students. Senate Bill 200 creates an access opportunity so all students get that opportunity.

I am not claiming we will be great at it; however, we know a lot more than we did a couple of years ago about how to make it happen.

SENATOR HAMMOND:
Your response helps me. Also, the last word in section 2 is the word ("shall"), which precedes the first words in subsection 1 and subsection 2. Are you making this mandatory language? Will the parties involved need to report what they are doing to try to get students involved? If it is mandatory, there will have to be reporting requirements.

MR. NEWBURN:
We are moving toward computer science for all. The word "may" means computer science for more. We know what computer science for more looks like. It looks like 17 percent girls and 3 percent African-Americans and Hispanics together. It is to put an impetus on the serious attempt to make computer science for all happen.

SENATOR HAMMOND:
Is your intent in the bill to tell school districts they need to show us there is a serious intent to do this?

MR. NEWBURN:
Yes. The State Board of Education may ask the school districts, what is your plan? What are the techniques you are using? How successful are you?

SENATOR HAMMOND:
The Board may ask if they notice numbers are low.

MR. NEWBURN:
Yes, we will probably ask every time. This is a big problem the Board is attempting to solve.

SENATOR HARRIS:
Section 4, subsection 1, paragraphs (a), (b) and (c) allow an exception for a math or science credit if a pupil is enrolled in a computer science class. In terms of a practical impact, how does this affect college requirements for students who want to use the substitution for both in-state institutions and out-of-state institutions?

MR. NEWBURN:
There are about 38 states that allow computer science to count for math or science. Senate Bill 200 talks about having the university system recognize that it counts as a math or science credit.

Some of the early research indicated if a student takes the advanced placement computer science class, he or she is more likely to enter a technical field. Often, the roadblock with taking the course was there was no room in the student's course load.

It was the belief that for a particular student maybe taking computer science as the third year of science or even as the fourth year of math, gave the student the slot to fit the course into his or her schedule. There is a lot of debate and room for discussion about whether computer science should be a third year of math or a fourth year of science.

Arkansas has a flex credit. They have a slot that is like fourth-year math, third-year science, and it fits in that slot, too.

SENATOR HARRIS:
Are you saying there should not be an out-of-state problem with Nevada students getting acceptance into colleges because 38 states already allow this?

MR. NEWBURN:
It may be possible students encounter a state that has not gotten that far. In this area, K-12 is a little ahead of higher education in the recognition of that. There is a general recognition, particularly in science, that computer science could count for the third year. It depends on the program. If you are entering into biology or chemistry, a school may prefer you have all three years of science.

SENATOR HARRIS:
I am thinking of the general student. It would be one heck of a wake-up call for a student to find out the college of his or her choice will not allow him or her to apply because he or she has not complied with all the college's requirements. This was because the student was only trying to follow the flexibility offered in the State of Nevada. That is a concern.

I would like some additional information to make sure we have a high school counseling component with regard to this. If a student tries to use the computer science credit as a flex credit we would not want to inadvertently put his or her ability to get into the college of his or her choice at risk.

In section 7, subsection 3, the Millennium Scholarship is discussed. It appears to me there is intent in the bill to begin limiting the Millennium Scholarship to students who take computer science classes and/or science, technology, engineering and mathematics (STEM) curriculums. Am I reading that correctly?

MR. NEWBURN:
That was clearly not my intent in the bill. It was to remove the potential roadblock if a student took a computer science class as a third year of science and suddenly discovered he or she did not qualify for a key scholarship. That was my reading on it.

SENATOR WOODHOUSE:
I totally agree with Mr. Newburn. Limiting the Millennium Scholarship is not our intent. One of the individuals who will come forward in support of the bill will address this issue. It may be one of the areas in which we will need to make some amendments.

SENATOR HARRIS:
What are the current qualifications for the Millennium Scholarship? Is it just a grade point average (GPA) requirement? Are there certain course requirements now for students to be able to qualify for the Millennium Scholarship?

I thought it was strictly a GPA requirement. If there are going to be conditions with regard to course work, it concerns me we are moving toward limiting the Millennium Scholarship as opposed to making it open-ended, as it has been in the past.

SENATOR WOODHOUSE:
The Millennium Scholarship is based upon the GPA and residency in Nevada. It is not our intent to be so restrictive.

CHAIR DENIS:
I appreciate the bill. Having worked in computers for more than 25 years, I have seen how quickly college computer class knowledge can become outdated. Computer science changes so quickly. The fact we are trying to teach the critical thinking students need to learn will help them in the computer field.

It does not matter what you learned in school, what one needs to know is how to solve a problem. In the computer field, no matter where one goes to work, each company must train its new employees on what and how its computer programs work.

I want to make sure I understand section 8, subsection 1, paragraph (i). Are you asking the Advisory Council on STEM to appoint a subcommittee of three members of the main committee?

MR. NEWBURN:
I would prefer it said at least three. There are three people from the current Advisory Council on STEM who are on the subcommittee. The intent is the subcommittee will be much larger than three.

While we were going through this process, we discovered the Governor's Office and the Department of Education (NDE) were receiving inquiries from organizations and companies that were attempting to give us free professional development and free curriculums. The Advisory Council on STEM task force became the group where the questions flowed.

It is a recognition that this will be an ongoing issue. The State needs a body of people the organizations and companies can go to, to ask these questions.

SENATOR DENIS:
Are you suggesting we amend the bill to say at least three?

MR. NEWBURN:
That would be my recommendation.

SENATOR DENIS:
Are these three or more people selected from the Advisory Council on STEM?

MR. NEWBURN:
The intent is the Advisory Council on STEM has a certain distribution of talent. The computer science subcommittee would have additional members invited and appointed by the Advisory Council on STEM that would have more in-depth experience in computer science.

SENATOR DENIS:
Are you envisioning people not on the Advisory Council on STEM that would be appointed to the subcommittee?

MR. NEWBURN:
Yes.

SENATOR DENIS:
Section 8, subsection 1, paragraph (i) is not clear, and there is no direction other than to create a subcommittee. You may want to clarify this.

SENATOR SPEARMAN:
I would like this on the record and I will provide you with the link. It may speak to Senator Harris' concern about substituting computer science for some of the math.

The article, "CS in HS: Promoting Computer Science Education in High School," by Trevor Ross at the Missouri University of Science and Technology and I quote:

> The world is in the midst of a technology revolution. Each day, new computing devices are introduced, hundreds of new websites are created, and people who have never used the Internet are trying it out for the first time. Nearly two thirds of Americans currently own a smartphone, and that number will only continue to climb. Even cars, thermostats and refrigerators are becoming computerized and connected. This isn't groundbreaking information; most people are aware of this. What isn't common knowledge, however, is who creates this technology. How does Google always seem to know exactly what you are asking for, even when you're not sure how to ask it? How does Facebook manage to accommodate the various needs and interests of over 1—billion users each month? Who is responsible for making this technology so comprehensive? The answer to the last question, of course, is computer scientists, software engineers, database administrators, computer engineers and others in the technology industry. … They work every day on technology that is shaping the future. However, it is the future that is looking bleak. There are currently too few college graduates suited to fill the demand of the growing tech industry.

I want to say this about Senate Bill 200: it provides us a more diverse toolbox. Yes, there will be some students who will want to go to college, and many times we have curricula that are specifically designed for them. Many of our students have no desire to go to a four-year college.

A few years ago, I was attending an Internet policy conference with Microsoft, Google, Facebook and Apple. I learned these companies have summer internships they provide to students between the eleventh and twelfth grade years. They have a hard time finding students who will qualify because in most of our State curriculum, we do not offer computer science as a substitution, if you will, for some of the more mainstream classes.

There are those for whom college does not work. When we limit the curriculum to the nineteenth century model, for those students who do not desire to go to college and work well with other things, their thought processes are much different.

We need to take a serious look at revamping our curriculum and make it more friendly towards the twenty-first century. Look back on the discussions we had on the Floor with Faraday and Tesla. When a twenty-first century company comes to Nevada, one of the first things they say is it will take a while to ramp up the skilled workforce it needs.

I do not see this as an either/or. I see it as a both/and. Those who want to attend college will be meticulous about the requirements needed from them. There will be some students for whom sports will not work for entering college; however, they will stay in school if there is an opportunity to do some things with computers. There is a company in Las Vegas that pays people good money to try out new video games to see if they work.

I am looking at this bill as an addition to, not a subtraction from.

SENATOR HARRIS:
I could not agree with you more. It is wonderful to open up options for all of our students regardless of whether they will attend college. I am simply concerned that as children engage in this dialogue with their parents, teachers and administrators, that there be a protective mechanism built in. Should they decide they want to attend college in the last part of their senior year, we have not foreclosed the possibility for them.

SENATOR HAMMOND:
I agree with this healthy discussion. It seems to me this bill will be a minimum requirement for students. There may be some schools that will want to offer more computer science courses, and students would be able to choose to go to

those schools. I am a big advocate of allowing students to figure out what they like. We are talking about putting requirements on schools.

I had the same questions as Senator Harris regarding section 4. Additionally, in section 4, subsection 2, paragraph (a) where it states "May not apply more than one unit of credit … ." I thought Senator Woodhouse had said no more than a half credit. Is it a half-unit, or can a student go up to a unit? My other concern is will a student still receive the math needed to graduate?

SENATOR WOODHOUSE:
I misspoke. Mr. Newburn will clear up this question.

MR. NEWBURN:
The intent is this would count as a fourth math class or third science class, not both. This is standard for what other states are doing.

SENATOR HAMMOND:
Senator Harris' concern is real. You are replacing one whole credit. Are students graduating with the math or science that is necessary? I appreciate information you can give us on our concerns on this matter.

In section 3, subsection 1, you begin talking about elementary schools. It states, "Before beginning sixth grade, each pupil who is enrolled in a public school … must receive instruction in computer education and technology … ." Are you contemplating having standards written for kindergarten and first grade through fifth grade? Is there a particular grade you have in mind when they need to get ready?

In the last portion of section 3, subsection 1, it states, "… instruction on the skills necessary to complete the criterion-referenced examinations administered pursuant to [*Nevada Revised Statutes*] *(NRS)* 390.105." Many schools are doing that now. This ensures the students receive a higher grade on the test because they know how to navigate the test itself and know how to use the computer. Can you elaborate what your intention is on this particular section?

SENATOR WOODHOUSE:
This is a K-12 plan. My philosophy is to move computer literacy into the elementary grades and computer science into the secondary schools. We have been talking about computer literacy and computer science.

Too often we have used these words interchangeably. In Mr. Newburn's testimony, he delineated clearly what computer literacy means. Computer science is a much larger topic and gets students into problem solving and critical thinking.

For the elementary students, computer literacy starts them out. I taught some of the basic parts of computer literacy when I was teaching first grade.

MR. NEWBURN:
One intent is recognition that the Smarter Balanced Assessment Consortium tests are online. These are tests given to third-graders through eighth-graders. The current system is expecting students to take online tests starting in third grade and not really receiving an education in using computers until the middle school course that is a half credit for graduation.

Eventually, we want to move the half credit that is now in middle school for graduation into elementary school. The elementary students need to know this information now.

If they do not have the exposure with computers, the tests will start to measure that fact in addition to math and English. A score will reflect the fact the student did not know how to manage the test tool.

Senator Hammond is correct. The districts are already doing this. We are not asking the districts to do anything differently. It is more of a recognition from the State that this shift has occurred. We have learned from partner states that they have made this shift.

This content used to be taught in college, then moved down to high school, then moved to middle school and now is on its way down to elementary school. It is the recognition of that fact.

There is a broader discussion of the standards. I believe there will be elementary school standards. Because computers are so pervasive, there is a natural interconnection with computer science and virtually every other subject. Educators are integrating those concepts into elementary schools.

A teacher will testify today who has experience in teaching these concepts to students. She may be able to bring some additional perspective on what that

can involve. Also, you have been given a letter of support from a STEM high school teacher from the Advanced Technologies Academy in Las Vegas (Exhibit E).

SENATOR HAMMOND:
The intent is to allow this Committee to develop standards for the elementary grade levels as far down as possibly kindergarten, first and second grades to prepare them for the third-grade test.

SENATOR WOODHOUSE:
Yes, that is correct.

SENATOR SPEARMAN:
You mentioned students who have the opportunity to get a private education and the advanced technology they learn there versus those students who attend our public schools. We have starved the public schools' budgets, so students do not have the same opportunities. Can you speak to that, please?

MR. NEWBURN:
This was research from *Stuck in the Shallow End*. It was not private school versus public schools. It was just public schools in affluent predominately white neighborhoods versus public schools in lower income neighborhoods that served predominately children of color.

There was a significant level of inequity between what they were able to offer. It was not always an inequity in ability of equipment, though that is a national problem. It was inequity in the course material and the experience level of the teacher.

In the more affluent neighborhoods, they were teaching high rigor, computational problem-solving computer science. In the lower income neighborhoods, they were teaching low level computer literacy topics. That was the inequity. There have been several studies nationally. This is a consistent inequity. It is a scarce resource and tends to get rationed based on the wealth of the neighborhood the school is in.

SENATOR SPEARMAN:
The other benefit of the legislation that has been proposed by Senator Woodhouse is equalizing. As Legislators and policy makers, how do we

put into policy, and put money behind it, for public education for the things our students need? It is not just linear learning anymore; we are talking about contextual learning. Learning incorporates all of one's life experiences. Here again, I think that this particular piece may not be a silver bullet. I think it forces us to bring our curriculum into the twenty-first century and our funding mechanism for the public school into the twentieth century.

CHAIR DENIS:
Those in support of the bill, please come forward.

BRIAN MITCHELL (Director, Office of Science, Innovation and Technology, Office of the Governor):
As the Director of the Governor's Office of Science, Innovation and Technology (OSIT), I fully support S.B. 200 and commit to working with the subcommittee.

Many of the skills required by the New Nevada economy will be learned in computer science classes and it is imperative that every student in Nevada have the opportunity to learn these skills.

Governor Sandoval has made STEM education and workforce development, particularly computer science, one of his top priorities. The Governor is one of seven governors to join the bipartisan Governors for Computer Science Partnership.

As a part of this partnership, he has committed to working with business and education stakeholders in Nevada to achieve the following three goals: enable all high schools to offer computer science; create high quality computer science standards; and provide for the necessary professional development for teachers. Senate Bill 200 will help Nevada achieve these goals.

In December, Governor Sandoval announced a partnership with Code.org and the College Board to bring two rigorous computer science classes to high schools in every school district in Nevada. This partnership will provide professional development to teachers in high schools in each school district in the State.

The Governor has also proposed continuing to fund the great teaching and leading fund in the Department of Education's budget, which funds science

technology, engineering and mathematics (STEM) professional development for teachers.

Nevada Revised Statute 223.640 establishes the Advisory Council on STEM which is supported by the Office of Science, Innovation and Technology. Section 8 of S.B. 200 requires the establishment of a computer science subcommittee to provide advice and recommendations regarding computer science standards, course curriculum, professional development and licensing.

As Director of OSIT, I fully support S.B. 200 and commit to working with this subcommittee.

CRAIG M. STEVENS (Clark County School District):
The Clark County School District (CCSD) supports S.B. 200. A news article on the front page of today's *Las Vegas Sun* states that Las Vegas is rich with dancers and dealers, but needs teachers and engineers. The article goes on to discuss the shortage of computer systems analysts and computer mathematical occupations. The article coincides with what we are talking about with today's bill.

According to the January 2017 report from the Governor's Office of Economic Development, the Governor's Office of Workforce Innovation for a New Nevada and the Department of Employment, Training and Rehabilitation regarding in-demand occupations the Nevada workforce needs, there is a significant demand for software developers. It is anticipated there will be 1,350 job openings in Nevada in this field by 2024. We want to be in a position to make sure those jobs are filled.

We appreciate the reasonable timelines in S.B. 200. It takes time to fill positions in our schools in order to create curriculum. In order to do the things we need to do, specifically the elementary school piece, the timelines give us the ability to plan.

We have a final consideration to ask the Committee. A certain license is required for a teacher when over 50 percent of computer science is taught in a course. This license requires an additional 12 semester credits in computers and computer programming, including instruction in at least two languages.

Senator Woodhouse specifically stated there is a difference between computer literacy and computer science. We want to be careful how that is delineated because we do have a shortage of instructors who can teach computer science in the CCSD, in our State and in the Country.

We need to think carefully about the course instruction to be taught in elementary schools, middle schools and in the high schools and the licensure requirements of those educators in each of those grade levels.

We do not want to assign higher teaching requirements in the elementary and middle schools for the curriculum that will be taught in those grade levels.

JOSHUA J. HICKS (Microsoft Corporation):
I am here today representing Microsoft Corporation, and their letter of support has been submitted for S.B. 200 (Exhibit F). Microsoft Corporation is in strong support of S.B. 200.

CINDI CHANG (Clark County School District):
I have been a computer science instructor with the CCSD since 2006, and I am in support of S.B. 200. I have also been working as an affiliate trainer since 2014 with Code.org. Code.org is a nonprofit dedicated to expanding access to computer science and increasing participation by women and underrepresented minorities. Code.org has submitted a letter of support for this bill (Exhibit G).

My remarks will focus on the teacher training taking place in Nevada, and I have submitted my written testimony (Exhibit H).

LISA MAYO-DERISO (Break Free CCSD):
I am with Break Free CCSD and a School Organizational Team (SOT) member at Bonanza High School. Bonanza High School is a rich and diverse school where implementing this kind of program would be beneficial. We could learn so much because of our diverse group of students and could see how computer and technology can cross over both ethnic and economic boundaries. I am in strong support of S.B. 200.

SHARON PEARSON:
I am a retired CCSD elementary school teacher. I am going to give you the view of an elementary school teacher and the importance of computers there.

I am writing for an educational company. To give you an idea of what is available out there for elementary school students, it is no longer just the games that were played in my classrooms. It is learning the technology and being able to use it day-to-day. Some of the things we are writing about are cyber security and virtual reality. These are K-8 lessons that we are developing.

These lessons are going to serve to ignite our students' imagination and will get them over the top and ready to go on to middle school. My focus as a teacher and now as a professional development instructor is to guide my students to become critical thinkers and problem solvers.

Elementary and secondary students need to have a strong basic understanding of technology and computer science just as they need a strong understanding of math and science.

As a teacher, one of the best ways to motivate students about learning was to engage them in science and computer technology. Bringing that world of social studies, reading, math and science together with computer technology opened things up for the students.

Questions are deeper; answers are accessible. When taught to find reliable resources, students become stronger problem solvers; they are more interested in the world around them. Our students will need to know about coding, about cyber security and things we know nothing about now.

My female students who were from underprivileged areas thrived on the use of technology. It seemed to level the playing field for them. They were primed for computer science. By ensuring that all students have access to strong computer science education, we are setting the stage for our children and their futures. I am in support of S.B. 200.

CHRIS DALY (Nevada State Education Association):
The Nevada State Education Association (NSEA) represents 40,000 educators. I have submitted our letter of support for S.B. 200 (Exhibit I).

MARY PIERCZYNSKI (Nevada Association of School Superintendents; Nevada Association of School Administrators):
We realize the importance of bringing our students along to deal with the future which lies with computers and computer technology. We appreciate the

timelines of the bill which are important for good and full implementation. We are going to need some time.

We also recognize and are concerned about the cost of full implementation. We know we will need more resources. We will require some professional development for our teachers. All of this is possible if we put our minds to it. This is an important bill and we are in support of S.B. 200.

BRENT LEGG (Vice President of Education Programs, Connected Nation):
I am Vice President of Education Programs for Connected Nation. We are a technology-focused nonprofit organization that works on education technology and school connectivity issues across the United States and specifically in Nevada under our Connect Nevada program. We are in support of S.B. 200.

Computer science and technology education are incredibly important to preparing Nevada kids to compete in our twenty-first century economy. It is important to expose these students to opportunities in computer science and technology early in their education so they have the opportunity to explore the career fields that are available to them.

The efficacy of computer science and technology classes is directly impacted by the speed and quality of broadband connectivity available at school. Our organization cares deeply about this issue. Unfortunately, our extensive research in Nevada has shown there are many areas in the State where school connectivity is lacking or worse.

We commend Governor Sandoval for highlighting this issue in his State of the State address and supporting initiatives to make sure it is addressed, and to facilitate courses like those called for in S.B. 200. We urge your support of this bill.

SENATOR HAMMOND:
What is worse than lacking?

MR. LEGG:
There are a number of areas in the State where the entire connection to the entire school is less than five megabits per second for the entire school. That is worse than lacking; it is worse than what your cellphone is capable of doing on the mobile LTE network you are connected to.

There are certainly areas of the State that are struggling and we think there are some creative ways to address those issues with some new federal funding that is on the table through the E-rate Program, also known as the Schools and Libraries Program of the Universal Service Fund.

SENATOR HAMMOND:
I want an opinion on where we are heading. I thought we were really working towards connectivity within our State, especially in the rural areas. Can the worse than lacking be improved quickly?

MR. LEGG:
That is the intent behind (S.B.) 53, which empowers the Governor's Office and OSIT to work on these issues specifically. We commend Governor Sandoval for raising this issue. It is certainly something that needs to be addressed. We have some opinions specifically on how it can be most effective in the State and we would love to talk with you about that further.

SENATE BILL 53: Revises provisions relating to the installation, operation and maintenance of telecommunications facilities. (BDR 18-234)

CONSTANCE BROOKS (Vice Chancellor, Government and Community Affairs, Nevada System of Higher Education):
We would like to thank Senator Woodhouse and Mr. Newburn for bringing this legislation forward. We view this as a wonderful platform and opportunity for Nevada to meet its economic development goals.

Senator Woodhouse allowed us to meet and discuss with her a little bit of the trepidation we had within section 6 of S.B. 200. I would like to thank Senator Harris for bringing that forward throughout this public discourse.

We have a concern and would respectfully ask for an amendment with respect to the mathematics portion of the language in section 6. The counting toward a unit of math could be potentially problematic. We would like to make sure our students are set up for success as they enter into our institutions. This is the only issue with the bill thus far, and we respectfully ask that the word "mathematics" be removed with respect to the Board of Regents.

MICHAEL FLORES (Director of Communications & Government Relations, College of Southern Nevada, Las Vegas):
I want to thank Senator Woodhouse for this bill and I echo what Dr. Brooks said in her testimony.

I do want to emphasize the importance of having a ready workforce. We have a cyber security program that is booming at the College of Southern Nevada, and we know students will need these skills in order to be successful with the jobs that are coming. We support S.B. 200.

NICK DI ARCHANGEL (Director of Communications, Nevada State Education Association):
I am Nick Di Archangel, Director of Communications of the NSEA and am in support of S.B. 200. I have a different perspective I would like to share with you.

In 1983, my math teacher encouraged me to join the first FORmula TRANslation (FORTRAN) class in New Jersey. The acronym FORTRAN is a scientific programming language, and I was 1 of 16 students to take the class.

Despite studying both BASIC and FORTRAN in high school, I did not go into a computer field. However, because of my skills, I was hired at the age of 16 by a local television station to program their Atari 800 to run a community bulletin board. This experience would lead to 25 years in broadcast television.

I credit computer literacy with giving me an edge. Even today, I use coding and problem-solving I learned in high school in my daily work. I mention here that I started in 1983 to emphasize the urgency of implementing this program now in Nevada. I applaud Senator Woodhouse for bringing the bill forward.

RAY BACON (Nevada Manufacturers Association):
The manufacturing sector has been moving rapidly to computers for years. I will ditto what everyone else has said. If I had to make a guess at this stage of the game, some new jobs that are being created by the economic development efforts that are going on in the State, probably 85 percent to 90 percent require computer skills at some level.

CHAIR DENIS:
I agree. When it comes to technology, people do not realize everything is being taken over by technology. When we worry about losing jobs, we are losing jobs because technology is making them better.

ED GONZALEZ (Clark County Education Association):
The Clark County Education Association (CCEA) represents 3,000 teachers in the Las Vegas area. The CCEA is in support of S.B. 200. I agree with everything that has been said about economic development.

I appreciate Senator Spearman and Senator Hammond bringing up the fact we need more people of color getting into computer literacy and computer science.

I am a person of color. I attended a very diverse high school and had a friend who lived down the street who took a computer science course at his high school. At my high school, I had typing. I understand some of the challenges we have in our schools.

It also reminds me of a conversation I had with a principal in Senator Woodhouse's district who wanted to bring coding to the classroom and asked me to help with some of the resources.

The conversation was: "Well, we just cannot help some of the schools over in the Henderson area." We need to help schools in each of the areas represented by our Legislators in Clark County. I know the CCSD is trying to have coding classes in their schools.

This bill will help to move the process forward. The districts will be able to offer it as a requirement for graduation. I appreciate anything we can do to help to get more students in computer science courses.

CHAIR DENIS:
Is there anyone in opposition of S.B. 200? Seeing none, is there anyone in a neutral position?

SENATOR SPEARMAN:
I want this on the record and am hoping someone from Nevada System of Higher Education (NSHE) is still in the audience.

Instead of downgrading the information in the bill, is it possible for NSHE to look at the compatibility between computer science programming and the outcome of mathematics? If critical thinking is the end result, is it possible for NSHE to look at the compatibility of computer science as well as mathematics?

That might be something worth exploring. It would not be a matter of automatically pre-empting mathematics as part of the bill.

We are talking about contextual learning and contextual application to the learning process as well as an interdisciplinary approach not just to school, but to life in general. All of these include critical thinking.

MS. BROOKS:
If I understand your question correctly, you are asking if we would consider this counting as a unit of math credit in order to get to the end goal of our students being able to have critical thinking skills. To answer your question, we look at the entire portfolio a student would bring forward as the platform by which the student would be able to demonstrate his or her critical thinking skills. We have some concerns in particular with calculus and geometry. There are some very specific nuances within the math discipline. Perhaps the computer science courses would not necessarily satisfy this concern.

We would look toward working with the NDE, the Governor's Office and others to do some intense curricular review and if we find this would be an opportunity for the unit of math credit to count after a pilot of seeing how this implementation would work, I think we would be happy to come forward and revisit this legislation and then maybe add math in the future.

SENATOR SPEARMAN:
You speak of calculus. After freshman year and sophomore year, many students may not take calculus, but I understand your point. Everyone is not going to go to college and in order to have a more skilled workforce, Senator Harris' recommendation to have a high school counseling component in the bill would be helpful for students not considering college after graduation. This was done when I was in high school.

I would hate to see us not move forward with this as an opportunity, particularly for students who have no desire to attend college. If there was

something that piqued their interest, they would be engaged more enthusiastically in the educational process.

MS. BROOKS:
Senator Spearman, we agree wholeheartedly with that notion. The bill in and of itself is an outstanding bill. We are in full support of it. We have concerns regarding section 6 of S.B. 200 especially for the math requirements and given the high number of students who come in needing remedial mathematics.

Section 6 states that a student who has successfully completed one or more courses in computer science described in section 4 will be allowed to apply one unit of credit received for the completion of computer science courses toward a completed course in mathematics or science.

We do have national accreditation standards and other things that make our institutions stand out, and we are not interested in doing this. We do understand your perspective and we thank you for that.

SENATOR HAMMOND:
I understand Senator Spearman's point. It is more about academic counseling. Making sure you know the student and know whether he or she wants to pursue a college curriculum or go into something else. It is about giving a student a choice.

SENATOR WOODHOUSE:
I have taken copious notes through the questions you all provided, as well as those questions, comments and proposed amendments from the other individuals who spoke here today.

We will be working on some amendments to this bill and will be bring it back to you. I want to thank Mr. Mark Newburn for all the work he did on this bill as well as his testimony here today.

CHAIR DENIS:
We will close the hearing on S.B. 200 and I will open our work session. We will begin with S.B. 19.

SENATE BILL 19: Revises provisions relating to dual credit courses. (BDR 34-227)

TODD BUTTERWORTH (Policy Analyst):
I will read the summary of the bill from the work session document (Exhibit J).

SENATOR HARRIS:
I have a question regarding the amendment that clarifies section 4, subsection 2, paragraph (c). I appreciate a district would need some flexibility in how to deal with tuition costs.

Would costs be pushed down to the families of the students? Would there be some tuition waivers at the community college level? Has there been conversation about how those costs are going to be covered?

MATT MORRIS (Legislative Director, Office of the Governor):
We had conversations with the districts. We want to ensure some of the programs that are working fairly well are not disrupted. There are some innovative systems to cover the costs of dual enrollment that are in place in some districts. We want to ensure those are not disrupted.

We have some ideas about students and families having some "skin in the game" when it comes to paying for dual enrollment. Even though a student is in high school, having the student and his or her family being responsible for some of the costs has some merit. At the same time, one of the barriers for dual enrollment is some students cannot access these opportunities simply because of cost.

On the budgeting side, there will be funds set aside through the NDE that districts can apply for. In addition to that, under the new Every Student Succeeds Act that was just re-authorized, there will be in Titles I, II, III and IV expanded opportunities for states to apply for federal funding specifically for dual enrollment.

This amendment contemplates providing the most flexibility possible; however, if a district or charter school is able to cover these costs, we want to encourage them to pursue those mechanisms. We also want it to be spelled out in the agreement.

SENATOR HARRIS:
I have concerns our low-income students and students who receive the lowest level of resources are not going to be precluded from participating in a program that is going to help educationally and change the trajectory of their lives.

CHAIR DENIS:
I will close the work session on S.B. 19.

SENATOR SPEARMAN MOVED TO AMEND AND DO PASS AS AMENDED S.B. 19.

SENATOR HAMMOND SECONDED THE MOTION.

THE MOTION CARRIED UNANIMOUSLY.

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CHAIR DENIS:
I will open the work session on S.B. 38.

SENATE BILL 38: Revises provisions governing the State's Central Mailing Room. (BDR 33-129)

MR. BUTTERWORTH:
I will read the summary of the bill from the work session document (Exhibit K).

CHAIR DENIS:
I will close the work session on S.B. 38.

SENATOR WOODHOUSE MOVED TO DO PASS S.B. 38.

SENATOR SEGERBLOM SECONDED THE MOTION.

THE MOTION CARRIED UNANIMOUSLY.

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CHAIR DENIS:
I will open the work session on S.B. 66.

SENATE BILL 66: Revises provisions relating to internship programs. (BDR 34-254)

MR: BUTTERWORTH:
I will read the summary of the bill from the work session document (Exhibit L).

CHAIR DENIS:
I will close the work session on S.B. 66.

SENATOR HAMMOND MOVED TO AMEND AND DO PASS AS AMENDED S.B. 66.

SENATOR GUSTAVSON SECONDED THE MOTION.

THE MOTION CARRIED UNANIMOUSLY.

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CHAIR DENIS:
I will open the work session on S.B. 76.

SENATE BILL 76: Revises provisions governing the investment of money held by the State or certain political subdivisions of the State. (BDR 31-431)

MR. BUTTERWORTH:
I will read the summary of the bill from the work session document (Exhibit M).

CHAIR DENIS:
I will close the work session on S.B. 76.

SENATOR GUSTAVSON MOVED TO AMEND AND DO PASS AS AMENDED S.B. 76.

SENATOR SPEARMAN SECONDED THE MOTION.

THE MOTION CARRIED UNANIMOUSLY

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CHAIR DENIS:
I will now open the work session on S.B. 119.

SENATE BILL 119: Provides immunity from civil liability to certain volunteers who serve on an organizational team established by the principal of a public school as part of the reorganization of the school district. (BDR 34—322)

MR. BUTTERWORTH:
I will read the summary of the bill from the work session document (Exhibit N).

CHAIR DENIS:
I will close the work session on S.B. 119.

SENATOR SPEARMAN MOVED TO AMEND AND DO PASS AS AMENDED S.B. 119.

SENATOR HARRIS SECONDED THE MOTION.

THE MOTION CARRIED UNANIMOUSLY.

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CHAIR DENIS:
Is there any public comment?

MR. GONZALEZ:
I want to thank the Committee for supporting S.B. 119 on behalf of over 850 teachers who sit on school organizational teams. I know many parents who may not have run for the SOT Board because they were afraid of possibly being sued. We appreciate your support.

MS. MAYO-DERISO:
As an SOT member and the other 800 parents who serve on the teams in SOT, I want to thank the Committee for supporting S.B. 119. It has not been a concern of mine to serve on the team. The Legislators are recognizing us as parents and as volunteers, and recognizing the importance of the reorganization.

Thank you for doing this. It means a lot.

ANNA SLIGHTING (HOPE, Honoring Our Public Education):
I am representing HOPE, Honoring Our Public Education, a parent advocacy group representing nearly 1,000 families who advocate for public education in southern Nevada. We appreciate your support on S.B. 119.

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CHAIR DENIS:
Is there further public comment? Having no further business, the meeting is adjourned at 5:48 p.m.

RESPECTFULLY SUBMITTED:

Shelley Kyle,
Committee Secretary

APPROVED BY:

Senator Moises Denis, Chair

DATE:

EXHIBIT SUMMARY				
Bill	**Exhibit / # of pages**		**Witness / Entity**	**Description**
	A	2		Agenda
	B	6		Attendance Roster
SB 200	C	5	Senator Joyce Woodhouse	Written Testimony
SB 200	D	3	Mark Newburn / State Board of Education	Written Testimony
SB 200	E	1	Mark Newburn	Letter of Support / Advance Technologies Academy
SB 200	F	2	Joshua J. Hicks / Microsoft Corporation	Letter of Support
SB 200	G	1	Cindi Chang	Letter of Support / Code.org
SB 200	H	2	Cindi Chang	Written Testimony
SB 200	I	1	Chris Daly / Nevada State Education Association	Letter of Support / Seek Amendment
SB 19	J	2	Todd Butterworth	Work Session Document
SB 38	K	1	Todd Butterworth	Work Session Document
SB 66	L	3	Todd Butterworth	Work Session Document
SB 76	M	18	Todd Butterworth	Work Session Document
SB 119	N	3	Todd Butterworth	Work Session Document