

Raggio Research Center for STEM Education at the University of Nevada

A Report on the Findings of the Biennial State Educational Technology Needs Assessment SETNA 2016

**Prepared for the Nevada Commission on Educational Technology & the Nevada
Department of Education**

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EXECUTIVE SUMMARY

The State Educational Technology Needs Assessment (SETNA) report for 2016 is a summary of data collected through research and surveys distributed to the teachers, technology coordinators, and parents throughout Nevada's school districts and the State Public Charter School Authority (SPCSA). This report addresses Nevada's state and district educational technology plans, its integration of educational technology for achievement and proficiency of students, the current capacity of schools to positively impact students, and the overall preparedness of teachers to integrate educational technology into the classroom.

The State Educational Technology Plan (2009-2014) was replaced by the Nevada Ready 21 (NR21) plan. NR21 is a six-year plan for implementing statewide 1:1 student computing, focusing on optimizing infrastructure and connectivity, professional development, and instructional technology integration. Nevada School Districts are no longer required to have an updated Technology Plan as they now follow the State NR21 Plan. District Educational Technology Coordinators follow that plan as closely as possible adjusting for their individual district needs.

A successful integration of educational technology into Nevada classrooms is critical for ensuring student achievement and proficiency. Digital assessment testing can provide a more complete and nuanced picture of student needs, interests, and abilities than can traditional assessments, allowing educators to personalize learning (Gohl, 2009). As of this report, Nevada is still a governing member of the Smarter Balanced Assessment Consortium (SBAC) and is implementing an assessment system aligned with the Common Core Standards (CCSS). The launch of the SBAC assessment tests during the 2014-2015 school year were largely unsuccessful due to unforeseen complications with the testing vendor. Since then, the NDE has contracted with a new test vendor, and has continued the assessment tests during the 2016-2017 school year. The Nevada Department of Education (NDE) has confirmed that additional technology upgrades will not be required to accommodate for the 2016-2017 assessment tests.

All technology coordinators shared beliefs in the importance of computer-based assessments and their benefits in regards to preparing students for post-secondary education and the workforce. Technology coordinators voiced their experiences with the initial SBAC assessment tests, mentioning that though

their districts had sufficient bandwidth to participate, they found it difficult to coordinate devices for all of their students to take the tests within the allotted testing time frame. While there were no specific claims as to what the additional funding would be used for, all technology coordinators stated that their districts could benefit from increased funding.

Supporting a positive momentum towards 21st Century education in Nevada is the Nevada Ready 21 (NR21) statewide six-year initiative focused on implementing one-to-one student computing in awarded schools. NR21 aims to provide 24-hour access for students to a CTL NL6B Chromebook for Education, with the initial phase targeting middle schools in the 2016-2017 school year. In March 2016 NR21 awarded funds through a competitive grant process to 20 schools which amounted to over \$17.6 million in funding. This investment aims to improve broadband internet access as well as stimulate one-to-one digital learning and professional development in the awarded schools.

Technology coordinators were asked about the opportunities and challenges associated with the expanded use of laptops to supplement, and in some instances, replace textbooks. All coordinators agreed that the outcome would be positive, though some cited increased student engagement, improved technology skills, cost savings, increased student learning, and constant up-to-date material as specific benefits. When questioned about the challenges associated with increased laptop use, many coordinators cited inadequate funding for purchases and maintenance, lack of bandwidth, and ongoing subscription costs for textbooks and software. Statewide, technology coordinators shared concerns that the expanded distribution of laptop computers may have little impact on student learning if the teachers lack quality professional development opportunities. Nevada Ready 21 (NR21) has a significant component of professional development built in, specifically to address this issue. In addition, it was widely agreed upon that some teachers need training in how to effectively engage students and integrate educational technology into their lesson plans as an interactive learning experience.

Research into the topic of one-to-one computing in K-12 schools and its effects on student achievement and proficiency uncovered an extensive research article hosted by the Review of Educational Research. Their findings showed significantly increased academic achievement in science, writing, math, and English; increased technology use for varied learning purposes; more student-centered, individualized, and project-based instruction; enhanced engagement and enthusiasm among students; and improved teacher–student and home– school relationships. They also concluded that the expanded use of laptop

computers had specific benefits in drafting, revising, and sharing writing for students (Zheng, Warschauer, Lin, & Chang, 2016). These findings strongly support that one-to-one computing in K-12 schools has a positive impact on student achievement and proficiency.

Data provided by the technology coordinators suggests that since 2012 there has been an increase in the overall availability of educational technology in Nevada classrooms; specifically in the classrooms that they classified as “middle” and “high-end.” Estimates also suggest that there are fewer classified “low-end” classrooms with slightly more high-end classrooms in Nevada than there were in 2012. Consistent with previous reports, technology coordinators also cite funding and bandwidth as their concerns with increased student device use. Furthermore, technology coordinators are generally more concerned about supplying their teachers with high quality professional development opportunities than investing in additional educational technology for their classrooms.

Approximately 98% of teachers reported that their classrooms had a device for administrative tasks (attendance, lunch count, etc.) and estimated that 68% of those devices are fewer than five years old. Only 67% of the teachers surveyed confirmed that they had designated devices in their classrooms for student use; a decrease from the reported 94% in 2014 and 75% in 2012. In regards to internet access, 98% of the teachers agreed that they had an internet connection in their classroom. Of these internet connections, 54% of the teachers with wired (Ethernet) connections *agree to strongly agree* that their connection is dependable, down from 66% in 2014. Only 41% of the teachers with wireless internet connections *agree to strongly agree* that their connection is dependable, slightly up from 39% in 2014. This data suggests that, though internet access is widely available, over the years the dependability of those connections have not improved.

Parents are generally supportive of their children’s use of technology in the classroom, especially as it might translate into 21st Century job skills. However, many parents voiced their concerns through comments about their lack of knowledge about what technology students and teachers use, or have access to in the classroom. Furthermore, only 46% of parents agreed that their students use technology in the classroom while 30% disagreed, and 24% were unsure. In 2012, 74% agreed, 10% disagreed, and 16% were unsure. This suggests that parents in 2016 are less aware of the technology available in their students’ classrooms than they were in 2012.

Largely unchanged from 2012, parents still hold *medium* to *high* expectations regarding technology use in schools. When asked whether their schools were meeting these expectations, parents responded; 30% *yes*, 45% *no*, and 24% *I'm not sure*. In 2012, the parents responded 46% *yes*, 32% *no*, and 22% *I'm not sure*. The data reflect, that though expectations stayed essentially the same, a greater percentage of parents in 2016 feel that their schools are not meeting their expectations than in 2012. This could be a representation of the scarcity of information provided to the parents about the educational technology available in the classrooms, or that Nevada parents sincerely believe that their district's schools are not providing the expected levels and/or types of technology experiences they believe are necessary for their students' success.

It is interesting to note that with the introduction of the Spanish edition of the Parent Survey, data comparison uncovered one area that showed a difference in perception. Though the predominantly Spanish speaking and English speaking parents of Nevada shared the same expectations related to educational technology use in schools, 56% of the Spanish speaking parents feel their expectations are being met, compared to 30% of the English speaking parents. For reasons that are not clear from the data gathered, their perceptions related to the performance of their child's school and their expectations of educational technology differed.

Assessing the preparedness of Nevada teachers' to use certain educational technology tools during their instruction resulted in two discoveries: Nevada teachers feel the best prepared to use tools during instruction that are geared towards simplifying the task of displaying information (presentation software, internet resources, LCD projectors, etc.); while over half of Nevada teachers feel *not prepared* to *not at all prepared* to use learning enhancement tools, such as response clickers, integrated learning systems, probes and/or probe-ware, and simulations. These findings suggest that there could be additional hurdles associated with one-to-one classrooms, judicious technology integration, e-book implementation, and computer-based testing as they all involve learning enhancement tools. In addition, it is important to note that the teachers in large districts feel more prepared to incorporate educational technology tools into their instruction than the teachers in both the medium and small districts of Nevada. These findings underscore the high demand for professional development for Nevada's teachers.

While a majority of Nevada teachers reported that they feel prepared to adopt some educational technology tools into their instruction, the practices associated with teaching in those contexts are somewhat different. For example, teachers statewide reported that they are ready to use mobile technologies for instruction (73% felt *well prepared* to *very well prepared*). However, if the mobile technologies are in the hands of the students, each student having their own device, then only 42% of teachers feel *well prepared* to *very well prepared* to teach in that scenario. Also, a concern when considering the potential for e-books is that teachers are generally unprepared to teach in classrooms that deliver materials via devices, and in terms of readiness for teaching in blended learning environments, only 40% of teachers felt prepared.

Based on the perceptions of Nevada teachers, the quality of professional development opportunities sponsored by districts, local higher education (LHE), regional professional development (RPD), and schools have increased slightly when compared to previous years. However, the data exposed that teachers in 2016 are less prepared to teach using 21st Century teaching practices than they were in 2014, 2012, and 2010. This signifies that the professional development opportunities offered in Nevada might not be up to speed with the technological advancements of the 21st Century, and/or classrooms are lacking sufficient educational technologies for teachers to establish their skills.

Though Nevada has been making progress towards improving the educational technology capacity of the schools and statewide assessment testing, the data from the 2016 SETNA report reflect that there is still a strong need for educational technology across the state. For example, teachers in Nevada are least prepared to teach using emerging technologies that promote engagement and the best prepared to teach using simple technologies as a means to present information. Furthermore, teachers feel less prepared in 2016 than they did in 2014, 2012, and 2010 to teach using 21st Century teaching practices. If Nevada is to provide K-12 students with the necessary skills to graduate college and career ready, the educational technology infrastructure of the state needs to expand. Students will then be able to gain the technological experience required to compete with neighboring states as well as present teachers with the opportunity to practice teaching with such technologies. As suggested by technology coordinators, further investments in the educational technology infrastructure of Nevada will only be as effective as the teaching skills of the educators using that technology.

SECTION 1: OVERVIEW

PURPOSE

The purpose of this report is to present the findings of the 2016 State Educational Technology Needs Assessment (SETNA) of Nevada school districts. The needs assessment was guided by the requirements set forth in SB184 (sections 19.1d, 19.6a-b, and 27.1-27.3) and by the first needs assessment conducted in 2008. To address these requirements, the following research questions guided the assessments for 2008, 2010, 2012, 2014, and remain the guiding questions in 2016:

- 1. What is the current status of the state and district educational technology plans?*
- 2. In what ways can educational technologies improve instructional development, delivery, and assessment in Nevada?*
- 3. What is the current capacity of schools in Nevada to influence the achievement of students with educational technologies?*
- 4. How prepared are Nevada teachers to integrate technology into their classrooms?*

ORGANIZATION

This report contains results organized by the research questions. This section (Section 1) provides an overview, purpose, and context for the report. Section 2 illustrates the methods and design of the data collection undertaken expressly for this assessment. Section 3 addresses Nevada's state and district technology plans, the impact of those plans, and the progress of Nevada's statewide assessment testing. Section 4 highlights the current capacity of Nevada's schools. Section 5 addresses the preparation of teachers in Nevada to engage in judicious technology integration. Section 6 is a review of Nevada's parents' thoughts and perceptions related to educational technology in their district. Each Section 3 through 6 represents the evaluation of multiple data sources and includes trends over time, wherever possible. Finally, Section 7 addresses the summary of findings for this report, as well as recommendations from these findings.

DISTRICT CATEGORIES

Assessing the educational technology needs of a state as large and diverse as Nevada is challenging because of its geography, economics, and the great variations that exist within the State’s districts and schools. The unique needs of each district, school, and classroom are products of these variations. Whenever possible, this report leverages available data to describe the unique needs of the districts as well as the state as a whole. As in previous versions of the SETNA, this report refers to large, medium, and small school districts using the conditions listed in Table 1

Table 1: District size definitions

<i>Size</i>	<i>Student Enrollment</i>	<i>Districts</i>
Small	< 2,000	Esmeralda, Eureka, Lander, Lincoln, Mineral, Pershing, Storey, White Pine
Medium	2,000 - 20,000	Carson City, Churchill, Douglas, Elko, Humboldt, Lyon, Nye
Large	> 20,000	Washoe, Clark, State Public Charter School Authority (SPCSA)

SECTION 2: NEEDS ASSESSMENT DESIGN AND METHODS

The 2016 SETNA was designed to present the data gathered from the technology coordinators, teachers, and parents from each of the 17 districts throughout Nevada. As a new addition, the assessment also included Nevada's State Public Charter School Authority (SPCSA) in the data gathering and analysis. The goal of this report is to present the findings of the needs assessment to the Nevada Commission on Educational Technology, pursuant to the 2007 Senate Bill (SB184). The primary sources of the data were web-based surveys hosted on Survey Monkey (www.SurveyMonkey.Com) and distributed to the appropriate recipients via emailed letters from the SETNA Staff. Approval from the University of Nevada, Reno Institutional Review Board was secured prior to data collection, to ensure the protection of human subjects in the conduct of this research.

DEVELOPMENT OF THE SURVEYS

In order to gather relevant and comparable data, it was determined that the 2016 SETNA survey questions would closely resemble previous versions of the surveys. In 2014, the Teacher Surveys underwent revisions based on expert review from evaluators as well as a focus group conducted with technology leaders and coaches from Clark County School District (CCSD). These revisions focused on elements or aspects of use, utility, and impact, rather than an inventory of available resources. They stayed aligned with the major themes that were present in earlier publications of the SETNA. Thus, those revisions were retained and adopted for the 2016 surveys.

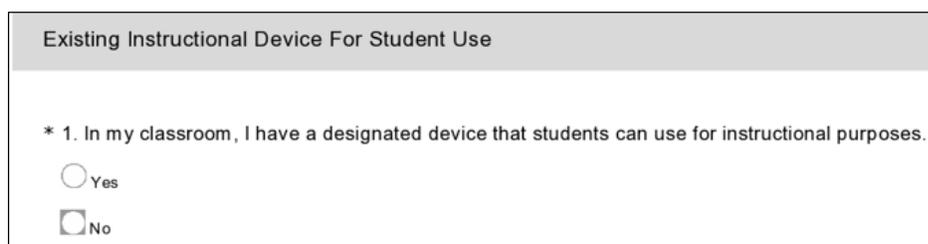
TECHNOLOGY COORDINATOR SURVEY

The Technology Coordinator Survey (Appendix A) was largely unchanged from the 2014 version. There were 28 open-ended questions that focused on technology planning, classroom capacity, school resources, teacher preparation, and professional development. One additional question, which requested feedback on how the survey could be improved for future SETNA reports, was added as the final question for the survey. The user interface of the survey included a percentage to completion display and a page counter to help the participants better allocate their time for the survey.

TEACHER SURVEY

The Teacher Survey (Appendix B) closely resembled the 2014 survey. The demographic section took into consideration length of teaching career, grade level, content area, district, job classification, and a self-evaluation of technology experience. The body included the sections titled: 1) existing technology in the classroom; 2) internet availability; 3) teacher preparation and technology readiness; 4) professional development availability; 5) classroom technology use; and 6) school-wide technology use. Furthermore, the use of Skip Logic* outlined additional sections labeled: designated administrative device, designated instructional device teacher use, designated instructional device student use, total devices in class, internet availability, and classroom technology use students.

The extensive length of the Teacher Survey created concerns in previous SETNA administrations. Therefore, it was considered to be of high priority that the design for the 2016 survey focus on reducing the time needed to complete the survey. To address this issue, the 2016 survey incorporated Skip Logic in the instrument design. This design strategy would skip certain sections of the survey if the response was such that the subsequent items were irrelevant to the participant. The judicious use of Skip Logic resulted in eight questions that the survey software enables a subset of respondents to skip. This resulted in two benefits: The Skip Logic questions promoted an accelerated flow through the survey, and further segregated the data, helping with data analysis. *Figure 1* displays an example of a Skip Logic question from the Teacher Survey. If a teacher answered “No” to this item, they were taken to the next item, whereas a “Yes” response would result in follow-up items.



The image shows a survey question titled "Existing Instructional Device For Student Use". The question is: "* 1. In my classroom, I have a designated device that students can use for instructional purposes." Below the question are two radio button options: "Yes" and "No". The "No" option is selected.

Figure 1: Example of a Skip Logic guiding question.

* Question Skip Logic lets you skip respondents to a later page, or a specific question on a later page, based on their answer to a previous closed-ended question.

As a result, the 2016 Teacher Survey had a total of 66 questions. This was an increase of 22 questions from the 2014 survey. Nine of the questions were newly added; eight Skip Logic questions and one question requesting feedback on how the survey could be improved for future SETNA reports. The remaining 13 additional questions were derived from converting some of the questions from the Qualtrics Survey Software that was used for the 2014 survey into the Survey Monkey platform. This required that some of the large Matrix* style questions from 2014 be separated into multiple, shorter questions. Though these 13 questions added to the overall number of questions in the survey, it was believed that the effort required to answer them was no more than that required in the 2014 Teacher Survey.

To further address the length issues associated with the Teacher Survey, of the 66 questions, eight were adjusted from open-ended answers to multiple choice. Overall, the development of the Teacher Survey took into consideration the 2012 survey and closely resembled the 2014 version. The survey had 22 additional questions; one new question, eight Skip Logic questions, and 13 questions derived from adjustments made during the integration of the 2014 questions into the Survey Monkey platform.

PARENT SURVEY

The SETNA 2016 Parent Survey (Appendix C) included all the questions developed in 2012 and used again in 2014. One new question (*Figure 2*) was added to the Parent Survey, making it a total of nine questions in length. In an attempt to improve the survey experience, seven of the nine questions were changed from open-ended responses to hybrid versions of multiple choice with the option to add comments. The one newly added question asked if the parent had anything else they would like share about educational technology in Nevada. Unlike the other questions in the survey, this question did not require an answer. As a result, 26% of the participants voluntarily submitted feedback. This question added value as it allowed for parents to voice their opinions in regards to educational technology on a statewide level.

* A Matrix question is a closed –ended question that asks respondents to evaluate one or more row items using the same set of column choices.

9. Do you have anything else you would like us to know about educational technology in Nevada? If so, please share below.



Figure 2: New question (Parent Survey)

A limiting factor in previous versions of this survey was the lack of a Spanish version for parents. Additional funding for 2016 allowed the SETNA staff to have the Parent Survey translated in to Spanish and made available to all Nevada parents. A link to the Spanish version of the Parent Survey was included in the letters to the parents (Appendix D). The Spanish edition had a total of 127 submissions spanning eight districts and the SPCSA. The results from both the English and Spanish versions of the Parent Survey can be found under Section 6: Parent Survey Results.

DISTRIBUTION

Hyperlinks to the surveys were distributed through letters emailed to the administration of each district and SPCSA. On January 5, 2016, all school district and SPCSA superintendents received, via fax and email, an introductory letter that made them aware of the SETNA process and the information that would be requested. On January 22, 2016, letters were emailed to the superintendents and technology coordinators of each district announcing the start of the surveys. The letters provided instructions on how to participate and asked for assistance with distributing the survey links. Additional letters addressed to the technology coordinators, teachers, and parents of each district were included in those emails. Further, each letter also contained an embedded link to the appropriate district-specific survey. A copy of each of the letters involved in the distribution process can be found in Appendix E. A personalized email was sent to the President of the Nevada State Parent Teachers Association (PTA), asking for assistance distributing the Parent Survey links. Weekly follow-up group emails were sent to the stakeholders involved in the distribution process. This technique proved to be effective in increasing participation on all of the surveys.

TECHNOLOGY COORDINATOR SURVEY

Technology Coordinator Survey links and letters were emailed directly to the designated technology coordinators for each district. As the weekly follow-up emails were distributed, superintendents often requested copies of the technology coordinator letters so they could help promote participation for their district. A handful of the coordinators requested PDF versions of the Technology Coordinator Survey to help them prepare their responses. It is a recommendation for future SETNA reports that a PDF version of the Technology Coordinator Survey be included with their announcement letters.

TEACHER SURVEY

Following previous methods, the superintendents and technology coordinators of each district were responsible for distributing the teacher letters and survey links. Overall, the distribution process for the Teacher Survey resulted in minimal issues, with the only reoccurring complaint being inactive survey links. The SETNA team quickly addressed this complication and discovered that the hyperlinks to the surveys would at times become broken during the email forwarding process. The number one solution was to copy the survey link text, and then paste it into the browser search bar.

PARENT SURVEY

Personalized emails that contained information regarding the Parent Surveys were sent to the superintendents and technology coordinators in each district. In addition, the SETNA team contacted the President of the Nevada PTA to help with the distribution process. The emails, which were to be forwarded to the parents, included introductory letters along with embedded hyperlinks to both the English and Spanish versions of the Parent Survey. The PTA email included an informative letter with links to all of the district specific Parent Surveys.

LIMITATIONS AND CONSTRAINTS

The Nevada Commission on Educational Technology (CET) approved additional funding for the SETNA 2016 report. As a result, the SETNA team was able to have the Parent Survey translated into Spanish, to reorganize and edit the Teacher Survey, to include the SPCSA in the survey process, and add some longitudinal comparisons to several sections of the report and compare the perceptions of Spanish

speaking parents against English speaking parents. An extremely tight timetable prevented the staff from examining the Technology Coordinator Survey for possible updates and restructuring.

As recommended by previous SETNA reports, the team decided on a judicious balance between depth and breadth for the Teacher Survey while preserving the ability to address the research questions in a meaningful way. Allowing participants to potentially skip irrelevant sections of the survey through the use of Skip Logic added to the number of questions, but decreased the time requirement for many participants. We are unable to analyze whether the Skip Logic technique was effective, considering a lack of comparable data from 2014.

After an initial review of the data, it was determined that out of 2,665 teacher responses, 6% were completed in less than ten minutes, 71% were completed within ten to thirty minutes, 11% were completed in thirty minutes to one hour, and 13% took over one hour. The 2014 report stated that the majority of participants finished the survey in ten to thirty minutes, with some spending forty minutes to an hour. From this data it cannot be determined if the Skip Logic technique was effective in reducing the time constraint for all participants. Nonetheless, it is clear that the Teacher Survey required a lengthy amount of time to complete. Thus, the data for the final section of the survey may be incomplete due to survey fatigue. An additional explanation for the surveys that took over an hour could be that the respondent stepped away from the survey for some reason, coming back to finish after some period of time.

OTHER DATA SOURCES

In addition to the surveys conducted expressly for this needs assessment, the evaluation team examined data from a variety of other sources. Additional supporting information for question one came from a review of the district technology plans, a select number of school technology plans, and from applications that were submitted for a State Educational Technology Implementation Funds sub-grant. Question two required a review of the applicable research and evaluation literature in the areas of computer-based assessment, one-to-one computing, and web-based collaboration in support of teaching. The Office of Educational Technology website, Superhighway study, and the Nevada Department of Education (NDE) Smarter Balanced Results Toolkit were amongst those sources.

SECTION 3: DISTRICT TECHNOLOGY PLANS

The sources of data in this section include the educational technology plans from the state and the districts, as well as data from technology coordinators, the Nevada Education Superhighway study, and applications for a Nevada Ready 21 related sub-grant. This section addresses the two guiding questions:

1. *What is the current status of the state and district educational technology plans?*
2. *In what ways can educational technologies improve instructional development, delivery, and assessment in Nevada?*

STATE PLAN

The State Educational Technology Plan (2009-2014) was replaced by the Nevada Ready 21 (NR21) plan. NR21 is a six-year plan for implementing statewide 1:1 student computing. As with the original plan, the NR21 Plan is the product of a collaboration, which utilized experts from both outside and inside the state including the One-to-One Institute, Cisco, NWN, Intel, the Nevada Department of Education, and the Nevada Commission of Educational Technology. The planning process was led by the NDE and the One-to-One Institute provided facilitators to help guide the process. The result was a comprehensive plan to guide Nevada through six years of focus on optimizing infrastructure and connectivity, professional development, and instructional technology integration. The mission that drives the NR21 Plan is:

To provide all Nevada students an equitable, technology-rich education that supports high standards, an engaging learning environment, and the development of the 21st century skills students will need to fuel the economic growth of the state. Furthermore, Nevada Ready 21 will support educators in their efforts to create more engaging and personalized instruction by providing the essential tools and the ongoing professional development to guide their transformation.

The plan acknowledges that these goals must be achieved in a culture of collaboration among all stakeholders to ensure students across the state master 21st Century Learning Skills including the Nevada Educational Technology Standards for Students. The rationale justifying each of these goals, and the anticipated learning benefits, are included in the text of the State Plan.

DISTRICT TECHNOLOGY PLANS

Nevada School Districts are no longer required to have an updated Technology Plan. E-Rate eliminated that requirement. The State NR21 Plan is now the technology plan for all 17 school districts. District Educational Technology Coordinators adjust that plan for their individual district needs.

NEVADA READY 21 SUB-GRANT STATUS REPORTS

Nine applications were submitted for a Nevada Ready 21 related sub-grant. These included up-to-date status reports as well as technology goals for the following districts: Churchill County, Carson City, Clark County, Elko County, Lander County, White Pine County, Mater Academy Charter School, Pine Crest Charter School, and Somerset Charter School.

All of these applications shared the common goals found in the Nevada Ready 21 Plan, demonstrating the desire to expand the reach of their one-to-one device programs. They all restate the importance of consistent use of technology in the classroom and at home for the success of their students. They also include goals for improved professional development, plans for onsite technology coaches and weekly meetings for classroom teachers, increased use of computer-based assessments to measure 21st Century learning outcomes, and the introduction of educational resources for parents. All applicants stated that they have sufficient bandwidth for the 1:1 initiative and assessment testing. Twenty-one schools were awarded NR21 funds for the 2016-2017 school year.

TECHNOLOGY COORDINATOR VIEWS ON TECHNOLOGY PLANNING

A few trends emerged in regards to technology planning during the technology coordinator data analysis. When asked questions related to technology planning on a district or school-wide basis coordinators agreed that they closely follow the NR21 Plan, with their greatest challenge being a lack of funding. This issue seems to be prevalent due to the fact that many of the districts rely on grants for their funding, rendering the funding unpredictable and inconsistent. A coordinator from one of the large school districts stated: “We do not have a single problem with technology that couldn’t be solved immediately with the proper funding and support.” This quote is an accurate representation of how the

“We do not have a single problem with technology that couldn't be solved immediately with the proper funding and support.”

great majority of technology coordinators responded about their district's challenges with technology planning.

The Technology Coordinator Survey data shows that most of the Nevada school districts rely on inconsistent funding for their technology planning. The few that do not solely rely on grant funding are Carson City, Humboldt, Nye, Storey, and the State Public Charter School Authority. The following is a summary of the updates provided on the surveys: Carson City is working to realign their priorities, so that their general fund can be used as a consistent and predictable funding source for educational technology related investments. Humboldt currently has a line item budget to purchase technology items, but they did not state if the amount is sufficient to cover their 1:1 initiative. Nye stated that funding is predictable and consistent for their technology department. Storey has a combination of grants and a general fund, both of which they consider predictable. The State Public Charter Schools have consistent and adequate funding for their technology needs, however it is dependent on student enrollment numbers.

In respect to how districts plan for educational technology, 12 of the 17 district coordinators referred to their use of a technology committee. Out of the remaining five districts, Esmeralda and Storey Counties are in the process of establishing a technology committee for their technology planning. Lincoln, Nye, and Pershing do not have technology committees, rather they promote collaboration among their staff and host group meetings for their technology planning. All of the State Public Charter School technology coordinators who responded, except for one anonymous outlier, have technology committees for their technology planning.

NEVADA READY 21 UPDATE

Nevada Ready 21 (NR21) is a statewide six-year initiative focused on implementing one-to-one student computing in Nevada schools. NR21 aims to provide 24-hour access to a portable technology device, CTL NL6B Chromebook for Education, for Nevada middle school students in the initial phase. In addition to providing Chromebooks for each student, the program will deliver comprehensive professional development training and support for teachers and will work towards improving broadband internet access in schools throughout the state.

Funds for the NR21 program are overseen by the Commission on Educational Technology (CET). Middle schools participating in the initial phase of the program were announced in March 2016. Funds amounting to over \$14 million were awarded through a competitive grant process to 20 Nevada schools. Additional funds were awarded at the April 2016 CET meeting, bringing the total awarded to \$17,671,036. Table 2 presents the total amount awarded per school, as well as the total amount awarded per district. Professional development for teachers and principals at participating schools will begin in late spring 2016 and continue throughout the program. Students will receive their new devices at the beginning of the 2016-2017 school year.

Table 2: 2016 Nevada Ready 21 grant awarded schools with amounts awarded per school and district

<i>District</i>	<i>School</i>	<i>Total Per School</i>
Carson	Carson Middle School	\$1,180,854.98
Carson	Eagle Valley Middle School	\$754,831.26
Churchill	Churchill County Jr. High School	\$591,458.11
Clark	Anthony Saville Middle School	\$1,568,143.22
Clark	Barbara and Hank Greenspun Junior High School	\$1,321,831.29
Clark	Bob Miller Middle School	\$1,443,114.70
Clark	Charles Silvestri Junior High School	\$1,453,463.43
Clark	Del E Webb Middle School	\$1,516,295.02
Clark	Elton M Garrett Junior High School	\$479,943.36
Clark	Lied Middle School	\$990,727.24
Clark	Mack Lyon Middle School	\$454,810.72
Clark	Sig Rogich Middle School	\$1,545,862.83
Elko	Adobe Middle School	\$640,637.83
Elko	Spring Creek Middle School	\$510,928.37
Lander	Eleanor Lemaire Junior High School	\$244,680.78
State Public Charter School Authority (SPCSA)	Mater Academy of Nevada	\$419,550.32
SPCSA	Pinecrest Academy of Nevada	\$1,752,606.40
SPCSA	Somerset Academy of Las Vegas	\$404,496.00
White Pine	Lund 6-8	\$127,761.68
White Pine	White Pine Middle School	\$269,038.64
Total Funds Awarded:		\$17,671,036.18
<i>District</i>	<i>Total Per District</i>	
Carson City	\$1,935,686.24	
Churchill County	\$591,458.11	
Clark County	\$10,774,191.81	
Elko County	\$1,151,566.20	
Lander County	\$244,680.78	
SPCSA	\$2,576,652.72	
White Pine	\$396,800.32	
Total Funds Awarded:		\$17,671,036.18

In order to support digital learning in all school districts in America, in July 2014 the Federal Communications Commission (FCC) established the connectivity goal of 100 kbps per student today with one Mbps per student by 2018. Data reported for the 2015 funding year (ESH, 2015) confirm that 47% of Nevada’s school districts are meeting the minimum 100 kbps per student connectivity goal, 94% of schools have the fiber connections needed to meet bandwidth targets, 59% of school districts accessed their E-rate budget for Wi-Fi networks, and 35% of school districts are meeting the \$3/Mbps internet access affordability target.

“To meet the 2018 bandwidth demand, the typical school district in NV will need to grow bandwidth at least three fold.”

-Education Superhighway

This data indicates that 47% of school districts in Nevada are ready for 1:1 digital learning today. However, in order to meet the 2018 demand, the typical school district in Nevada will need to grow bandwidth at least threefold to reach the Nevada K-12 connectivity goal set by the FCC (ESH, 2015).

COMPUTER-BASED TESTING IN NEVADA

Computer-based assessments are necessary tools for tracking the learning of Nevada students. It is essential to track students’ understanding so that parents and teachers can help them successfully prepare for college and the workforce. Paper assessments have been the means to accomplish this in the past, but the introduction of computer-based assessments helps reduce the time, resources, and disruption to learning required for the administration of paper assessments. Assessments delivered using technology also can provide a more complete and nuanced picture of student needs, interests, and abilities than can traditional assessments, allowing educators to personalize learning (Gohl, 2009).

Through technology-enabled assessments, educators can see evidence of students’ thinking during the learning process and provide near real-time feedback through learning dashboards (Reeves, 2007). Also, families can have the option to be more informed about what and how their children learned during the school day. In the long term, educators, schools, districts, states, and the nation can use the information to support continuous improvement and innovations in learning. Nevada has been taking steps to ensure that students have access to proper assessment testing so learning can be improved.

SMARTER BALANCED ASSESSMENT CONSORTIUM

The Smarter Balanced Assessment Consortium (SBAC) is a state-led consortium working to develop next-generation assessments that accurately measure student progress toward college- and career-readiness. Nevada is a governing member of SBAC, and is one of the two multistate consortia awarded funding from the U.S. Department of Education in 2010 to develop an assessment system that was aligned with the Common Core State Standards (CCSS), by the 2014-15 school year. As of 2016 the SBAC has developed a statewide assessment system to provide a fair and accurate, online testing opportunity for all students. Nevada kept to the deadline and launched the first installation of the SBAC assessments towards the end of the 2014-2015 school year.

SBAC UPDATE

The much anticipated launch of the 2014-2015 Nevada SBAC assessment tests were largely unsuccessful. The Nevada Department of Education (NDE) released the following statement, summarizing the issues presented during the introduction of the statewide assessment:

Due to a statewide irregularity in test administration, this year's data may not provide an accurate reflection of student, school or district performance and student score reports are not available for all students. Approximately 213,500 Nevada students were expected to take the Smarter Balanced assessments. However, due to computer system problems with Nevada's test vendor, Measured Progress (MP), and the Smarter Balanced test platform, the majority of students in Nevada were unable to complete all four sections of the assessment (NDE, 2015).

Administrative issues which included overloaded servers and system crashes ultimately rendered the data unusable. The disruption was felt statewide. Only about 62,400 students (30%) were able to successfully complete the Smarter Balanced assessment. The Clark County School District, which was never able to test at full capacity because of the computer system problems, had less than 5% of its students (about 5,800) complete the assessment (NDE, 2015). This event was determined to be a vendor issue not related to the existing technology infrastructure in Nevada schools. All three of the neighboring states that adopted and launched their first round of the SBAC tests in the 2014-2015 school year experienced similar scenarios.

The assessment administration company Measured Progress reached a pre-litigation settlement in August 2015 which resulted in a refund to the NDE of approximately \$1.3 million in cash and services

(NDE, 2015). For the 2015-2016 school year, the NDE has hired Data Recognition Corporation (DRC) as the new system administrator. It has been determined that this change in administration will not require any additional technology upgrades for Nevada schools. School districts will be able to use the same devices from the 2014-2015 school year to deliver this assessment. Testing will continue at the end of the 2016 school year. Students in grades three through eight will start the Smarter Balanced English and math tests at the end of the school year. No data are yet available on the 2016 testing efforts.

TECHNOLOGY COORDINATOR VIEWS ON ASSESSMENT TESTING

All technology coordinators shared beliefs in the importance of computer-based assessments and their benefits in regards to preparing students for college and the workforce. Technology coordinators voiced their experiences with the SBAC assessment test, mentioning that even though their districts had sufficient bandwidth to participate in the assessments they had a hard time trying to coordinate devices for all of their students to take the tests within the testing time frame. While there were no specific claims as to how the additional funding would be used, all technology coordinators stated in some way that their districts could benefit from increased funding. One issue that could potentially be addressed with additional funding would be the insufficient number of devices for assessment testing.

OVERALL PROGRESS ASSESSMENT TESTING

Overall, Nevada kept to the SBAC assessment deadline set by the U.S. Department of Education in 2010. From the statements posted by the NDE, it can be inferred that schools in Nevada were at least minimally prepared to participate in the launch of the assessment test, but many districts, even the districts with adequate technology, were unable to successfully complete the assessment test due to unforeseen circumstances. Schools who lacked in devices uncovered the problem of not being able to get all of their students to take the test in the allocated time frame. As the SBAC assessment test returns for the 2016-2017 school year, the NDE made it clear that there will not need to be any technology upgrades to accommodate for the new assessment test vendor.

EDUCATIONAL TECHNOLOGIES: INSTRUCTIONAL DEVELOPMENT & DELIVERY

The goal of educational technology integration into the curriculum at all grade levels has the support of a variety of local, state, and national stakeholders. For Nevada teachers to provide their students with the 21st Century technology skills needed to succeed as they advance into college and the workforce, the state of Nevada must take the necessary steps to foster technology efficacy among its teachers. The purpose of this segment is to consider some of the technological needs stated in the Technology Coordinators Survey, and the role laptop computers and other portable devices, as well as web-based collaborative technologies have in education.

EXPANDED USE OF LAPTOP COMPUTERS AND OTHER TECHNOLOGY DEVICES

Technology coordinators were asked about the opportunities and challenges associated with the expanded use of laptops to supplement, and in some instances, replace textbooks. All coordinators agreed that the outcome would be positive, though some cited specific benefits; increased student engagement, improved technology skills, cost savings, increased student learning, and constant up-to-date material were amongst those opportunities. One district explained their one-to-one experience in regards to replacing textbooks:

We have been doing this. I think this is less expensive. You have better content. It is more interactive. In some cases, it decreases a teacher's workload by eliminating monotonous grading of papers. The students seem to like it better. However, when the power goes out or when we lose internet connectivity (which occasionally happens) it can really disrupt the learning process in a classroom.

This quote aligns with most of the coordinators' opinions on the potential benefits with the expanded use of laptop computers. When questioned about the challenges presented by increased laptop use, many coordinators cited inadequate funding for purchase and maintenance, lack of bandwidth, and ongoing subscription costs for textbooks and software. Statewide, technology coordinators shared concerns that the expanded distribution of laptop computers may have little impact on student learning if teachers lack the proper professional development opportunities. In addition, it was widely agreed that some teachers need training on how to effectively engage students and integrate educational

technology as interactive learning rather than using them as tools to present information. An example mentioned in one of the surveys was that in some classrooms a Smartboard is often only used as a projection screen.

ONE-TO-ONE EFFECTS ON STUDENT ACHIEVEMENT AND PROFICIENCY

Research conducted in the 2012 SETNA report ventured into the topic of one-to-one computing and its effects on student achievement and proficiency. A review of the literature returned mixed findings, largely due to the lack of research supporting one-to-one initiatives at that time. Within the four-year timespan between the 2012 and the 2016 reports there remains a relative lack of research on the topic of one-to-one computing in K-12. However, during the review of literature the 2016 SETNA team came across an extensive research article published in the *Review of Educational Research*.

In the article *Learning in one-to-one Laptop Environments: A Meta-Analysis and Research Synthesis*, Zheng, Warschauer, Lin and Chang (2016) reviewed 65 journal articles and 31 doctoral dissertations published from January 2001 to May 2015 in order to examine the effect of one-to-one laptop programs on teaching and learning in K-12 schools. Findings showed significantly increased academic achievement in science, writing, math, and English; increased technology use for varied learning purposes; more student-centered, individualized, and project-based instruction; enhanced engagement and enthusiasm among students; and improved teacher–student and home– school relationships. They also concluded that the expanded use of laptop computers had specific benefits in drafting, revising, and sharing writing for students (Zheng, Warschauer, Lin, & Chang, 2016). These findings strongly support that one-to-one computing in K-12 schools has a positive effect on student achievement and proficiency.

DIGITAL TEXTBOOKS

Researching the topic of digital textbooks and their potential to reduce textbook expenses for K-12 schools resulted in a lack of up-to-date information. The bulk of the resources related to this topic exclusively focused on digital textbook opportunities in higher education. The lack of information on this subject could imply that cost benefits associated with digital textbooks may not be present. However, due to inadequate data, the 2016 SETNA is unable to make any concrete assertions on the topic of digital textbooks and their potential cost savings for K-12 schools.

SECTION 4: CURRENT CAPACITY OF NEVADA’S SCHOOLS

The sources of data for this section are the responses from the Technology Coordinator Survey and Teacher Survey. The purpose of this section is to address the guiding question:

3. *What is the current capacity of schools in Nevada to influence the achievement of students with educational technologies?*

TECHNOLOGY COORDINATOR SURVEY RESULTS

With the addition of the State Public Charter School Authority (SPCSA), the Technology Coordinator Survey experienced a large increase in its number of responses. The survey received a total of 28 submissions including all 17 of the Nevada school districts and the SPCSA. There were nine responses for the SPCSA, two each for Clark and Elko County, and one for each of the remaining districts. The following information was collected from the Technology Coordinator Survey.

Coordinators were asked a series of questions regarding the software and technical support provided to teachers, and the technological capabilities of the classrooms within their district. One of the questions asked the coordinators to describe the technological capabilities of a typical low-end, middle-end, and high-end classroom in their district. The question addressed issues such as computer and projector availability, internet capability, and any other types of technology currently available for teacher and student use in their district. In addition, the survey asked for an approximate percentage of the classrooms in their district that closely fit the classroom descriptions they provided. The following table (Table 3) displays the data gathered from the technology coordinators’ responses to the above question.

Table 3: Descriptions of three relatively common classrooms that can be found in each district

County	Common Low-End Classroom	Common Middle-End Classroom	Common High-End Classroom
Carson City	<p>Computer: 1 Teacher Computer</p> <p>Projector: Yes</p> <p>Internet Capabilities: Yes</p> <p>Other Technologies: Interactive Whiteboard Document Camera</p>	<p>Computer: 1 Teacher Computer 1:1 Device to Student</p> <p>Projector: Yes</p> <p>Internet Capabilities: Yes</p> <p>Other Technologies: Interactive Whiteboard Audio Enhancement</p>	<p>Computer: 1 Teacher Computer 1 Teacher Laptop 1:1 Device to Student</p> <p>Projector: Yes</p> <p>Internet Capabilities: Yes</p> <p>Other Technologies: Interactive Whiteboard Audio Enhancement</p>
Churchill	<p>Computer: 1 Teacher Computer 1 Teacher Laptop</p> <p>Projector: No</p> <p>Internet Capabilities: Did Not Specify</p> <p>Other Technologies: Interactive Whiteboard</p>	<p>Computer: 1 Teacher Computer 1 Teacher Laptop</p> <p>Projector: No</p> <p>Internet Capabilities: Did Not Specify</p> <p>Other Technologies: Interactive Whiteboard ELMO</p>	<p>Computer: 1 Teacher Computer 1 Teacher Laptop 1:2 Device to Students</p> <p>Projector: No</p> <p>Internet Capabilities: Did Not Specify</p> <p>Other Technologies: Interactive Whiteboard ELMO</p>
Clark	<p>Computer: 1 Teacher Computer 7-9 Years Old</p> <p>Projector: Yes- Shared</p> <p>Internet Capabilities: 100 MB Ethernet</p> <p>Other Technologies: Document Camera</p>	<p>Computer: 1 Teacher Computer 1 Student Computer 3-4 Years Old</p> <p>Projector: Yes- Shared</p> <p>Internet Capabilities: 5-6 100 MB Ethernet Wi-Fi Limited</p> <p>Other Technologies: Interactive Whiteboard Document Camera Mobile Device Cart for Checkout</p>	<p>Computer: 1 Teacher Computer 5+ Student Computers 1:1 Device to Student</p> <p>Projector: Yes- Dedicated</p> <p>Internet Capabilities: 5-6 100 MB Ethernet Wi-Fi Highly Available</p> <p>Other Technologies: Interactive Whiteboard Document Camera Mobile Device Cart Assigned</p>

County	Common Low-End Classroom	Common Middle-End Classroom	Common High-End Classroom
Douglas	Computer: 2 Computers 5 Years Old Projector: Yes –No Interaction Internet Capabilities: Wi-Fi 70 MB Other Technologies: Did Not Specify	Computer: 6 Computers 3-5 Years Old Projector: Yes Internet Capabilities: Wi-Fi 70 MB Other Technologies: Did Not Specify	Computer: 32 Computers 1-3 Years Old Projector: Yes Internet Capabilities: Wi-Fi 200 MB Other Technologies: Interactive Whiteboard
Elko	Computer: 1 Teacher Computer 4 Years Old Projector: Did Not Specify Internet Capabilities: Yes Other Technologies: Interactive Whiteboard	Computer: 1 Teacher Computer 2-4 Student Computers 4 Years Old Projector: Did Not Specify Internet Capabilities: Yes Other Technologies: Interactive Whiteboard	Computer: 1 Teacher Computer 4 Years Old 1:1 Device to Student Projector: Did Not Specify Internet Capabilities: Yes Other Technologies: Interactive Whiteboard
Esmeralda	Computer: 1 Teacher Computer Projector: Did Not Specify Internet Capabilities: Did Not Specify Other Technologies: Did Not Specify	Computer: 1 Teacher Computer Some Student Computers Projector: Did Not Specify Internet Capabilities: Did Not Specify Other Technologies: Interactive Whiteboard	Computer: 1 Teacher Computer Some Student Computers Projector: Did Not Specify Internet Capabilities: Did Not Specify Other Technologies: Interactive Whiteboard ELMO iPads/Tablets
Eureka	Computer: 1 Teacher Computer Projector: Yes Internet Capabilities: Did Not Specify Other Technologies: Interactive Whiteboard	Computer: 1 Teacher Computer 3 Student Computers Projector: Yes Internet Capabilities: Did Not Specify Other Technologies: Access to Mobile Device Cart Interactive Whiteboard	Computer: 1 Teacher Computer 5 Student Computers Projector: Yes Internet Capabilities: Did Not Specify Other Technologies: 20 Mobile Devices 15 Shared Laptops Interactive Whiteboard

County	Common Low-End Classroom	Common Middle-End Classroom	Common High-End Classroom
Humboldt	<p>Computer: 1 Teacher Computer < 3 years old</p> <p>Projector: Yes</p> <p>Internet Capabilities: Did Not Specify</p> <p>Other Technologies: Did Not Specify</p>	<p>Computer: 1 Teacher Computer < 3 years old 5 Student Computers < 7 years old</p> <p>Projector: Yes</p> <p>Internet Capabilities: Did Not Specify</p> <p>Other Technologies: Did Not Specify</p>	<p>Computer: 1 Teacher Computer < 3 years old 30 Student Computers</p> <p>Projector: Yes</p> <p>Internet Capabilities: Did Not Specify</p> <p>Other Technologies: Interactive Whiteboard</p>
Lander	<p>Computer: 1 Teacher Computer</p> <p>Projector: Did Not Specify</p> <p>Internet Capabilities: Did Not Specify</p> <p>Other Technologies: Did Not Specify</p>	<p>Computer: 1 Teacher Computer Some Student Computers</p> <p>Projector: Did Not Specify</p> <p>Internet Capabilities: Did Not Specify</p> <p>Other Technologies: Interactive Whiteboard</p>	<p>Computer: 1 Teacher Computer 1 Teacher Laptop Student Computers/Tablets</p> <p>Projector: Did Not Specify</p> <p>Internet Capabilities: Did Not Specify</p> <p>Other Technologies: Interactive Whiteboard ELMO</p>
Lincoln	<p>Computer: 1 Teacher Computer > 3 Years Old</p> <p>Projector: None</p> <p>Internet Capabilities: Did Not Specify</p> <p>Other Technologies: None</p>	<p>Computer: 1 Teacher Computer 1:1 Device to Student</p> <p>Projector: Did Not Specify</p> <p>Internet Capabilities: Yes</p> <p>Other Technologies: 1 Video Camera 1 Digital Camera 1 Printer ELMO</p>	<p>Computer: 1:1 Device to Student</p> <p>Projector: Yes</p> <p>Internet Capabilities: Yes</p> <p>Other Technologies: Interactive Whiteboard High Quality Printers/Plotters Laser Engraver CNC Machines Embroidery Machines</p>

County	Common Low-End Classroom	Common Middle-End Classroom	Common High-End Classroom
Lyon	<p>Computer: 1 Teacher Computer</p> <p>Projector: Yes</p> <p>Internet Capabilities: Did Not Specify</p> <p>Other Technologies: Did Not Specify</p>	<p>Computer: 1 Teacher Computer 1-4 Student Computers Or 10 iPads</p> <p>Projector: Yes</p> <p>Internet Capabilities: Did Not Specify</p> <p>Other Technologies: Interactive Whiteboard Response Clickers</p>	<p>Computer: 1 Teacher Computer 1:1 Device to Student</p> <p>Projector: Yes</p> <p>Internet Capabilities: Did Not Specify</p> <p>Other Technologies: Interactive Whiteboard</p>
Mineral	<p>Computer: 1 Teacher Computer 3-5 Years Old</p> <p>Projector: Yes</p> <p>Internet Capabilities: 50-100 Mbps wired internet and Wi-Fi</p> <p>Other Technologies: Interactive Whiteboard</p>	<p>Computer: 1 Teacher Computer 3 Student Computers</p> <p>Projector: Yes</p> <p>Internet Capabilities: 50-100 Mbps wired internet and Wi-Fi</p> <p>Other Technologies: Interactive Whiteboard</p>	<p>Computer: 1 Teacher Computer 3 Student Computers 5 iPads</p> <p>Projector: Yes</p> <p>Internet Capabilities: 50-100 Mbps wired internet and Wi-Fi</p> <p>Other Technologies: Interactive Whiteboard</p>
Nye	<p>Computer: 1 Teacher Computer 1 Student Computer</p> <p>Projector: Yes</p> <p>Internet Capabilities: Yes, Ethernet</p> <p>Other Technologies: Network Printer Document Camera</p>	<p>Computer: 1 Teacher Computer 2-5 Student Computers</p> <p>Projector: Yes</p> <p>Internet Capabilities: Yes, Ethernet</p> <p>Other Technologies: Network Printer Document Camera Interactive Whiteboard</p>	<p>Computer: 2 Teacher Computer 20-30 Student Devices</p> <p>Projector: Yes</p> <p>Internet Capabilities: Yes, Ethernet and Wi-Fi</p> <p>Other Technologies: Network Printer Document Camera Interactive Whiteboard Apple TV</p>

County	Common Low-End Classroom	Common Middle-End Classroom	Common High-End Classroom
Pershing	Computer: 1 Teacher Computer (Win XP) 1-2 Student Computers Projector: Yes Internet Capabilities: Did Not Specify Other Technologies: Interactive Whiteboard	Computer: 2 Teacher Computer (Win 7) 3-5 Student Computers Projector: Yes Internet Capabilities: Did Not Specify Other Technologies: Interactive Whiteboard Response Clickers Printer	Computer: 2 Teacher Computer (Win 7) 1:2 Device to Students Projector: Yes Internet Capabilities: Did Not Specify Other Technologies: Interactive Whiteboard Response Clickers Printer IPads
Storey	Computer: 1 Teacher Computer Projector: Did Not Specify Internet Capabilities: Did Not Specify Other Technologies: Did Not Specify	Computer: 1 Teacher Computer Some Student Computers Projector: Did Not Specify Internet Capabilities: Did Not Specify Other Technologies: Interactive Whiteboard	Computer: 1 Teacher Computer Some Student Computers Projector: Did Not Specify Internet Capabilities: Did Not Specify Other Technologies: Interactive Whiteboard ELMO
Washoe	Computer: 1 Teacher Computer 1-2 Student Computers Projector: Yes Internet Capabilities: Yes, Wi-Fi 1:1 Compatible Other Technologies: Did Not Specify	Computer: 1 Teacher Computer 1-2 Student Computers Projector: Yes Internet Capabilities: Yes, Wi-Fi 1:1 Compatible Other Technologies: Interactive Whiteboard	Computer: 1 Teacher Computer Laptop Cart Projector: Yes Internet Capabilities: Yes, Wi-Fi 1:1 Compatible Other Technologies: Interactive Whiteboard Audio Enhancement

County	Common Low-End Classroom	Common Middle-End Classroom	Common High-End Classroom
White Pine	Computer: 1 Teacher Computer 1 Teacher Laptop 1:1 Device to Student Projector: Did Not Specify Internet Capabilities: Yes, Wi-Fi Other Technologies: Camera	Computer: 1 Teacher Computer 1 Teacher Laptop 1:1 Device to Student Projector: Yes Internet Capabilities: Yes, Wi-Fi Other Technologies: Camera Mimmo	Computer: 1 Teacher Computer 1 Teacher Laptop 1:1 Device to Student Projector: Yes Internet Capabilities: Yes, Wi-Fi Other Technologies: Camera Mimmo
State Public Charter School Authority*	Computer: Most Have 1:1 Device to Student Projector: Yes Internet Capabilities: Yes, Wi-Fi 1:1 Compatible Other Technologies: Interactive Whiteboards ELMO	Computer: Most Have 1:1 Device to Student Projector: Yes Internet Capabilities: Yes, Wi-Fi 1:1 Compatible Other Technologies: Interactive Whiteboards ELMO	Computer: Most Have 1:1 Device to Student Projector: Yes Internet Capabilities: Yes, Wi-Fi 1:1 Compatible Other Technologies: Interactive Whiteboards ELMO

* Two out of the nine SPCSA technology coordinator responses were from web-based schools. One out of the nine mentioned that low, middle, and high-end classrooms have: 0-1 Computer, which is fewer than 10 years old and equipped with software that is approximately 10 years old. One projector available with Wi-Fi and Ethernet internet connections. The remaining six shared common technologies for their low, middle, and high-end classrooms, these descriptions are included in Table 3 above.

The information presented in Table 6 demonstrates that classroom technology availability varies among districts in Nevada as well as between classrooms within the same district. Below are summarized descriptions of the data presented, as well coordinators’ estimates of the approximate percentage of the classrooms in their district that closely fit the classroom descriptions they provided.

Low-end Classroom:

A typical low-end classroom in Nevada contains one to two computers for administrative tasks that are generally fewer than five years old. Four of the districts stated that their low-end classrooms included one to two student computers. Ten stated that they had access to a projector with nine having internet access. Ten reported that a low-end classroom might include an interactive whiteboard and a document

camera. After taking an average of the percentages of low-end classrooms within each district, as estimated by the technology coordinators, approximately 24% of Nevada classrooms fall into the low-end classroom category. This is a drastic improvement from the 38% reported in the SETNA 2012. The 2014 report did not include this information.

Middle-end Classroom:

A typical middle-end classroom in Nevada contains at least one administrative device for teacher use and between one to five devices for student use. Four districts reported one-to-one device to student ratios. For the internet capabilities of middle-end classrooms, eight districts did not specify if they had a connection, five have one-to-one compatible Wi-Fi, three reported having internet connections that are not one-to-one compatible (Clark, Douglas, and Nye), and two simply stated that they had internet access without connection details.

Six districts did not specify if they had projectors in their middle-end classrooms, but all six of these districts stated that they had interactive whiteboards or ELMO. Therefore, it can be concluded that all of the middle-end classrooms in Nevada have some form of digital projection device for instruction purposes. Other technologies available are interactive whiteboards, cameras, printers, and the checkout availability of other technology (e.g. a mobile cart of tablets or computers). Mean percentages reported by the coordinators surveyed, approximately 48% of Nevada classrooms fall into the middle-end classroom category. This is an increase from 42% based on the 2012 findings.

High-end Classroom:

A typical high-end classroom in Nevada contains at least one computer for teacher use and administrative tasks, with access to multiple computers for student use. Seven districts specifically stated that they had one-to-one device to student ratios, two have one-to-two device to student ratios, three have approximately thirty computers for student use, and the remaining have multiple designated devices for student use along with access to technology carts. This access includes laptop carts, computer labs, and access to iPads or other tablets. For all of the high-end classrooms, internet access is available as well as access to a projector. Other technologies included an interactive whiteboard, printer, document camera (ELMO), access to SKYPE, and Web 2.0 technologies.

The common technology scenario for a high-end classroom in Nevada is a one-to-one device learning environment. Some districts also have access to specialty technologies, including embroidery and CNC

(industrial) machines, laser engraver, student response systems, and iPads. After taking an average of the percentages reported by the coordinators, approximately 21% of Nevada classrooms fall into the high-end classroom category; an increase from 19% in 2012. The pie charts presented in Figure 3 provide a representation of the classroom distribution estimates given by the technology coordinators. Please note, the sum of these percentages do not equal 100% due to rounding and variation in reporting; however, the percentages are a representative estimation of the frequencies of each type of classroom statewide.

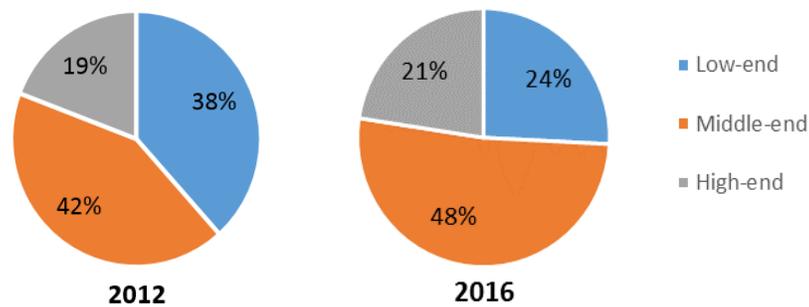


Figure 3: Technology coordinators' estimates: Percentages of low, middle, and high-end classrooms in NV.

TEACHER SURVEY RESULTS

Teacher Surveys were distributed to the technology coordinators and administrators in all 17 districts and State Public Charter School Authority (SPCSA). All teachers in Nevada had the opportunity to participate in the Teacher Survey. In total, the survey had 2,926 submissions which included 14 districts and the SPCSA. A total of 535 of the surveys were not fully completed; 271 of them were completed up to just over the half way point, and the remaining 263 were at least 80% complete. After further review, it was determined that the sample size for Teacher Survey data analysis would include the surveys that were at least 80% complete. These participants had the opportunity to provide a sufficient amount of information to give an accurate representation related to the technology capacity and professional development in Nevada. This resulted in a sample size of 2,665 for the Teacher Survey. Table 4 the number of teacher submissions per district and the percentage of teachers who participated out of each

district. Esmeralda, Lander, and Mineral County did not have any submissions for the 2016 SETNA Teacher Survey.

Table 4: Teacher Survey submission total/sample size

<i>District Size</i>	<i>District</i>	<i>Teacher Survey Submissions</i>	<i>Total Teachers Per District (K-12)*</i>	<i>Teacher Participation Per District</i>
Small	Lincoln	56	82	68%
Small	Eureka	7	30	23%
Small	Churchill	117	188	62%
Small	Storey	9	30	30%
Small	White Pine	1	77	1%
Small	Mineral	0	19	0%
Small	Esmeralda	0	7	0%
Small	Lander	0	66	0%
Small	Pershing	47	52	90%
Medium	Elko	235	552	43%
Medium	Nye	149	270	55%
Medium	Carson City	117	418	28%
Medium	Douglas	86	316	27%
Medium	Lyon	221	478	46%
Medium	Humboldt	80	200	40%
Large	Clark	1,124	15,321	7%
Large	Washoe	379	3,197	12%
Large	SPCSA	308	584	53%
Total		2,936	21,887	13%
Sample Size		2,665		

*Data were retrieved from the National Center for Education Statistics nces.ed.gov

DEMOGRAPHICS

The demographic data from the Teacher Survey indicated that most teachers in Nevada are female (75%), with the remaining male or electing not to answer (22% and 3% respectively). Next, the survey asked teachers to report the year in which they began teaching (*Figure 4*). The range of years spanned from 1963 to 2016, with 2004 and 2005 being the most reported years. Approximately 56% of the teachers in Nevada started in or after 2000, and there was a spike in the number of teachers from 2012 to 2013. This sample has a slight negative skew, signifying that more teachers have been teaching in Nevada for a shorter number of years. Teachers also reported how long they have been teaching (*Figure 5*), and how long they have been teaching at their current school (*Figure 6*).

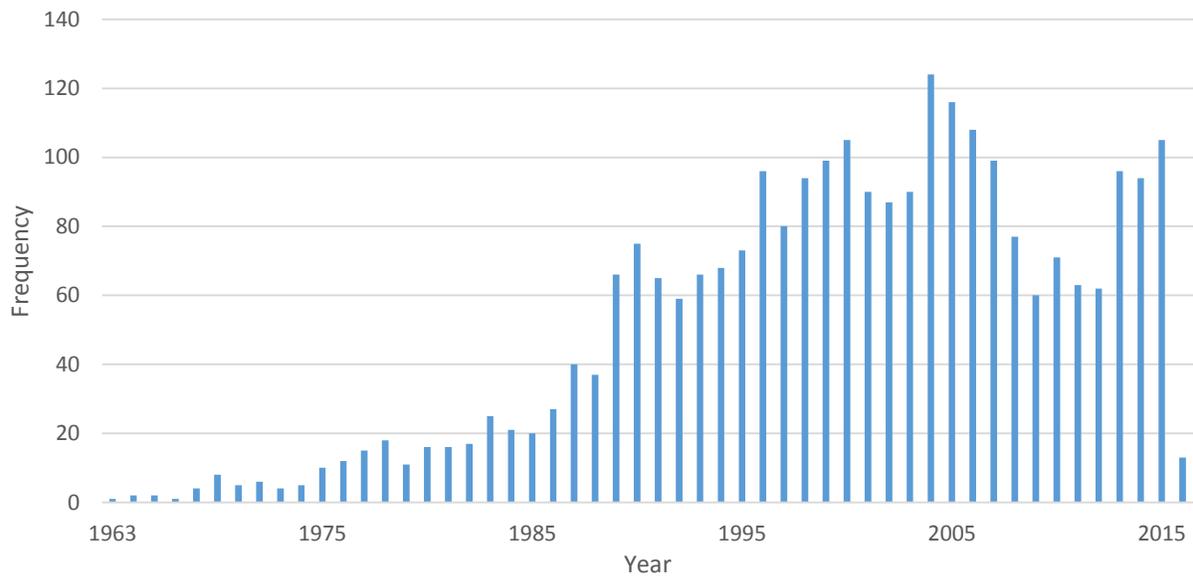


Figure 4: The year that responding teachers began teaching.

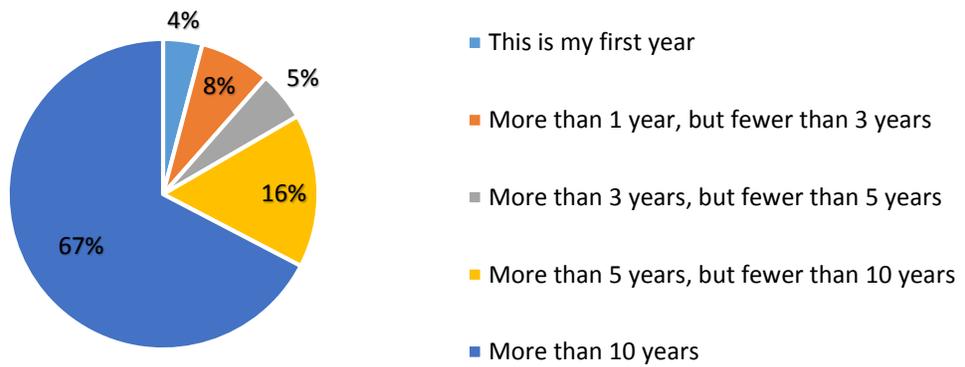


Figure 5: How long responding teachers have been teaching.



Figure 6: How long responding teachers have been teaching in their current school.

The Teacher Survey also asked respondents to indicate the type of school in which they worked. These levels were: Elementary school (K-5 or K-6), Middle school (6-8, 6-9, 7-8, or 7-9), High school (9-12 or 10-12), Elementary/Middle school (K-8), and Other (please specify). The other category included responses from teachers in special education departments, correctional facilities, other grade combinations (1-6, 5-6, 7-12, K-4, K-12, etc.), early childhood, and many more placements that are atypical. Figure 7 displays their responses.

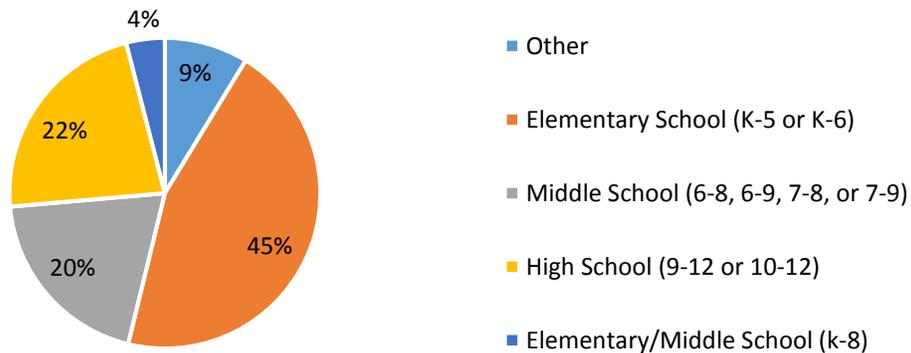


Figure 7: Percentage of teachers that work in each type of school.

When asked about their experience with technology (Figure 8), most of the teachers considered themselves about average or experienced (39% and 40% respectively). Few respondents described themselves as very experienced (16%). These numbers are largely unchanged from the findings in 2014.

When interpreting the results, it is important to consider that the majority of teachers in Nevada feel that they have average or above average experience with technology.

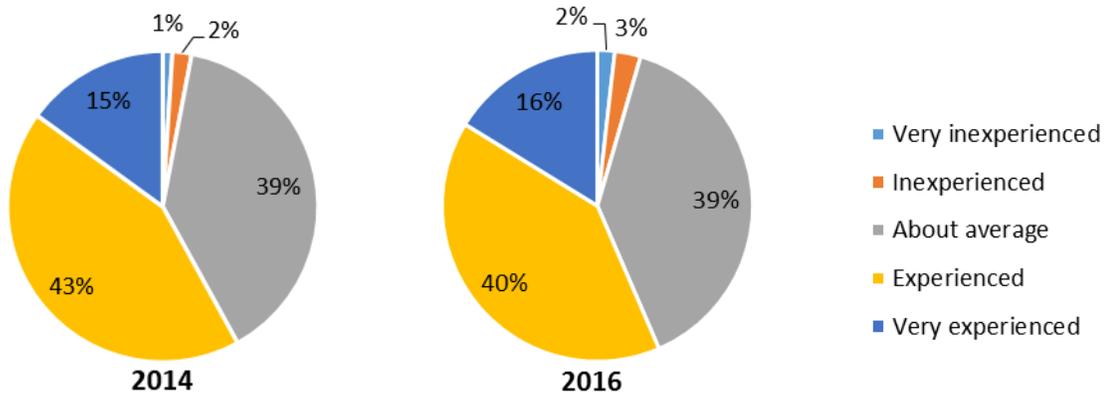


Figure 8: Teachers' self-evaluation of experience with technology.

DEVICES IN CLASSROOM

With respect to the number and age of devices in Nevada classrooms, the Teacher Survey asked a series of questions about designated devices for administrative tasks (e.g., grading, attendance), instructional tasks, and student use. Teachers reported that 98% of their classrooms had a device for administrative tasks. Teachers estimated that 68% of those devices are fewer than five years old, and a total of 90% of teachers *agree to strongly agree* that their designated administrative device is easy to use (Figure 9).

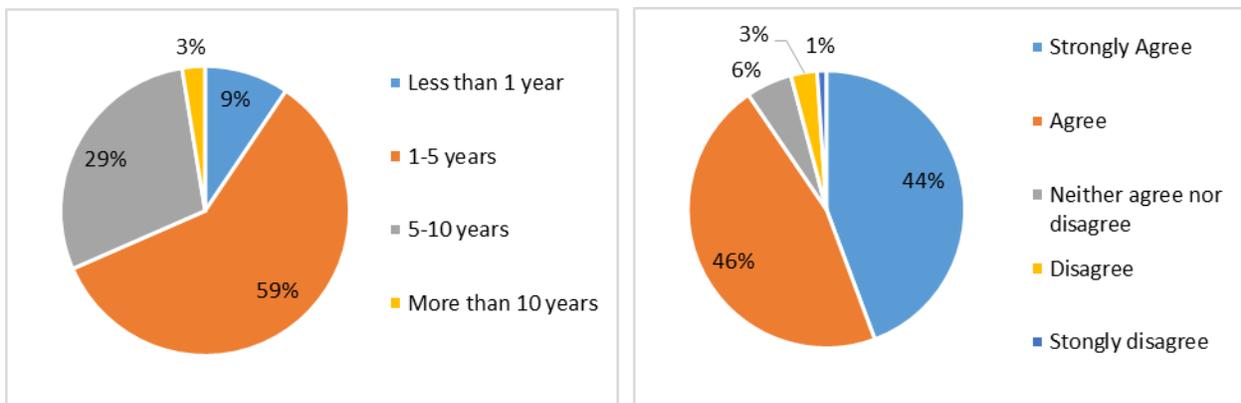


Figure 9: Age of classroom designated administrative device? / Ease of use administrative device.

In response to whether or not teachers had a designated device for instructional purposes and student use in their classroom, 91% said that they had a device for instructional purposes, 80% said that they *agree to strongly agree* that the instructional device is easy to use (Figure 10). A total of 67% confirmed that they had designated devices for students to use in their classroom. A total of 72% *agree to strongly agree* that these student devices are easy to use (Figure 10). In comparison, the 2012 SETNA had 75% of respondents who stated that they had at least one device in their classroom for student use. In the 2014 SETNA, 94% of the respondents stated that they had regular access to a computer for student use. The 2016 SETNA team believe that the wording of the 2014 question makes the data incomparable to the 2012 and 2016 data. The difference between “a designated device” and “access to a device” may be the reason for the inconsistency. Nonetheless, according to teachers in 2016, only 67% of the classrooms in Nevada have at least one designated device for students to use for instructional purposes.

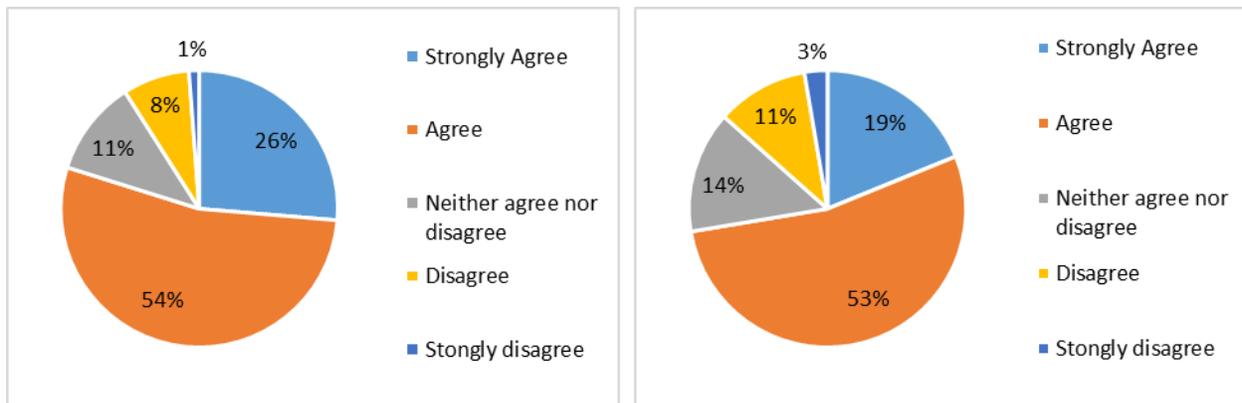


Figure 10: Ease of use classroom's designated **instructional** device / Ease of use classroom's designated **student** device

INTERNET ACCESS

With regard to the internet access for Nevada schools, 98% of Nevada teachers *agreed* that their classroom had an internet connection (96% *agreed* in 2012 and 2010). Seventy-five percent stated that they had a wired (Ethernet) connection and 71% stated that they had a wireless connection for their classroom internet. In terms of reliability, 54% *agree to strongly agree* that their wired connection is dependable (Figure 11) with 41% stating that they *agree to strongly agree* that their wireless connection

is dependable (Figure 11). In 2014, 66% of teachers reported that they *agree* to *strongly agree* that their wired connection was dependable, and 39% *agree* to *strongly agree* that their wireless connection was dependable. The data establish that fewer of the 2016 respondents felt their wired internet connections were reliable than did the respondents in 2014. However, more responding teachers in 2016 feel that their wireless connections are dependable than those responding in 2014.

When ask to rate the speed that a typical online video will begin playing on the classroom devices, an essentially equal distribution of teachers responded *quickly* to *very quickly*, *neither quickly nor slowly*, and *slowly* to *very slowly* (Figure 12). This distribution closely resembles the responses found in the 2012 report. This suggests that the classroom internet speed varies greatly across the state, and that it has not improved since 2012. A widely available and dependable internet connection is necessary for not only the one-to-one initiative, but also successful teaching with technology. It is clear from the data that the dependability and speed of classroom internet connections in Nevada schools can be improved.

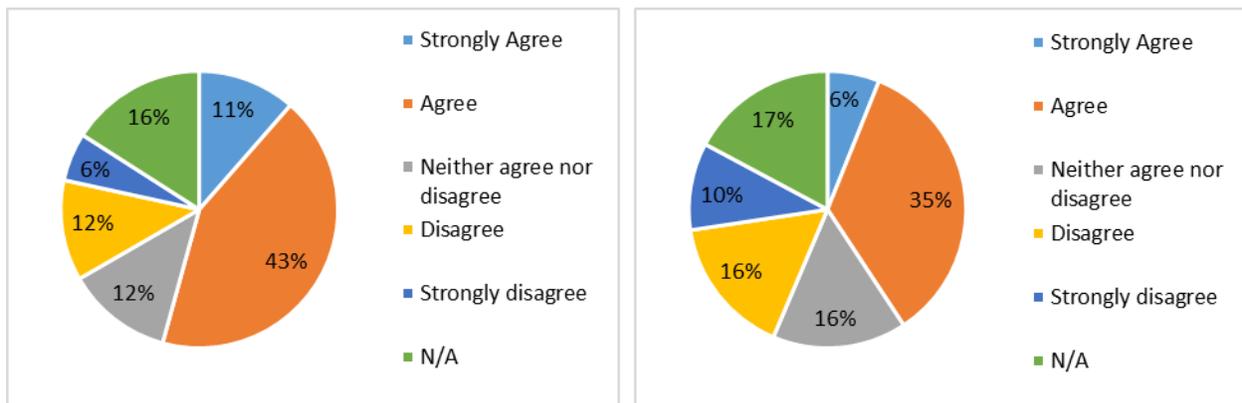


Figure 11: I find my **wired** internet connection dependable / I find my **wireless** internet connection dependable.

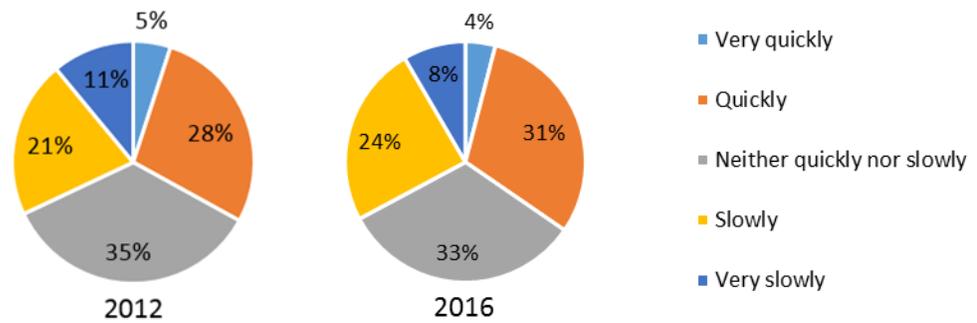


Figure 12: Teachers rate the speed that a typical online video will begin to play on classroom devices.

INTERNET FILTER

All Nevada school districts have policies and practices in place to vet websites for student and staff use. Internet filtering is a constant struggle for administrators and teachers. Administrators must contend with student safety and the Family Education Rights and Privacy Act (FERPA). From a classroom perspective, a teacher may submit a site as acceptable one week, while another teacher in the same district may submit the same site as being inappropriate the following week.

When asked about their opinions on the internet filter at their school, 51% of teachers reported that they feel their school's internet filter is about right, and 40% consider it to be too restrictive. Very few (5%) suggest that additional restrictions are necessary. Five percent did not comment. Almost half of Nevada's teachers feel that the internet filter at their schools needs to be less restrictive. Considering that one of the reoccurring requests from the Parent Survey was that the digital content available to their children be properly regulated; parents may object to loosening their district's internet restrictions.

SECTION 5: TEACHERS' PREPAREDNESS FOR TECHNOLOGY INTEGRATION

The sources of data for this section are the responses from the Teacher Survey.

This section addresses the guiding question:

4. *How prepared are Nevada teachers to integrate technology into their classrooms?*

TEACHER SURVEY RESULTS

The 2016 SETNA Teacher Survey closely resembled the 2014 questions that assessed teachers' readiness to engage in a 21st Century teaching environment. This report includes a number of different educational technology tools and incorporates specific examples of 21st Century teaching practices. These practices included: the use of data to make instructional decisions, the ability to leverage content management systems to hybridize instruction, and the use of teaching material that is delivered solely from a digital device. In addition to tools and practices, this section includes aspects of teachers' professional development with respect to educational technology.

TEACHER READINESS: EDUCATIONAL TECHNOLOGY TOOLS

The Teacher Survey asked participants to rate how prepared they felt to use certain educational tools for instructional purposes. Optional responses included: N/A, not at all prepared, not prepared, prepared, well prepared, and very well prepared. To better present the data, it has been segregated to show the percentage of teachers who felt *not prepared* to *not at all prepared*, and *well prepared* to *very well prepared*. "N/A" answers were minimal and therefore are excluded from the graphs. *Figure 13* summarizes the statewide responses to the prompt: "Please indicate the degree to which you are currently prepared to use the following tools for instructional purposes." *Figure 14* divides this data into district categories.

Overall, the data in *Figure 13* shows that Nevada teachers feel well prepared to use many of the mentioned educational tools for instructional purposes. The highest percentages are in the utilization of tools geared towards simplifying the task of displaying information; for example, presentation software, internet resources, LCD projector are the tools the teachers feel the best prepared to use. In contrast, over half of Nevada teachers feel *not prepared* to *not at all prepared* to use learning enhancing tools like

response clickers, integrated learning systems, probes and/or probe-ware, and simulations. While it is helpful, and should be encouraged that teachers use technology to simplify their daily tasks, it is also important for technology to become integrated into the lesson plans to enhance the learning experience for students. From the data in *Figure 13*, it can be confirmed that teachers could benefit from increased professional training efforts to learn enhancing tools.

Another discovery is that teachers appear better prepared to use tools that have been in the classroom setting for several years, and are generally unprepared to make use of newer emerging technologies, many of which are currently available in schools throughout the state. This suggests that there may be additional hurdles associated with current initiatives like one-to-one classrooms, judicious technology integration, e-book implementation, and computer-based testing. Although reports indicate that progress is ongoing, the issues with teacher preparedness must be addressed prior to securing additional educational technologies for Nevada schools.

The trend shown in *Figure 14* is that teachers in medium districts are generally better prepared to teach with the specified educational tools than small districts, and teachers in large districts are better prepared than the teachers in both medium and small districts. Furthermore, the tools that teachers in the large districts feel largely not prepared to use, the teachers in the medium and small districts feel even less prepared. The findings also indicate that in addition to the commonly available tools (e.g., Internet resources, LCD projectors, Presentation software), teachers generally feel that they are at least well prepared to use modern technologies for instructional purposes.

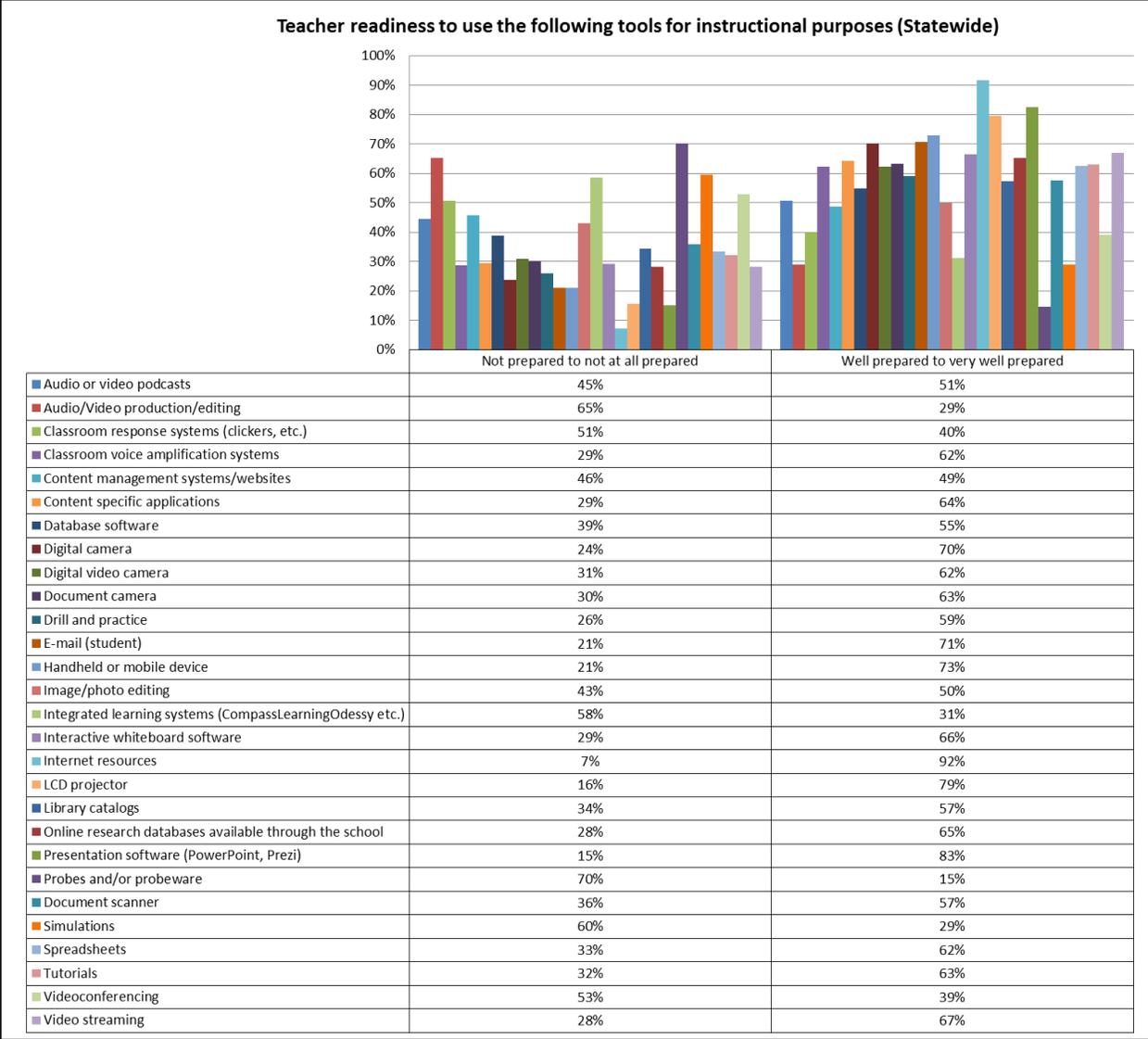
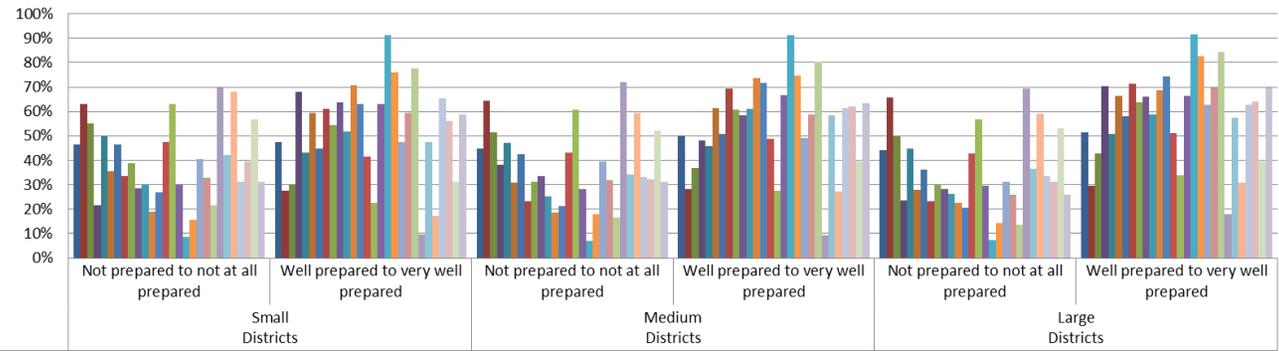


Figure 13: Teacher readiness to use the following tools for instructional purposes. (Statewide)

Teacher readiness to use the following tools for instructional purposes (District Categories)



	Small Districts		Medium Districts		Large Districts	
	Not prepared to not at all prepared	Well prepared to very well prepared	Not prepared to not at all prepared	Well prepared to very well prepared	Not prepared to not at all prepared	Well prepared to very well prepared
Audio or video podcasts	47%	47%	45%	50%	44%	51%
Audio/Video production/editing	63%	28%	64%	28%	66%	30%
Classroom response systems (clickers, etc.)	55%	30%	52%	37%	50%	43%
Classroom voice amplification systems	22%	68%	38%	48%	23%	70%
Content management systems/websites	50%	43%	47%	46%	45%	51%
Content specific applications	35%	59%	31%	61%	28%	66%
Database software	47%	45%	42%	51%	36%	58%
Digital camera	34%	61%	23%	69%	23%	71%
Digital video camera	39%	54%	31%	61%	30%	64%
Document camera	28%	64%	34%	58%	28%	66%
Drill and practice	30%	52%	25%	61%	26%	59%
E-mail (student)	19%	71%	19%	74%	23%	69%
Handheld or mobile device	27%	63%	21%	72%	21%	74%
Image/photo editing	47%	41%	43%	49%	43%	51%
Integrated learning systems (CompassLearningOdyssey etc.)	63%	22%	61%	28%	57%	34%
Interactive whiteboard software	30%	63%	28%	67%	30%	66%
Internet resources	9%	91%	7%	91%	7%	92%
LCD projector	16%	76%	18%	75%	14%	82%
Library catalogs	41%	47%	39%	49%	31%	63%
Online research databases available through the school	33%	59%	32%	59%	26%	70%
Presentation software (PowerPoint, Prezi)	22%	78%	17%	80%	14%	84%
Probes and/or probeware	70%	9%	72%	9%	69%	18%
Document scanner	42%	47%	34%	59%	36%	58%
Simulations	68%	17%	59%	27%	59%	31%
Spreadsheets	31%	66%	33%	61%	34%	63%
Tutorials	40%	56%	32%	62%	31%	64%
Videoconferencing	57%	31%	52%	39%	53%	40%
Video streaming	31%	59%	31%	63%	26%	70%

Figure 14: Teacher readiness to use the following tools for instructional purposes. (District Categories)

TEACHER READINESS: 21ST CENTURY TEACHING PRACTICES

In addition to gauging teachers' preparedness to use educational tools for instructional purposes, this report also examined how prepared Nevada teachers are to adopt several different 21st Century teaching practices. Table 5, *Figure 15*, and *Figure 16* outline teachers' responses to the prompt: "Please indicate the degree to which you are currently prepared to accomplish the following." Optional responses included: N/A, not at all prepared, not prepared, prepared, well prepared, and very well prepared. Table 5 presents a comparison of the percentage of teachers statewide who feel *well prepared* to *very well prepared* to accomplish the following 21st Century teaching practices from the 2016, 2014, 2012, and 2010 reports. From the comparison, an alarming trend has been uncovered; as years have passed there has been a decrease in the overall preparedness of Nevada teachers to adopt these 21st Century teaching practices.

Table 5: Comparison of teachers who feel *well prepared* to *very well prepared* for the following 21st Century teaching practices. (2016, 2014, 2012, 2010)

<i>Task</i>	<i>SETNA 2016</i>	<i>SETNA 2014</i>	<i>STNA 2012</i>	<i>STNA 2010</i>
Teach in a classroom where every student has their own device (1:1).	49%	55%	56%	76%
Access and use state assessment data to support instructional decisions.	61%	76%	70%	73%
Access and use district assessment data to support instructional decisions.	66%	78%	65%	71%
Teach in a classroom where all of the instructional materials are delivered via the device.	42%	48%	49%	54%
Find effective instructional materials on the Internet.	85%	89%	87%	88%
Integrate educational technology into your classroom.	69%	75%	74%	77%
Incorporate library databases into student research projects.	45%	56%	49%	58%
Blended learning, hybrid 1:1, BYOD, Project Based Learning (PBL).	40%	44%	*	*

* Did not report.

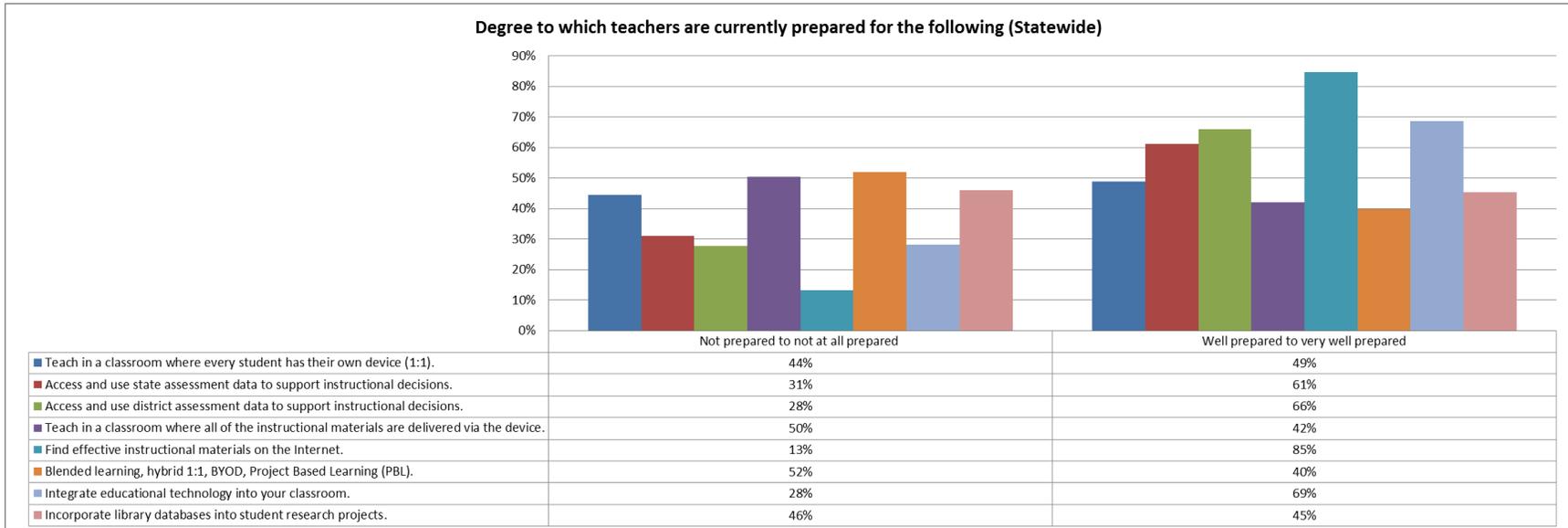


Figure 15: Teachers who feel well to very well prepared for 21st Century teaching practices. (Statewide)

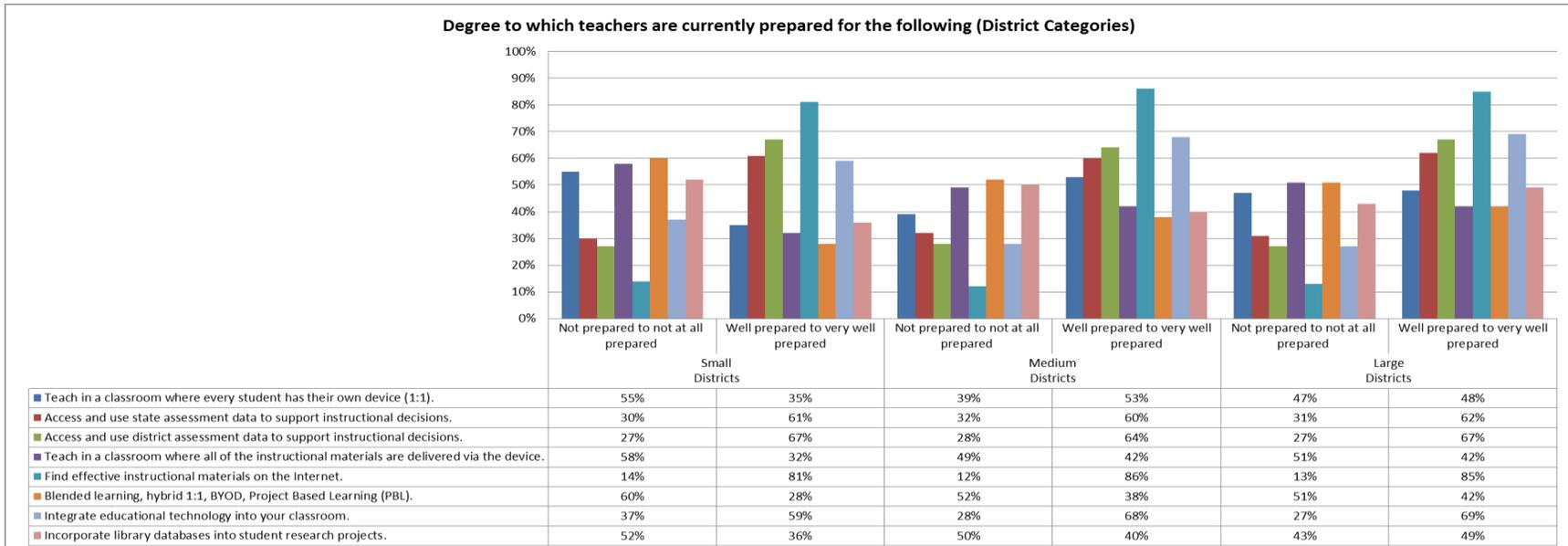


Figure 16: Teachers who feel well prepared to very well prepared for the following 21st Century teaching practices. (District Categories)

SUMMARY TEACHER PREPAREDNESS: TOOLS & 21ST CENTURY PRACTICES

Teachers in modern classrooms require new skills, strategies, and pedagogies if they are to succeed. The data related to teachers' preparedness to integrate educational technology tools into their classrooms indicate that while teachers report readiness with respect to some tools, the practices associated with teaching in those contexts are somewhat different. For example, in *Figure 13* teachers statewide reported that they are ready to use mobile technologies (73% felt *well prepared* to *very well prepared*). However, if the mobile technologies are in the hands of the students and each student has a device, then only 42% of teachers feel *well prepared* to *very well prepared* to teach in that scenario.

Also, a concern when considering the potential for e-books, teachers are generally unprepared to teach in classrooms that deliver materials via devices. In terms of readiness for teaching in blended environments, only 40% of teachers felt prepared. Largely, the data indicate that teachers report being less prepared to teach using 21st Century teaching practices than they were in 2014, 2012, and 2010. This likely signifies that the professional development opportunities offered in Nevada might not be sufficient in quality or quantity to embed the technological advancements of the 21st Century into Nevada classrooms.

PROFESSIONAL DEVELOPMENT

The ongoing professional development of Nevada teachers is an objective that is ubiquitous across all districts. To assess the quality of the current professional development opportunities available to Nevada teachers, the 2016 Teacher Survey asked teachers a variety of questions about their most recent professional development experiences. *Figure 17* represents data related to teachers' perceptions on offered professional development opportunities statewide, and *Figure 18* segregates the data into district categories.

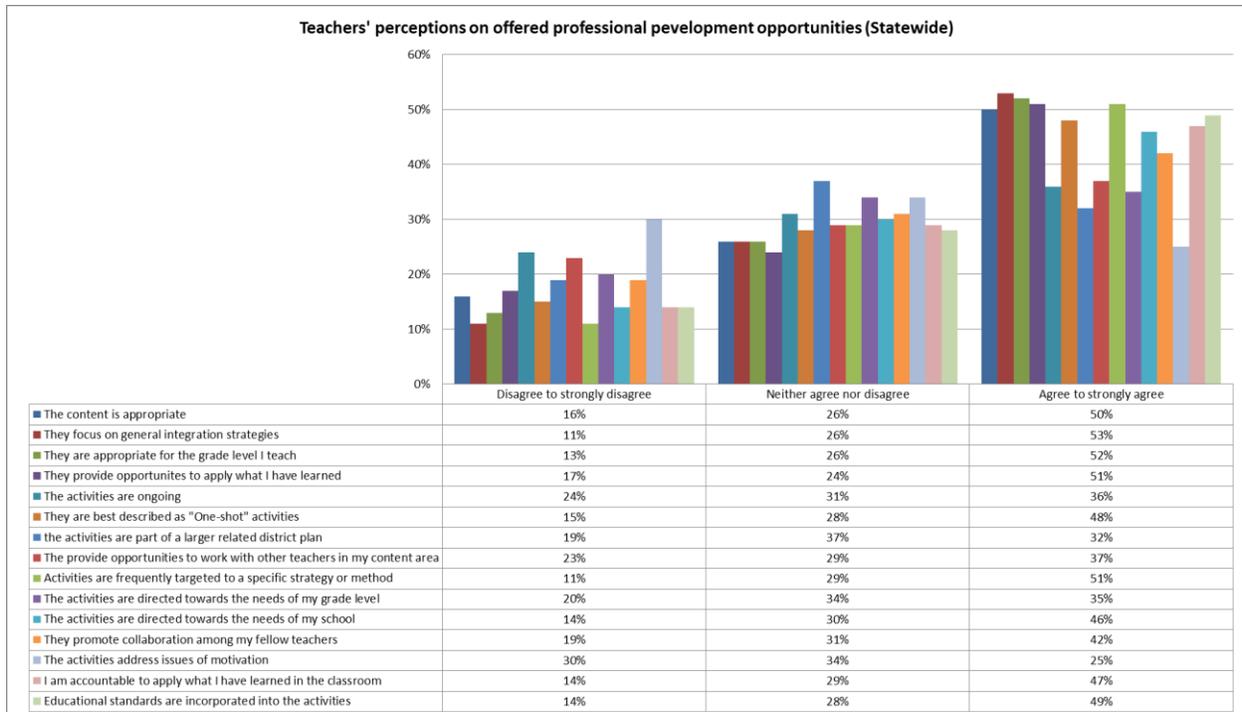
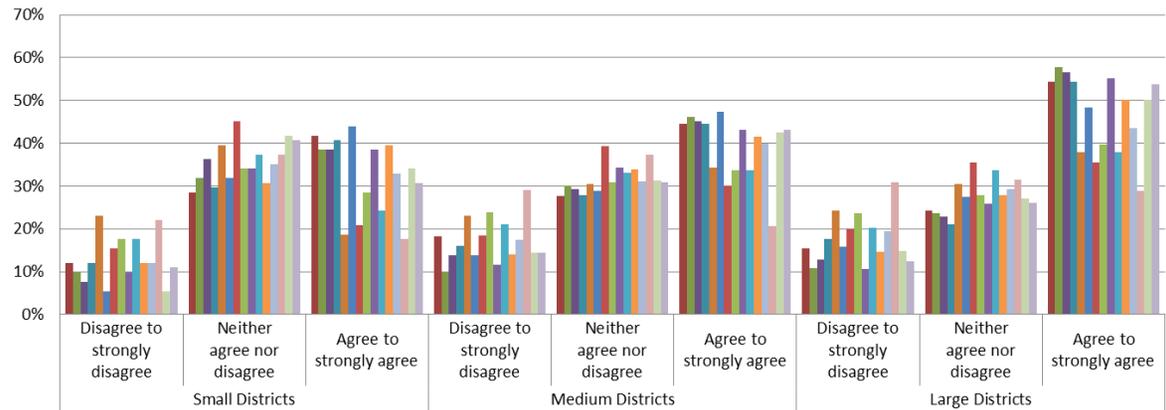


Figure 17: Teachers' perceptions on offered professional development opportunities. (Statewide)

Teachers' perceptions of their recent professional development experiences indicate that there is no outstanding percentage of teachers who *agree* or *strongly agree* with any of the statements in Figure 17. No more than half of the teachers in Nevada *agree* to *strongly agree* with the professional development statements, with the greater majority taking a neutral stance. Figure 18 compiles the data into district categories. The findings suggest that the teachers in large districts agree with these statements related to professional development than do the teachers in medium and small districts.

Teachers' perceptions on offered professional development opportunities (District Categories)



	Small Districts			Medium Districts			Large Districts		
	Disagree to strongly disagree	Neither agree nor disagree	Agree to strongly agree	Disagree to strongly disagree	Neither agree nor disagree	Agree to strongly agree	Disagree to strongly disagree	Neither agree nor disagree	Agree to strongly agree
■ The content is appropriate	12%	29%	42%	18%	28%	44%	15%	24%	54%
■ They focus on general integration strategies	10%	32%	38%	10%	30%	46%	11%	24%	58%
■ They are appropriate for the grade level I teach	8%	36%	38%	14%	29%	45%	13%	23%	56%
■ They provide opportunities to apply what I have learned	12%	30%	41%	16%	28%	44%	18%	21%	54%
■ The activities are ongoing	23%	40%	19%	23%	30%	34%	24%	30%	38%
■ They are best described as "One-shot" activities	5%	32%	44%	14%	29%	47%	16%	28%	48%
■ the activities are part of a larger related district plan	15%	45%	21%	18%	39%	30%	20%	36%	36%
■ They provide opportunities to work with other teachers in my content area	18%	34%	29%	24%	31%	34%	24%	28%	40%
■ Activities are frequently targeted to a specific strategy or method	10%	34%	38%	12%	34%	43%	11%	26%	55%
■ The activities are directed towards the needs of my grade level	18%	37%	24%	21%	33%	34%	20%	34%	38%
■ The activities are directed towards the needs of my school	12%	31%	40%	14%	34%	41%	15%	28%	50%
■ They promote collaboration among my fellow teachers	12%	35%	33%	17%	31%	40%	19%	29%	44%
■ The activities address issues of motivation	22%	37%	18%	29%	37%	21%	31%	31%	29%
■ I am accountable to apply what I have learned in the classroom	5%	42%	34%	14%	31%	43%	15%	27%	50%
■ Educational standards are incorporated into the activities	11%	41%	31%	14%	31%	43%	13%	26%	54%

Figure 18: Teachers' perceptions on offered professional development opportunities. (District Categories)

QUALITY OF PROFESSIONAL DEVELOPMENT

The 2016 Teacher Survey also asked teachers to rate the quality of the professional development opportunities sponsored by their district, local higher education (LHE), regional professional development (RPD), and school. Optional responses included: N/A, very low, low, neutral, high, and very high. *Figure 19* presents the statewide results while *Figure 20* shows the data categorized by district.

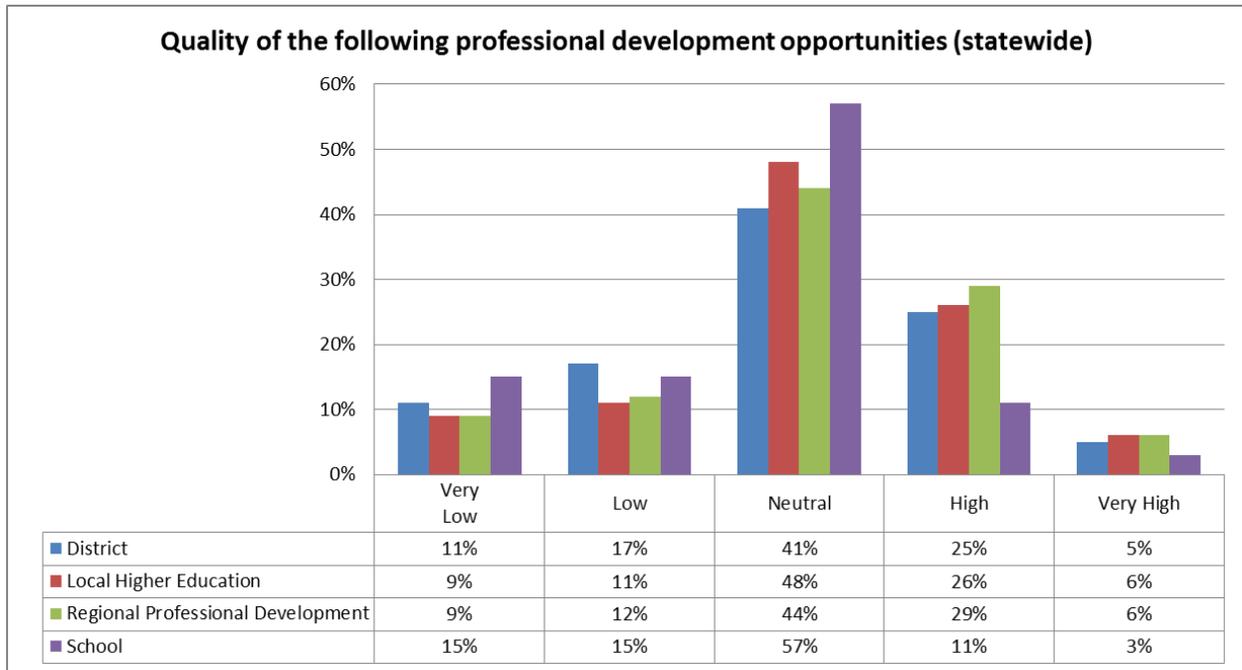
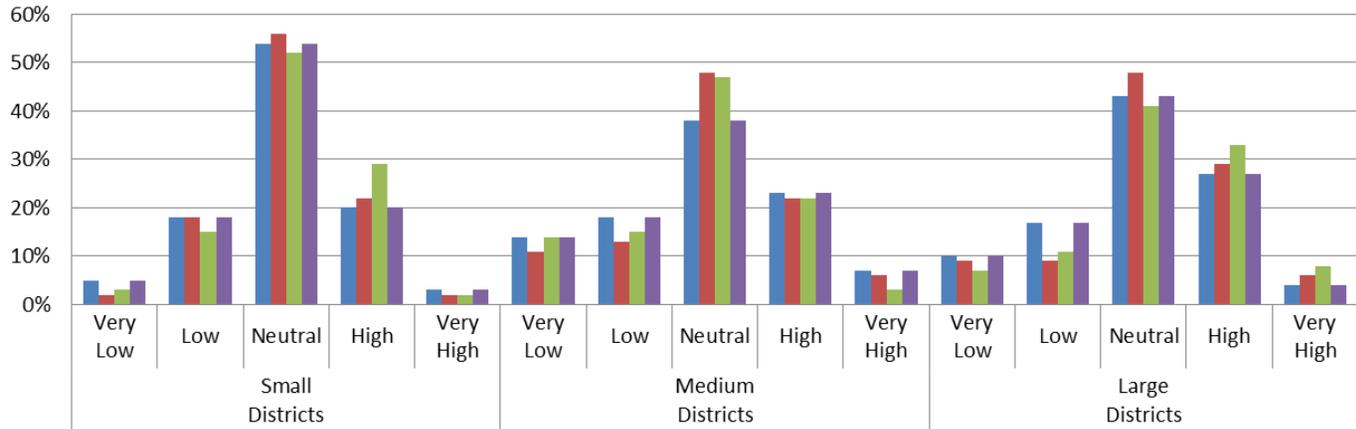


Figure 19: Teachers' quality rating of the professional development opportunities sponsored by the following. (Statewide)

Statewide, 28% of teachers felt that the quality of technology related professional development sponsored by their districts rated from *low* to *very low*. This represents a decrease in the percentage of respondents from 2012, where 42% felt the same way. In 2016, 30% of teachers indicated that the quality of their district's professional development opportunities were *high* to *very high*. In 2012, only 25% rated their district technology professional development from *high* to *very high*. The teachers rated the quality of the LHE sponsored professional development on the high end of the scale (32% on the high and 20% on the low side). In comparison, the 2012 and 2010 responses about the LHE were essentially the same, reaching 22% on the high and 29% on the low side.

When asked about the RPD sponsored professional development opportunities, 35% rated them on the high end of quality, with 21% on the low side. For 2012, 22% rated the RPD on the high side and 32% rated it on the low side, similar to 2010. Finally, when asked about professional development on their school sites, teachers rated the quality on the low side of the scale (30%) with only 14% rating it on the high side. For 2012, 47% rated the quality of professional development sponsored by the schools on the low side with 22% who rated it on the high end of the scale.

Quality of the following professional development opportunities (District Categories)



	Very Low	Low	Neutral	High	Very High
Small Districts					
District	5%	18%	54%	20%	3%
Local Higher Education	2%	18%	56%	22%	2%
Regional Professional Development	3%	15%	52%	29%	2%
School	5%	18%	54%	20%	3%
Medium Districts					
District	14%	18%	38%	23%	7%
Local Higher Education	11%	13%	48%	22%	6%
Regional Professional Development	14%	15%	47%	22%	3%
School	14%	18%	38%	23%	7%
Large Districts					
District	10%	17%	43%	27%	4%
Local Higher Education	9%	9%	48%	29%	6%
Regional Professional Development	7%	11%	41%	33%	8%
School	10%	17%	43%	27%	4%

Figure 20: Teachers' quality rating of the professional development opportunities sponsored by the following. (Statewide)

SUMMARY PROFESSIONAL DEVELOPMENT: PERCEPTIONS & QUALITY

The success of educational technology integration into K-12 schools is heavily reliant on the skills of the teachers involved. From the responses to the Teacher Survey that were related to teachers' professional development opportunities, it is clear that teachers' perceptions are indifferent when it comes to the statements listed in *Figure 18*. In addition, the quality ratings made by the teachers regarding the professional development sponsored by the districts, local higher education, regional professional development, and school were mostly neutral. The opportunities that received the worst quality ratings were the ones sponsored by the individual schools.

From *Figure 20* it can be concluded that large districts rate the quality of their professional development sponsored by the entities mentioned above higher than that of the teachers in the medium and small districts. From *Figure 19* and *Figure 20* it is apparent that the quality of professional development opportunities for Nevada teachers have significant room for improvement. Furthermore, when compared to the data from the 2012 and 2010 SETNA, the trend towards higher ratings of professional development are evident, but not overwhelming.

SECTION 6: PARENT SURVEY RESULTS

The 2016 SETNA reintroduced the Parent Survey as a means for gathering parents’ feedback on their students’ technology use in schools and in the classroom setting. As a new addition, the 2016 Parent Survey was also offered in Spanish. Table 6 presents the submission totals for the English and Spanish versions of the Parent Survey. The total number of responses for the Parent Survey was 4,928 including 11 counties and the State Public Charter School Authority (SPCSA). This was an increase in parent responses compared to previous editions of the SETNA: 3,503 in 2014, 2,626 in 2012, and 915 in 2010. This section analyzes the data gathered from the 2016 Parent Survey while comparing data to previous years when applicable. *Figure 21-22* display the student grade level distribution from the parent responses.

Table 6: Parent Survey submission totals

<i>District Size</i>	<i>District</i>	<i>Parent Submissions (English)</i>	<i>Parent Submissions (Spanish)</i>	<i>Total Submissions</i>
Small	Lincoln	85	0	85
Small	Eureka	0	0	0
Small	Churchill	339	2	341
Small	Storey	0	0	0
Small	White Pine	14	1	15
Small	Mineral	0	0	0
Small	Esmeralda	0	0	0
Small	Lander	0	0	0
Small	Pershing	58	2	60
Medium	Elko	105	0	105
Medium	Nye	32	1	33
Medium	Carson City	0	0	0
Medium	Douglas	567	4	571
Medium	Lyon	383	2	385
Medium	Humboldt	0	0	0
Large	Clark	266	28	294
Large	Washoe	2,136	67	2,203
Large	SPCSA	816	20	836
Total		4,801	127	4,928
Total Parent Submissions		4,928		

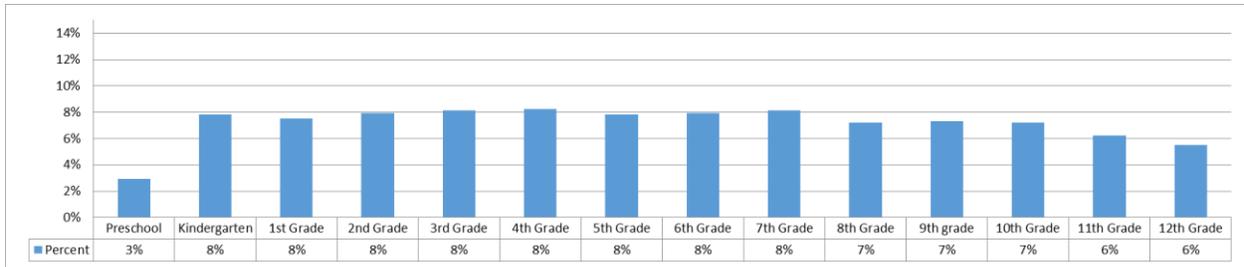


Figure 21: Student Grade Level Distribution. (Parent Survey)

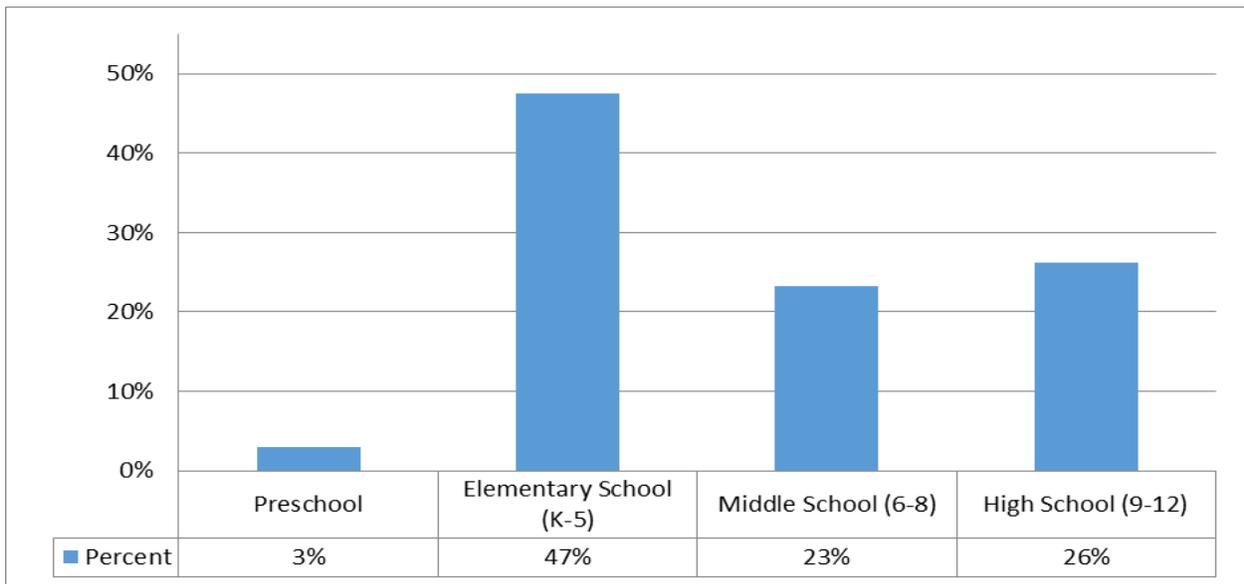


Figure 22: Grade Band Distribution. (Parent Survey)

When asked about their student’s technology use for homework purposes, 68% of the parents stated that their student engages in technology use for homework (*Figure 23*). When asked about the type of activities they complete, the most mentioned activities were cloud based collaboration (e.g. google docs and google drive), online research, and essay writing. Parents also identified various types of software used by students at home that included Word, Excel, and PowerPoint. Many parents also reported that their students rely on an Internet connection for homework assignments, such as online educational games and assignments that require research. Overall, a majority of parents stated that their student uses technology on a regular basis in order to complete homework assignments.

Do your students use technology to complete homework?

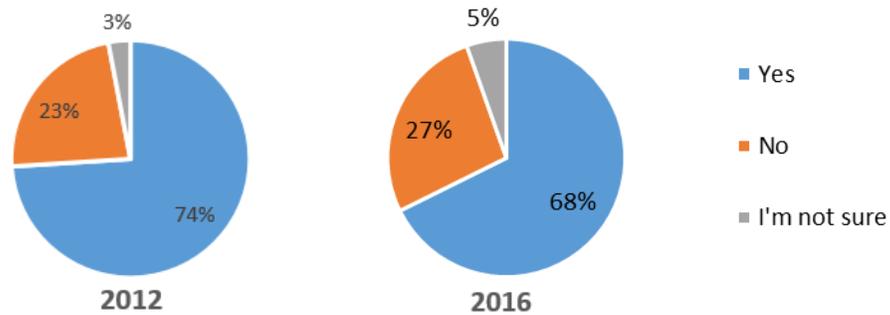


Figure 23: Students' technology use to complete homework. (Parent Survey)

In addition, the Parent Survey asked participants to report on their student's use of technology in the classroom. Out of the responses, only 46% stated that their student uses technology in school, substantially lower than the percentage reported in 2012 (74%) (Figure 24). Parents identified the types of activities their students complete in the classroom. These included projects, internet research, assessments, testing, submitting assignments, Black Board, YouTube, and Smart Boards.

Do your students use technology in the classroom?

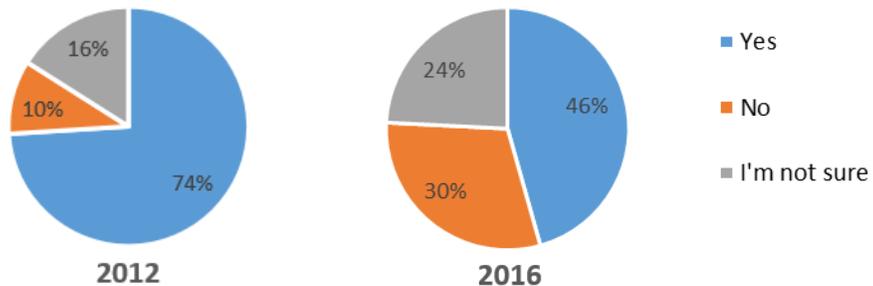


Figure 24: Students' technology use in the classroom. (Parent Survey)

The Parent Survey also assessed parents' expectations towards technology use in schools. The results showed that parents in Nevada have *medium* to *high* expectations regarding technology use in schools (Figure 25). When asked whether their schools were meeting these expectations parents responded; 30% *yes*, 45% *no*, and 24% *I'm not sure* (Figure 26). In 2012, the parents responded 46% *yes*, 32% *no*, and 22% *I'm not sure*; demonstrating that the expectations of parents are being met less in 2016 than

they were in 2012. There are several possible explanations for this finding. Parents' expectations regarding technology may have increased since 2012, as Nevada's economy strengthens and technology skills become increasingly critical for the workforce, thus making expectations more difficult to meet. The composition of the respondent group may also have played a role. The majority were parents of elementary school children, which generally have less technology for students to interact with. Either way, it is clear that Nevada schools are not meeting the technology expectations of parents.

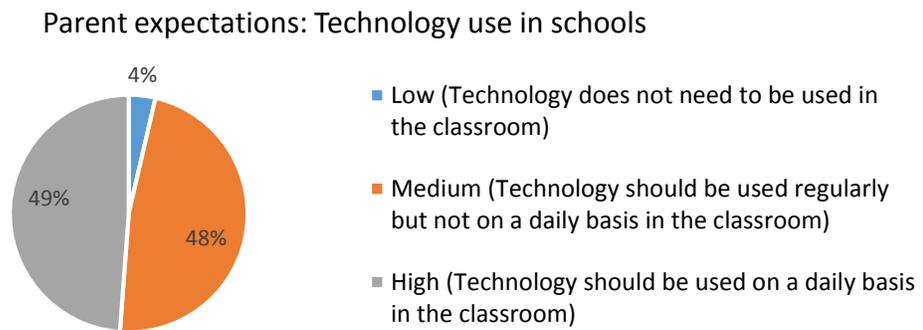


Figure 25: Parents' expectations regarding educational technology use in schools.

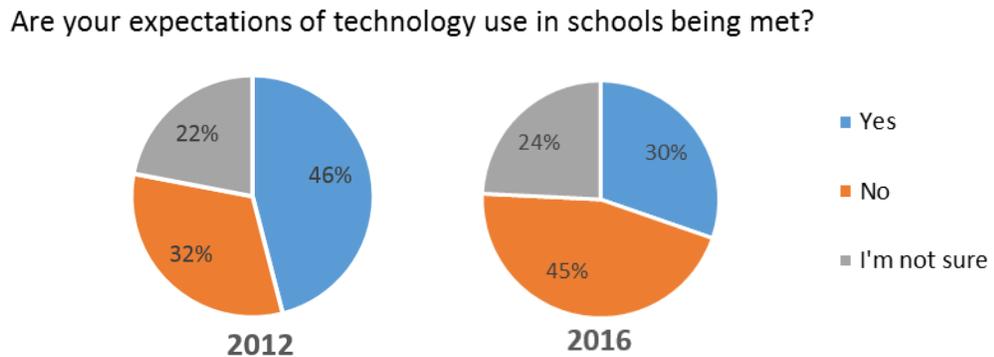


Figure 26: Are parents' expectations regarding educational technology use in schools being met?

It is interesting to note that with the introduction of the Spanish edition of the Parent Survey, data comparison uncovered only one area that showed a difference in perception. Out of the 126 Spanish survey submissions, parents' expectations related to educational technology use in schools remained consistent with that of the English language survey. Where the opinions differed was when they were asked if their expectations were being met (Figure 27).

Out of the Spanish Parent Survey submissions, 56% of respondents generally feel their expectations regarding educational technology in schools are being met, where only 30% of the predominantly English speaking parents felt the same. This data cannot be considered an accurate generalization of the entire Spanish speaking population of parents in Nevada due to the low number of submissions. It is interesting however, that though the expectations are the same, a higher percentage of parents who participated in the Spanish survey felt that their schools are meeting their expectations than those of the English Parent Survey.

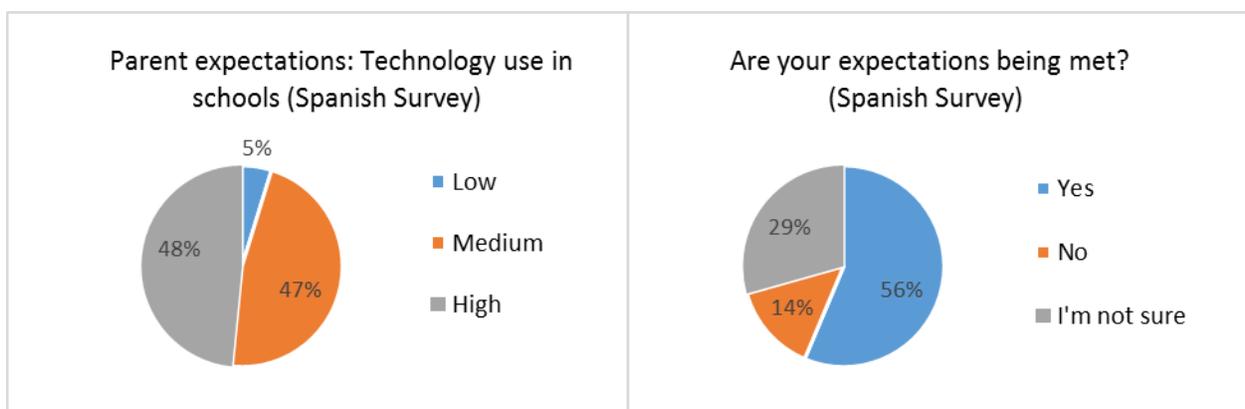


Figure 27: Parents' expectations regarding educational technology use in schools and if they are being met. (Parent Survey Spanish)

Finally, the Parent Survey asked respondents to voice their concerns regarding their students' use of educational technology in school (Figure 28) and for Nevada as a whole. The great majority of parents did not share any concerns with their students' technology use in school. Out of the parents who do have concerns, the bulk of them agree that technology is necessary in preparing their students for a successful future. The highest concern for Nevada parents is the lack of technology in their students' classrooms, with other reoccurring concerns related to monitoring web access, eliminating social media and texting from the classroom, children not developing basic skills (penmanship/grammar) at a young age, and children becoming too reliant on technology at a young age. Some parents were also concerned about their limited knowledge of how much exposure their children have to technology while in school. Many mentioned that they would like to know more about the technology to which their students have access.

Are you concerned about your students' technology use in school?

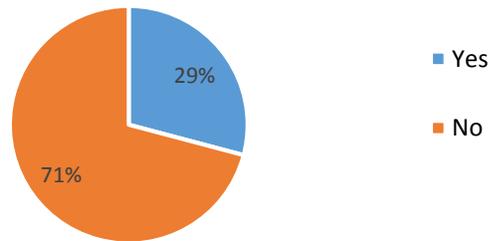


Figure 28: Parental concern with their student's use of educational technology in school

In addition to asking parents if they had concerns about their students' use of technology in school, the Parent Survey requested feedback about parents' thoughts on educational technology in Nevada. Twenty-six percent of the respondents replied to this question, which uncovered a few new concerns with Nevada's educational technology progress. Out of the 26% who replied, there were general agreements on the following concerns: increased eye strain and posture issues for students, Nevada's progress compared to California's schools, outdated technology, lack of STEM in schools, and national education ranking. Parents generally feel that Nevada needs to increase its use of educational technology if it plans to provide students with a competitive education.

SECTION 7: SUMMARY OF FINDINGS AND RECOMMENDATIONS

SUMMARY OF FINDINGS

Having gathered data from several sources including district educational technology plans, Nevada teachers, technology coordinators, and parents; the following is a summary of findings from the 2016 SETNA report:

- With the launch of the SBAC assessment test, many technology coordinators mentioned that a lack of devices made it difficult for all of their students to participate within the allotted testing time window.
- There is strong evidence that one-to-one computing in K-12 schools has a positive impact on student achievement and proficiency.
- There is insufficient data to make any assumptions on the topic of digital textbooks and their potential to reduce textbook expenses for K-12 schools.
- In order to reach the 2018 bandwidth demand, the typical school district in Nevada will need to grow its bandwidth at least three fold.

TECHNOLOGY COORDINATOR SURVEY

- Since 2012 there has been an increase of educational technology in middle and high-end classrooms.
- Technology coordinator estimates suggest that there are fewer low-end classrooms and slightly more high-end classrooms in Nevada than there were in 2012.
- Technology coordinators cite funding and bandwidth as their concerns with increased student device use.
- Technology coordinators are generally more concerned about supplying teachers with proper professional development than investing in additional educational technology.

TEACHER SURVEY

- Teachers in Nevada consider themselves to have average to above average experience with technology.
- Teachers statewide are generally unprepared to teach in classrooms where material is delivered mainly via a device.

- There are fewer classrooms in Nevada that have designated devices for student use than there were in 2014 and 2012.
- Approximately half of the teachers in Nevada believe that their classroom internet connections, both wired and wireless, are dependable.
- Nevada teachers feel that they are best prepared to teach with educational technology tools that are geared towards displaying information (LCD projector, document camera, internet resources, etc.).
- Nevada teachers feel that they are the least prepared to teach with tools that promote student engagement (integrated learning systems, probes and/or probeware, simulations, etc.).
- Teachers in large districts feel better prepared to use educational tools for instructional purposes than the teachers in medium and small districts.
- Teachers in 2016 feel less prepared to adopt 21st Century teaching practices than teachers did in 2014, 2012, and 2010.
- Teachers rate the quality of their professional development opportunities slightly higher than they did in 2012 and 2010.

PARENT SURVEY

- Data from the Parent Survey suggests that fewer students use technology to complete their homework than did in 2012.
- Parents feel that there has been a significant decrease in the number of students who use technology in the classroom than in 2012.
- A greater number of parents feel that their schools are not meeting their expectations in regards to educational technology use in schools than did in 2012.
- Though they share the same expectations, a greater percentage of Spanish speaking parents feel that their schools are meeting their expectations in regards to educational technology use in schools than English speaking parents.
- A majority of parents have concerns that their younger students are not gaining a balance of basic skills (penmanship, spelling, etc.) and technological skills (typing, internet use, etc.).
- Generally, Nevada parents are unaware of the educational technology that is available to their students in the classroom.

RECOMMENDATIONS FROM SETNA 2016 FINDINGS

The State Educational Technology Needs Assessment highlights both the enclaves of excellence and the need for a more unified strategy for educational technology in Nevada. The following are some recommendations made by the Raggio Research Center (RRC) research team for statewide initiatives, based on the findings from the 2016 needs assessment:

- Assess the effectiveness of professional development opportunities that are offered to teachers in neighboring states
- Adopt significant professional development opportunities that are focused on best practices for integrating educational technology into lesson plans
- Explore new methods for assessing the educational technology skill levels of Nevada teachers
- Invest in upgrading the bandwidth in Nevada schools
- Monitor the ongoing progress of the schools that were awarded Nevada Ready 21 grant funding
- Provide more information to parents on the educational technology that their students have access to in their classroom

REFERENCES

- ESH. (2015). *State of the states*. Retrieved from Education Superhighway:
<http://stateofthestates.educationsuperhighway.org/>
- Gohl, E. G. (2009). Assessments and technology: A power combination for improving teaching and learning. *Meaningful measurement: The role of assessments in high school education*, 183-197.
- NDE. (2015). *2015 Smarter Balanced Results Talking Points*. Retrieved from State of Nevada Department of Education:
http://www.doe.nv.gov/Assessments/SBAC_Smarter_Balanced/Communication_Tools/
- Reeves, D. (2007). *Ahead of the curve: The power of assessment to transform teaching and learning*. .
Bloomington, IN: Solution Tree Press.
- Zheng, B., Warschauer, M., Lin, C.-H., & Chang, C. (2016). Learning in one-to-one Laptop Environments: A Meta-Analysis and Research Synthesis. *Review of Educational Research*, 1-33.

APPENDICES

APPENDIX A

Technology Coordinator Survey



2016 SETNA- Technology Coordinator Survey

Welcome!

Dear Technology Coordinator,

This is the 2016 State Educational Technology Needs Assessment (SETNA) Technology Coordinator Survey. This survey is conducted by the Raggio Research Center (RRC) for Science, Technology, Engineering and Mathematics (STEM) education at the University of Nevada, Reno on behalf of the Commission on Educational Technology and the Nevada State Department of Education. This survey is intended to assess your views and perceptions of technology throughout your school and across the district. The survey covers a variety of topics, from technology planning to teachers' use of technology in terms of teaching and administrative tasks.

We ask that you please complete the following Technology Coordinator Survey which will take approximately 30 minutes. Your responses are anonymous and extremely important as the results will provide important feedback for the Nevada State Legislature and can effect funding for educational technology.

To begin this survey, please click on the "next" button located at the bottom of this page. Please answer each question thoroughly.

Thank you for your support.

Respectfully,

Jacque Ewing-Taylor, PhD
Director of Grants and Evaluation

Daniel Monk
Graduate Assistant

Pamela Smith
Administrative Assistant III

2016 SETNA- Technology Coordinator Survey

Technology Capacity

(*) Indicates a required question.

The following items pertain to the technology capacity in the average classroom throughout your district. Please, in the following text boxes, describe three relatively common classrooms that a visitor might see in your district.

The three classrooms should represent your view of the low, middle, and high in terms of technology availability in your district.

In your description, include the approximate number, age, and condition of the computers in the room. In addition, please include the presence or absence of a projector, the Internet connection capacity and any other technologies that might be available.

* 1. Common low-end classroom:

* 2. Common mid-range classroom:

* 3. Common high-end classroom:

* 4. Next to each of the designations below, provide a number that represents the approximate percentage of classrooms that closely fit the description:

Low-end classroom

Mid-range classroom

High-end classroom

* 5. What support is available to teachers when they need technical assistance in their classrooms?

6. Please share any other comments you have regarding the technology capacity in your district's classrooms.

2016 SETNA- Technology Coordinator Survey

Technology Planning

This section pertains to planning for technology use at local, district, and state levels.

- * 1. Describe the role of the current STATE educational technology plan in the design, delivery and planning of educational technology in your district.
- * 2. Describe the role of the current DISTRICT educational technology plan in the design, delivery and planning of educational technology in your district.
- * 3. Do the schools in your district typically engage in significant technology planning? If so, how does this occur? Do they have school technology plans? Do they have technology committees?
- * 4. Describe the status of PLANNING for technology in your district. What are the major challenges?
- * 5. Describe in general terms the FUNDING for technology in your district. What are the major sources of funding? Is the funding consistent and predictable?
- * 6. What role does open source software such as OpenOffice, Apache, or Firefox have in your district's technology plan?
- 7. What other comments do you have regarding technology planning in your district?

2016 SETNA- Technology Coordinator Survey

Role of Technologies

The following items refer to the role of technology throughout the district as the tools pertain to a variety of tasks.

1. What do you think the opportunities and challenges associated with increasing the use of computerbased assessments are in your district?
- * 2. What do you think are the opportunities and challenges associated with the expanded use of laptops to supplement and in some instances replace textbooks?
3. Would the expanded distribution of laptop computers have a positive impact on student outcomes? Why or why not?
- * 4. What are some of the more advanced ways teachers in your district are utilizing the Internet to improve student outcomes?
5. What are some of the greatest challenges associated with the increased use of the Internet for teachers in your district?
- * 6. Are teachers in your district using the Internet to collaborate with other teachers in your district? If yes, how?
7. What are some of the most important ways teachers can utilize the web to support teaching?
8. What other comments do you have regarding the role of technologies in your district classrooms?

2016 SETNA- Technology Coordinator Survey

Professional Development

These items pertain to the professional development that is available to teachers throughout your school and district.

- * 1. What type of professional development is available to teachers in your district?
- * 2. Describe what you believe are the key components to effective professional development.
- * 3. How do these key components compare to the professional development opportunities you are able to provide to teachers?
- 4. Please share any other comments, ideas or suggestions regarding educational technology you feel is pertinent to this survey.

2016 SETNA- Technology Coordinator Survey

Finished

We appreciate your feedback, thank you for the time and effort that you put into completing this survey. If you have any suggestions on how we can improve this survey please enter them below, otherwise click the on the "Done" button to finish.

Sincerely,

The 2016 SETNA Team.

How can we improve this survey?

APPENDIX B



2016 SETNA- Teacher Survey

Welcome!

Dear Teacher,

This is the 2016 State Educational Technology Needs Assessment (SETNA) Teacher Survey. This survey is conducted by the Raggio Research Center (RRC) for Science, Technology, Engineering and Mathematics (STEM) Education at the University of Nevada, Reno on behalf of the Commission on Educational Technology and the Nevada Department of Education. This survey is intended to give you the opportunity to comment on the educational technology that is being used in your school district.

We ask that you please complete the following Teacher Survey which will take 10-30 minutes. Your responses are anonymous and extremely important as the results will provide important feedback for the Nevada State Legislature and may effect funding for educational technology.

To begin this survey, please click on the "next" button located at the bottom of this page. Please answer each question thoroughly.

Thank you for your support.

Respectfully,

Jacque Ewing-Taylor
Director of Grants and Evaluation

Daniel Monk
Graduate Assistant

Pamela Smith
Administrative Assistant III

2016 SETNA- Teacher Survey

Demographic Information

This information is for classification purposes only; we have no way of tracking this information back to the participant.

(*) Indicates a required question.

* 1. In which year did you begin teaching?

* 2. How long have you been teaching?

- This is my first year
- More than 1 year, but fewer than 3 years
- More than 3 years, but fewer than 5 years
- More than 5 years, but fewer than 10 years
- More than 10 years

* 3. How long have you been teaching at your current school?

- This is my first year
- More than 1 year, but fewer than 3 years
- More than 3 years, but fewer than 5 years
- More than 5 years, but fewer than 10 years
- More than 10 years

4. Which job classification most closely matches your current position?

*

- Certified teacher
- Media specialist
- Special education teacher
- Technology teacher/integration specialist
- Other (please specify)

* 5. What type of school accurately describes your current assignment/placement?

- Elementary School (K-5 or K-6)
- Middle School (6-8, 6-9, 7-8, or 7-9)
- High School (9-12 or 10-12)
- Elementary/Middle School (K-8)
- Other (please specify)

* 6. If you teach at the middle school or high school level, which subject(s) do you teach? (Select all that apply)

- | | |
|--|---|
| <input type="checkbox"/> I teach elementary school | <input type="checkbox"/> Technology |
| <input type="checkbox"/> Math | <input type="checkbox"/> Librarian |
| <input type="checkbox"/> Science | <input type="checkbox"/> Foreign Language Arts |
| <input type="checkbox"/> English/Language Arts/Reading | <input type="checkbox"/> Specialist or Strategist |
| <input type="checkbox"/> Social Studies/History/Government | <input type="checkbox"/> CTE Program Teacher |
| <input type="checkbox"/> Physical Education/Health | |
| <input type="checkbox"/> Other | |

*

7. Are you:

- Male
- Female
- Choose not to answer
- Other

* 8. Please rate your experience with technology:

- Very inexperienced (I do not consider myself a technology user. I get someone else to do technology-based tasks for me).
- Inexperienced (I consider myself a novice user. I accomplish assigned tasks, but I am more efficient when I don't use technology to do a job).
- About average (I have enough skills to complete the management and communication tasks expected of me and occasionally prefer to use technology to accomplish my tasks).
- Experienced (My skills are very good. I use a variety of technology tools and I use them efficiently for all aspects of my job).
- Very experienced (I am a technology leader. I use technology efficiently, effectively and in creative ways to accomplish my job. I often teach others to use technology resources).

2016 SETNA- Teacher Survey

Existing Technology in the Classroom

This section pertains to the technology to which you and your students regularly have access in the classroom. Some questions refer to the age and capabilities of these tools. Although you may not have the exact information, please respond to the best of your knowledge.

Note: Throughout this survey we use the term "device" to refer to desktop computer, laptop computer, mobile devices, and tablet computer (e.g., iPads, Microsoft surface, etc.).

(*) Indicates a required question.

1. In my classroom, I have a designated device that I can use for administrative tasks (e.g. grading, email, attendance).

- Yes
- No

*

2016 SETNA- Teacher Survey

Designated Administrative Device

* 1. In general, I find this administrative device easy to use.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

* 2. Approximately what is the age of this administrative device?

- Less than 1 year
- 1-5 years
- 5-10 years
- More than 10 years

2016 SETNA- Teacher Survey

Existing Instructional Technology in the Classroom

* 1. In my classroom, I have a designated device that I can use for instructional and curricular tasks (e.g. lesson planning, content projection, demonstration).

- Yes
- No

2016 SETNA- Teacher Survey

Designated Instructional Devices Teacher use

* 1. In general, all devices for instructional and curricular tasks are easy to use.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

* 2. Approximately what is the age of the instructional and curricular device(s)?

- Less than 1 year
- 1-5 years
- 5-10 years
- More than 10 years

2016 SETNA- Teacher Survey

Existing Instructional Device For Student Use

* 1. In my classroom, I have a designated device that students can use for instructional purposes.

- Yes
- No

2016 SETNA- Teacher Survey

Designated Instructional Devices for Student use

* 1. In general, all devices that the students operate for instructional purposes are easy to use.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

2. Approximately what is the average age of the devices that the students use in the classroom ?

- Less than 1 year
- 1-5 years
- 5-10 years
- More than 10 years

2016 SETNA- Teacher Survey

Number of Devices in Classroom

* 1. Do you have any devices in your classroom other than a designated administrative device?

- Yes (Please specify how many devices are in your classroom)
- No

If "Yes" then how many?

2016 SETNA- Teacher Survey

Total Devices Available In Classroom

*

1. What is the ratio of students to devices during a typical class?

- 2 students : 1 device
- 3 students : 1 device
- 4 students : 1 device
- 5 students : 1 device
- More than 5 students : 1 device

* 2. In general, these devices are easy to use.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

* 3. Approximately what is the average age of the devices in the classroom ?

- Less than 1 year
- 1-5 years
- 5-10 years
- More than 10 years

2016 SETNA- Teacher Survey

Internet Availability

1. Do any of the devices in your classroom have an internet connection?

- Yes
- No
- I don't have any devices in my classroom

*

2016 SETNA- Teacher Survey

Internet Connection

* 1. The devices in my classroom have a wired connection to the Internet.

- Yes
 No
 I don't know

* 2. In general, I find this wired connection to be dependable.

- Strongly agree
 Agree
 Neither agree nor disagree
 Disagree
 Strongly disagree
 Not applicable

* 3. The devices in my classroom have a wireless connection to the Internet.

- Yes
 No
 I don't know

4. In general, I find this wireless connection to be dependable.

- Strongly agree
 Agree
 Neither agree nor disagree
 Disagree
 Strongly disagree

Not applicable

* 5. The connection speed for classroom devices is such that typical online videos will begin playing:

- Very quickly

*

Quickly

Neither quickly nor slowly

Slowly

Very slowly

2016 SETNA- Teacher Survey

Comments Technology Availability

1. What comments do you have regarding the technology available in your classroom?

2016 SETNA- Teacher Survey

Teacher Preparation and Technology Readiness

This section pertains to how ready and prepared you are to use different technologies. It also applies to your ability to use technology for specific tasks and in certain situations.

* 1. Please indicate the degree to which you are currently prepared to use the following tools for instructional purposes:

	Very well prepared	Well prepared	Not prepared	Not at all prepared	N/A
Audio or video podcasts (access or create)	<input type="radio"/>				
Audio/Video production/editing (Audacity, GarageBand, iMovie, Movie maker, etc.)	<input type="radio"/>				
Classroom response systems (clickers, etc.)	<input type="radio"/>				
Classroom voice amplification systems	<input type="radio"/>				
Content management systems/websites (Moodle, Canvas, Blackboard, etc.)	<input type="radio"/>				
Content specific applications (math, science, music, etc.)	<input type="radio"/>				
Database software	<input type="radio"/>				

2. Please indicate the degree to which you are currently prepared to use the following tools for instructional purposes:

	Very well prepared	Well prepared	Not prepared	Not at all prepared	N/A
Digital camera	<input type="radio"/>				
Digital video camera	<input type="radio"/>				
Document camera	<input type="radio"/>				
Drill and practice	<input type="radio"/>				
E-mail (student)	<input type="radio"/>				
Handheld or mobile device	<input type="radio"/>				
Image/photo editing	<input type="radio"/>				

*

* 3. Please indicate the degree to which you are currently prepared to use the following tools for instructional purposes:

	Very well prepared	Well prepared	Not prepared	Not at all prepared	N/A
Integrated learning systems (CompassLearningOdyssey, Plato Learning, etc.)	<input type="radio"/>				
Interactive whiteboard software (Promethean, SMART Notebook, etc.)	<input type="radio"/>				
Internet resources	<input type="radio"/>				
LCD projector	<input type="radio"/>				
Library catalogs	<input type="radio"/>				
Online research databases available through the school media center/library	<input type="radio"/>				
Presentation software (PowerPoint, Prezi)	<input type="radio"/>				

4. Please indicate the degree to which you are currently prepared to use the following tools for instructional purposes:

	Very well prepared	Well prepared	Not prepared	Not at all prepared	N/A
Probes and/or probeware	<input type="radio"/>				
Scanner	<input type="radio"/>				
Simulations	<input type="radio"/>				
Spreadsheets	<input type="radio"/>				
Tutorials	<input type="radio"/>				
Videoconferencing	<input type="radio"/>				
Video streaming (Discovery, Learn 360, TeacherTube, etc.)	<input type="radio"/>				

*

5. Please indicate the degree to which you are currently prepared for the following for instructional purposes:

	Very well prepared	Well prepared	Not prepared	Not at all prepared	N/A
Teach in a classroom where every student has their own device (1:1).	<input type="radio"/>				
Access and use state assessment data (e.g. CRT scores) to support instructional decisions.	<input type="radio"/>				
Access and use district assessment data to support instructional decisions.	<input type="radio"/>				
Teach in a classroom where all of the instructional materials are delivered via the device.	<input type="radio"/>				
Find effective instructional materials on the Internet.	<input type="radio"/>				
Blended learning, hybrid 1:1, BYOD, Project Based Learning (PBL).	<input type="radio"/>				
Integrate educational technology into your classroom.	<input type="radio"/>				
Incorporate library databases into student research projects.	<input type="radio"/>				

6. What comments do you have regarding your teacher preparation opportunities?

2016 SETNA- Teacher Survey

Professional Development Availability

This section pertains to training and/or professional development that you may have received while you have been a teacher in Nevada.

* 1. In your current school have you received any professional development opportunities/ training?

- Yes
 No
 Not sure

2016 SETNA- Teacher Survey

Professional Development Information

* 1. Which of the following professional development opportunities have been available to you during the current school year?

- One-on-one training from a technology specialist or coach
 Informal training from colleagues
 Group training related to technology (e.g. staff development days)
 Online professional development courses
 In this current school year I have not had any professional development opportunities
 Other (please specify)

For the next group of questions, please estimate the number of hours you have participated in available technology professional development activities during the current school year.

2. One-on-one training from a technology specialist or coach

- | | |
|-----------------------------------|-----------------------------------|
| <input type="radio"/> N/A | <input type="radio"/> 20-30 Hours |
| <input type="radio"/> 1-10 Hours | <input type="radio"/> 30-40 Hours |
| <input type="radio"/> 10-20 Hours | <input type="radio"/> 40+ Hours |

3. Informal training from colleagues

- N/A
 20-30 Hours
 1-10 Hours
 30-40 Hours
 10-20 Hours
 40+ Hours

4. Group training related to technology (e.g. staff development days)

- N/A
 20-30 Hours
 1-10 Hours
 30-40 Hours
 10-20 Hours
 40+ Hours

5. Online professional development courses

- N/A
 20-30 Hours
 1-10 Hours
 30-40 Hours
 10-20 Hours
 40+ Hours

6. Other

- N/A
 20-30 Hours
 1-10 Hours
 30-40 Hours
 10-20 Hours
 40+ Hours

* 7. How would you rate the quality of the technology-related professional development opportunities sponsored by the following entities?

	Very High	High	Neutral	Low	Very Low	N/A
District	<input type="radio"/>					
Local Higher Education Institution (UNR, UNLV, CSN, GBC, Etc.)	<input type="radio"/>					
Regional Professional Development Program (RPDP)	<input type="radio"/>					
School	<input type="radio"/>					

* 8. Please rate your agreement with the following statements as they relate to your technology professional development opportunities.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	N/A
They are appropriate for content I am expected to teach.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The activities focus on general integration strategies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They are appropriate for the grade level of my students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They generally provide me with opportunities to try what I have learned.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The activities are ongoing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They are best described as 'one-shot' presentations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The different activities are a part of a larger related plan.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They provide opportunities to work with other teachers in my content area.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Activities are frequently targeted to a specific strategy or method.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Agree	Agree	nor Disagree	Disagree	Strongly Disagree	N/A
The activities are directed towards the needs of my grade level.	<input type="radio"/>					
The activities are directed towards the needs of my school.	<input type="radio"/>					
They promote collaboration among my fellow teachers.	<input type="radio"/>					
The activities address issues of motivation.	<input type="radio"/>					
Accountability: I am expected to apply what I've learned in the classroom.	<input type="radio"/>					
Educational standards are incorporated into the activities.	<input type="radio"/>					

2016 SETNA- Teacher Survey

Comments Professional Development

1. Please share any additional comments you may have regarding your professional development opportunities.

2016 SETNA- Teacher Survey

Classroom Technology Use (TEACHER)

* 1. Do you personally use technology while in your classroom ?

- Yes
- No
- Sometimes

2016 SETNA- Teacher Survey

Classroom Technology Use Section (TEACHER)

This section pertains to the ways that YOU generally use technology in your classroom.

This includes your use and technology for planning purposes.

Please consider technology to which you have access in your classrooms all of the time and do not include items that may be available elsewhere in the school (e.g., for checkout).

* 1. What best describes your current practice of using technology in instruction?

- I seldom use technology to deliver instruction.
- I almost exclusively use whole group presentation style either using an interactive whiteboard, PowerPoint or other instructional software to explain or demonstrate concepts or instructions.
- I often use whole group presentation style, but sometimes facilitate students in their use of a variety of information resources and hands-on activities.
- I almost exclusively facilitate student learning by encouraging students to use information resources and hands-on activities.

* 2. Do you have access to the following materials via the Internet (select all that apply)?

- District content objectives
- Lessons developed by other district teachers
- District curriculum materials
- Videos related to the curriculum
- Online reports from standardized testing done school-wide
- Do not have access to technology-based materials for planning
- Do not use technology-based materials to make instructional decisions

*

3. Check all of the following that you do to help plan with other teachers who teach the same grade level or content area (select all that apply).

- Using web-based tools that permit document sharing (e.g. Google Docs, edmodo, C.E., wikis, blogs)
- Using shared space on the school network
- Emailing files
- Printing and copying documents
- Meet face to face
- Do not regularly plan with other teachers

2016 SETNA- Teacher Survey

Classroom Technology Use Section (TEACHER)

1. Please indicate how often YOU use the following technology in your classroom :

	Daily	Weekly	Infrequently	Never	N/A
Digital camera	<input type="radio"/>				
Digital video camera	<input type="radio"/>				
Document camera	<input type="radio"/>				
Drill and practice	<input type="radio"/>				
E-mail (student)	<input type="radio"/>				
Handheld or mobile device	<input type="radio"/>				
Image/photo editing	<input type="radio"/>				

*

* 2. Your classroom use:

	Daily	Weekly	Infrequently	Never	N/A
Audio or video podcasts (access or create)	<input type="radio"/>				
Audio/Video production/editing (Audacity, GarageBand, iMovie, Movie maker, etc.)	<input type="radio"/>				
Classroom response systems (clickers, etc.)	<input type="radio"/>				
Classroom voice amplification systems	<input type="radio"/>				
Content management systems/websites (Moodle, Canvas, Blackboard, etc.)	<input type="radio"/>				
Content specific applications (math, science, music, etc.)	<input type="radio"/>				
Database software	<input type="radio"/>				

3. Your classroom use:

	Daily	Weekly	Infrequently	Never	N/A
Integrated learning systems (CompassLearningOdyssey, Plato Learning, etc.)	<input type="radio"/>				
Interactive whiteboard software (Promethean, SMART Notebook, etc.)	<input type="radio"/>				
Internet resources	<input type="radio"/>				
LCD projector	<input type="radio"/>				
Library catalogs	<input type="radio"/>				
Online research databases available through the school media center/library	<input type="radio"/>				
Presentation software	<input type="radio"/>				

*

* 4. Your classroom use:

	Daily	Weekly	Infrequently	Never	N/A
Probes and/or probeware	<input type="radio"/>				
Scanner	<input type="radio"/>				
Simulations	<input type="radio"/>				
Spreadsheets	<input type="radio"/>				
Tutorials	<input type="radio"/>				
Videoconferencing	<input type="radio"/>				
Video streaming (Discovery, Learn 360, TeacherTube, etc.)	<input type="radio"/>				

1. Please share any comments you have regarding your use of technology in your classroom.

2016 SETNA- Teacher Survey

Classroom Technology Use (STUDENTS)

* 1. Do your students use technology while in your classroom?

- Yes
- No
- Sometimes

2016 SETNA- Teacher Survey

Classroom Technology Use Section (STUDENTS)

This section pertains to the ways that the STUDENTS generally use technology in your classes.

This includes the students' use and technology available for planning purposes.

Please consider technology to which you have access in your classrooms all of the time and do not include items that may be available elsewhere in the school (e.g., for checkout).

* 1. Please indicate how often the STUDENTS use the following technology in your classroom:

	Daily	Weekly	Infrequently	Never	N/A
Audio or video podcasts (access or create)	<input type="radio"/>				
Audio/Video production/editing (Audacity, GarageBand, iMovie, Movie maker, etc.)	<input type="radio"/>				
Classroom response systems (clickers, etc.)	<input type="radio"/>				
Classroom voice amplification systems	<input type="radio"/>				
Content management systems/websites (Moodle, Canvas, Blackboard, etc.)	<input type="radio"/>				
Content specific applications (math, science, music, etc.)	<input type="radio"/>				
Database software	<input type="radio"/>				

* 2. Student classroom use:

	Daily	Weekly	Infrequently	Never	N/A
Digital camera	<input type="radio"/>				
Digital video camera	<input type="radio"/>				
Document camera	<input type="radio"/>				
Drill and practice	<input type="radio"/>				
E-mail (student)	<input type="radio"/>				
Handheld or mobile device	<input type="radio"/>				
Image/photo editing	<input type="radio"/>				

* 3. Student classroom use:

	Daily	Weekly	Infrequently	Never	N/A
Integrated learning systems (Compass Learning Odyssey, Plato Learning, etc.)	<input type="radio"/>				
Interactive whiteboard software (Promethean, SMART Notebook, etc.)	<input type="radio"/>				
Internet resources	<input type="radio"/>				
LCD projector	<input type="radio"/>				
Library catalogs	<input type="radio"/>				
Online research databases available through the school media center/library	<input type="radio"/>				
Presentation software	<input type="radio"/>				

* 4. Student classroom use:

	Daily	Weekly	Infrequently	Never	N/A
Probes and/or probeware	<input type="radio"/>				
Scanner	<input type="radio"/>				
Simulations	<input type="radio"/>				
Spreadsheets	<input type="radio"/>				
Tutorials	<input type="radio"/>				
Videoconferencing	<input type="radio"/>				
Video streaming (Discovery, Learn 360, TeacherTube, etc.)	<input type="radio"/>				

2016 SETNA- Teacher Survey

School-Wide Technology Use

This section pertains to technology availability, use, and policies at a school-wide level.

* 1. Through a sign up or checkout procedure, I can arrange to have the following technologies available for a finite time in my classroom:

	Yes	No	N/A
Audio/Video production/editing (Audacity, GarageBand, iMovie, MovieMaker, etc.)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Classroom response systems (clickers, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Classroom voice amplification systems	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Content specific applications (math, science, music, etc.)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

	Yes	No	N/A
Database software	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital camera	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital video camera	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Document camera	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drill and practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Handheld or mobile device	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Image/photo editing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrated learning systems (CompassLearningOdyssey, PlatoLearning, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interactive whiteboard software (Promethean, SMART Notebook, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LCD projector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Probes and/or probware	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scanner	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Simulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Videoconferencing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Video streaming (Discovery, Learn 360, TeacherTube, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visualization/graphic organizers (Inspiration, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 2. Please rate your agreement with the following statements:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	N/A
The system in place for technology support is adequate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The time required to get technical assistance is minimal.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can manage the majority of technical issues that arise with my classroom devices.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can access the websites I need for instruction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The devices to which I have access are in good working condition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 3. I believe the Internet filter used at my school is:

- Too restrictive
- About right
- Not restrictive enough
- Don't Know
- N/A

4. I believe that the administrators responsible for the Internet filter are willing to consider a request for access:

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

5. What comments do you have regarding the technology usage in your school as a whole?

2016 SETNA- Teacher Survey

Finished

We appreciate your feedback, thank you for the time and effort that you put into completing this survey. If you have any suggestions on how we can improve this survey please enter them below, otherwise click the on the "Done" button to finish.

Sincerely,

The 2016 SETNA Team

1. How can we improve this survey?



2016 SETNA - Parent Survey

Welcome!

Dear Parent,

This is the 2016 State Educational Technology Needs Assessment (SETNA) Parent Survey. This survey is conducted by the Raggio Research Center (RRC) for Science, Technology, Engineering and Mathematics (STEM) Education at the University of Nevada, Reno on behalf of the Nevada Commission on Educational Technology and the Nevada Department of Education. This survey is intended to allow parents and guardians the opportunity to comment on the educational technology that is being used in their school districts and by their children.

We ask that you please complete the following seven-item Parent Survey, which will take 510 minutes. Your responses are anonymous and extremely important as the results will provide important feedback for the Nevada State Legislature.

To begin this survey, please click on the "next" button located at the bottom of this page. Please answer each question thoroughly.

Thank you for your support.

Respectfully,

**Jacque Ewing-Taylor
Director of Grants and Evaluation**

**Daniel Monk
Graduate Assistant**

**Pamela Smith
Administrative Assistant III**



2016 SETNA - Parent Survey

Parent Survey

Note: Educational technology includes computers, tablets, mobile devices etc...

(*) Indicates a required question.

* 1. In which school district is your student currently enrolled?

- | | | |
|---|--|--|
| <input type="checkbox"/> Carson City | <input type="checkbox"/> Eureka County | <input type="checkbox"/> Nye County |
| <input type="checkbox"/> Churchill County | <input type="checkbox"/> Humboldt County | <input type="checkbox"/> Pershing County |
| <input type="checkbox"/> Clark County | <input type="checkbox"/> Lander County | <input type="checkbox"/> Storey County |
| <input type="checkbox"/> Douglas County | <input type="checkbox"/> Lincoln County | <input type="checkbox"/> Washoe County |
| <input type="checkbox"/> Elko County | <input type="checkbox"/> Lyon County | <input type="checkbox"/> White Pine County |
| <input type="checkbox"/> Esmeralda County | <input type="checkbox"/> Mineral County | |
| <input type="checkbox"/> Other (please specify) | | |

* 2. In which grade is your child currently enrolled? If you have multiple children in school, please select all applicable levels.

- | | | |
|---|------------------------------------|-------------------------------------|
| <input type="checkbox"/> Preschool | <input type="checkbox"/> 4th Grade | <input type="checkbox"/> 9th grade |
| <input type="checkbox"/> Kindergarten | <input type="checkbox"/> 5th Grade | <input type="checkbox"/> 10th Grade |
| <input type="checkbox"/> 1st Grade | <input type="checkbox"/> 6th Grade | <input type="checkbox"/> 11th Grade |
| <input type="checkbox"/> 2nd Grade | <input type="checkbox"/> 7th Grade | <input type="checkbox"/> 12th Grade |
| <input type="checkbox"/> 3rd Grade | <input type="checkbox"/> 8th Grade | |
| <input type="checkbox"/> Other (please specify) | | |

* 3. Does your student regularly use educational technology to complete HOMEWORK? If so, what types of activities do they complete? (Research, projects, studying etc...)

- Yes (Please explain below which types of activities:)
- No (They never use technology to complete homework.)
- I'm not sure

If "Yes" please explain here:

* 4. Does your student use educational technology regularly while IN THE CLASSROOM? If so, what types of activities do they complete? (Research, projects, studying etc...)

- Yes (Please explain below which types of activities:)
- No (They never use technology while in the classroom.)
- I'm not sure

If "Yes" please explain here:

* 5. What are your expectations regarding educational technology use in schools?

- High (Technology should be used on a daily basis in the classroom)
- Medium (Technology should be used regularly but not on a daily basis in the classroom)
- Low (Technology does not need to be used in the classroom)
- Other (please specify)

* 6. Are your expectations regarding educational technology use in schools being met?

- Yes
- No

I'm not sure

* 7. Do you have any concerns regarding your student's use of educational technology in school?

Yes (Please share your concerns below.)

No

Please explain your concerns here:

8. What other comments do you have regarding the use of educational technology in your student's school?

9. Do you have anything else you would like us to know about educational technology in Nevada? If so, please share below.

2016 SETNA - Parent Survey

Finished

We appreciate your feedback, thank you for the time and effort that you put into completing this survey.

Sincerely,

The 2016 SETNA Team

APPENDIX D

Parent Survey (Spanish Version)



2016 SETNA - Encuesta de Padres

Saludos!

Querido Padre,

Esta es la encuesta estatal del año 2016 para que los padres puedan evaluar necesidades tecnológicas (SETNA). El Raggio Centro de Investigaciones de Educación de las ciencias, tecnología, ingeniería y matemáticas en la Universidad de Nevada, Reno está conduciendo este estudio para la Comisión Tecnológica de Nevada y el Departamento de Educación de Nevada. El propósito de esta encuesta es darles la oportunidad a padres y guardianes de comentar sobre la tecnología educativa que los hijos están usando en sus escuelas y distritos.

Le solicitamos que complete la encuesta de padres con siete preguntas, que solo será 5-10 minutos. Sus respuestas serán anónimas y es extrañamente importante porque nos dará información para la legislatura del estado de Nevada.

Para empezar esta encuesta, por favor, haga clic en "Siguiente" en la parte inferior de esta página.

Por favor, responda a cada pregunta.

Gracias por su apoyo.

Respetuosamente,

Jacque Ewing-Taylor
Directora de Proyectos en Becas y Evaluación

Daniel Monk
Asistente Escolar

Pamela Smith
Asistente Administrativa III

2016 SETNA - Encuesta de Padres

Encuesta de Padres

Nota: Tecnología educativa incluye computadoras, tabletas, celulares móviles, etc.

(*)Indica que su respuesta es requerida.

Carson City

Condado Churchill

Condado Clark

Condado Douglas

Condado Elko

Condado Esmeralda

Condado Eureka

Condado Humboldt

Condado Lander

Condado Lincoln

Condado Lyon

Condado Mineral

* 1. ¿Actualmente, en cuál distrito escolar está su hijo/a?

Condado Nye

Condado Pershing

Condado Storey

Condado Washoe

Condado White Pine

Otro (especifique)

* 2. ¿Actualmente, en qué grado está su hijo/a? Si tiene varios hijos en la escuela, por favor seleccione todos los niveles aplicables.

Preescolar

El Kinder

1er Grado

2o Grado

3a Grado

Otro (especifique)

4° Grado

5° Grado

6° Grado

7° Grado

8° Grado

9° Grado

10° Grado

11° Grado

12° Grado

* 3. ¿Su estudiante regularmente usa tecnología para completar si TAREA? Si es así, ¿qué tipo de actividades completa con la tecnología ?

Sí. (Por favor explique abajo los tipos de actividades:)

No. (Nunca usa la tecnología para completar tarea.)

No estoy seguro/a.

Para sí, por favor explique aquí:

* 4. ¿Su estudiante utiliza tecnología regularmente cuando está en una CLASE? Si es así, ¿qué tipo de actividades completa con la tecnología? (Estudios, proyectos, estudiar, etc...)

Sí. (Por favor explique abajo los tipos de actividades:)

No. (Nunca usa la tecnología para completar tarea.)

No estoy seguro/a.

Para sí, por favor explique aquí:

* 5. ¿Cuáles son sus expectativas sobre el uso de la tecnología en las escuelas?

Altas (La tecnología se debe usar al diario en la clase)

Mediana (La tecnología se debe usar regularmente, pero no al diario en la clase)

Baja (La tecnología no se necesita usar en la clase)

Otra (especifique)

* 6. ¿Se están cumpliendo sus expectativas sobre el uso de la tecnología en las escuelas?

Sí.

No

No estoy seguro/a

* 7. ¿Tiene alguna preocupación acerca de su uso de la tecnología del estudiante en la escuela?

Sí. (Por favor ponga sus preocupaciones abajo.)

No

Por favor ponga sus preocupaciones aquí:

8. ¿Qué otros comentarios tiene acerca del uso de la tecnología en la escuela de su estudiante?

9. ¿Tiene algo más que quiere que sepamos sobre la tecnología educativa en Nevada? Si es así, por favor indique abajo.

2016 SETNA - Encuesta de Padres

Hecho

Gracias.

Sinceramente,

El equipo de 2016 SETNA

SUPERINTENDENT LETTER

BRIAN SANDOVAL
Governor

STEVE CANAVERO, Ph.D.
*Interim Superintendent
of Public Instruction*

STATE OF NEVADA



DEPARTMENT OF EDUCATION
700 E. Fifth Street
Carson City, Nevada 89701-5096
(775) 687 - 9200 · Fax: (775) 687 - 9101
<http://www.doe.nv.gov>

SOUTHERN NEVADA OFFICE
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(702) 486-6458
Fax: (702)486-6450
www.doe.nv.gov/Educator_Licensure

January 5, 2016

MEMORANDUM

TO: Nevada School District Superintendents

FROM: Steve Canavero, Interim Superintendent of Public Instruction
Nevada Department of Education

SUBJECT: Notice of Required School District Participation in Educational Technology Needs Assessment

This is to inform you of a statewide study that is currently underway. In accordance with NRS 388.795, an educational technology needs assessment must occur every spring of even numbered years. On December 7, 2015, the Nevada Commission on Educational Technology selected Dr. Jacque Ewing-Taylor of the William Raggio Research Center for STEM Education at UNR to conduct this assessment. The results of this assessment will influence state educational technology initiatives for the next two years. The timeline on this study is extremely tight with the first draft due to the Commission on May 29, 2016, and I strongly encourage cooperation from your district.

Dr. Kimberly Vidoni NDE is helping Dr. Ewing-Taylor contact educational technology directors in your district, and your support in this effort is greatly appreciated. Please feel free to forward this to whomever you believe should have this information. If you have further questions, please contact Jacque Ewing-Taylor at (775)784-7784 or jacque@unr.edu.

TECHNOLOGY COORDINATOR LETTER



Dear Technology Coordinator,

Thank you for your district's participation in the biennial State Educational Technology Needs Assessment Survey (SETNA) for 2016. As you may be aware from the recent letter emailed to your district's superintendent by Kim Vidoni of the NDE, we are conducting a statewide survey in regards to the educational technology needs of each district. In order to get as much useful data as possible, we need every district technology coordinator to participate. We are therefore asking that you click on the following link and complete the technology coordinator survey:

https://www.surveymonkey.com/r/TechCoord_District

Your responses are extremely important, as the information you provide will be included in the report to the Nevada State Legislature, which has a *direct effect* on how technology needs are funded in your district and throughout the state.

Your responses will provide necessary and important information to those who decide how and what to fund in order meet the technology needs of Nevada's public education system.

Please answer all of the questions. If you find some questions do not apply to your district, please respond with "not applicable" or "N/A", or a similar response.

If you have any questions, do not hesitate to contact the Raggio Research Center Research Team.

Thank you for your participation on this important project.

Daniel J. Monk
Graduate Assistant
Raggio Research Center, UNR
Dmonk@unr.edu
775-327-5215

Jacque Ewing-Taylor
Director of Grants and Evaluation
Raggio Research Center, UNR
Jacque@unr.edu
775-784-7784



Dear Teacher,

Thank you for your district's participation in the biennial State Educational Technology Needs Assessment Survey (SETNA) for 2016. As you may be aware from the recent letter emailed to your district's superintendent by Kim Vidoni of the NDE, we are conducting a statewide survey in regards to the educational technology needs of each district. We are therefore asking that you click on the following link and complete the teacher survey:

https://www.surveymonkey.com/r/Teacher_District

Your responses are extremely important, as the information you provide will be included in the report to the Nevada State Legislature, which has a *direct effect* on how technology needs are funded in your district and throughout the state.

Your responses will provide necessary and important information to those who decide how and what to fund in order meet the technology needs of Nevada's public education system.

Please answer all of the questions. If you find some questions do not apply to your district, please respond with "not applicable" or "N/A", or a similar response.

If you have any questions, do not hesitate to contact the Raggio Research Center Research Team.

Thank you for your participation on this important project.

Daniel J. Monk
Graduate Assistant
Raggio Research Center, UNR
Dmonk@unr.edu
775-327-5215

Jacque Ewing-Taylor
Director of Grants and Evaluation
Raggio Research Center, UNR
Jacque@unr.edu
775-784-7784



Dear Superintendent,

Thank you for your district's participation in the biennial State Educational Technology Needs Assessment Survey (SETNA) for 2016. As you are aware from the recent letters from Kim Vidoni of the NDE and from the Raggio Research Team regarding the teacher survey, we are conducting a statewide survey of educational technology needs. In order to get as much participation as possible, we are asking for your help. In order to collect the greatest number of responses, we are asking you to help us disseminate the survey link to the parents in your district.

The second section of this email is addressed to parents with a county-specific parent technology survey link. Please forward the email to the principals in your district, so they can then send it on to parents directly or send a hard copy home with their students, whichever method will most effectively reach parents.

In the email that we are asking you to forward, we describe the ways in which the survey is accessible. That is, we inform parents that the survey is accessible from computers, tablets, and most mobile devices. However, with your permission, we also inform them that if those options are not available to them, they will be able to access the survey at their child's school.

With this in mind, **please forward this email to your district site-based administrators so they are aware that some parents may choose to complete the survey at their sites and that they may be asked to forward the email to their students' parents.** We know school sites are busy this time of year, but we hope that this advance notice will allow site-based administrators to schedule times for parents to access the survey, if necessary. The current plan is for the parent survey to be **open until Monday February 29, 2016**, which should help in scheduling these times.

Parent responses are extremely important, as the information they provide will be included in the report to the Nevada State Legislature, which has a *direct effect* on how technology needs are funded in your district and throughout the state.

Thank you for your participation on this important project!

Directions to forward:

- **Click forward**
- **Delete from here up (but please leave the letterhead intact)**



Dear Parent,

We are asking for your participation in the biennial State Educational Technology Needs Assessment for 2016 (SETNA 2016). The Nevada Legislature requires a technology assessment every two years, which *directly influences* state educational technology initiatives.

The thoughts and perceptions of parents are extremely important in determining the educational technology needs of school districts across the state.

Please click on the following link to complete the brief (9-question) survey:

https://www.surveymonkey.com/r/Parent_District

Spanish version (Espanol):

https://www.surveymonkey.com/r/Parent_District_Espanol

Parents, please complete the parent survey by clicking on the above link, or typing it in to a web browser exactly how it appears. Your responses are confidential and extremely important, as the information you provide will be included in the report to the Nevada State Legislature, which has a *direct effect* on how technology needs are funded in your district and throughout the state.

Your responses will provide necessary and important information to those who decide how and what to fund to meet the technology needs of Nevada's public education system.

The survey is accessible from computers, tablets, and most mobile devices. If these options are not available, please contact your school and they will set up a time when you can use their technology to complete the survey. Public libraries also have computers with Internet connections that can be used to complete this survey.

If you have any questions, do not hesitate to contact the Raggio Research Center Research Team.

Thank you for your participation on this important project!

Daniel J. Monk
Graduate Assistant
Raggio Research Center, UNR
Dmonk@unr.edu
775-327-5215

Jacque Ewing-Taylor
Director of Grants and Evaluation
Raggio Research Center, UNR
Jacque@unr.edu
775-784-7784

Dear Dave Flatt,

I am a student at the University of Nevada, Reno, and the Graduate Research Assistant working on this year's State Educational Technology Needs Assessment (SETNA). We are conducting a statewide survey to determine the educational technology needs of Nevada school districts. Parent responses are extremely important, as the information they provide will be included in the report to the Nevada State Legislature, which has a *direct effect* on how technology needs are funded in your district and throughout the state. In order to collect the greatest number of responses, we are asking for your help to disseminate the survey links to the members of the NV PTA.

The second section of this email is a letter addressed to the members of the NV PTA with county-specific parent survey links. Thank you for your participation on this important project.

Survey Deadline: 5:00 pm on Monday, February 29, 2016.

Regards,

Daniel Monk

Graduate Research Assistant
SETNA - State Educational Technology Needs Assessment
Raggio Research Center
University of Nevada, Reno
775-327-5215
Email: Dmonk@unr.edu

Directions to forward:

- **Click forward**
- **Delete from here up**

Dear Nevada PTA Members,

We have been asked for your participation in the biennial State Educational Technology Needs Assessment for 2016 (SETNA 2016). The Nevada Legislature requires a technology assessment every two years, which *directly influences* state educational technology initiatives.

The thoughts and perceptions of parents are extremely important in determining the educational technology needs of school districts across the state.

Please click on the appropriate link for your county to complete the brief (9-question) survey:

Carson City	Churchill County	Clark County
Douglas County	Elko County	Esmeralda County
Eureka County	Humboldt County	Lander County
Lincoln County	Lyon County	Mineral County
Nye County	Pershing County	Storey County
Washoe County	White Pine County	

Your responses are confidential and extremely important, as the information you provide will be included in the report to the Nevada State Legislature, which has a *direct effect* on how technology needs are funded in your district and throughout the state.

In addition, your responses will provide necessary and important information to those who decide how and what to fund to meet the technology needs of Nevada's public education system.

The survey is accessible from computers, tablets, and most mobile devices. If these options are not available, please contact your school and they will set up a time when you can use their technology to complete the survey.

WEEKLY FOLLOW-UP EMAIL

Raggio Research Center
For Science, Technology, Engineering and Mathematics Education



Raggio Research Center
College of Education
University of Nevada, Reno
Mailstop 432
Reno, NV 89557-0432

Dear Technology Coordinators,

This is the first installment of our weekly follow-up email for tracking districts' participation in the 2016, State Educational Technology Needs Assessment (SETNA) surveys. We are off to a great start, however, some districts have not yet had any submissions for their surveys. The initial letters with district specific links to the parent and teacher surveys were sent to the superintendents of each district. In addition, you should have received a letter containing the technology coordinator survey link for your district. As technology coordinators, we are asking that you encourage the participation from teachers and parents in your district. Please let us know if you would like us to send you a copy of the district specific parent, teacher, or technology coordinator letters with survey links.

The surveys went live on Friday January 22, 2016 and will close at 5:00 pm on Monday February 29, 2016.

2016 SETNA District Participation:

2016 SETNA Responses		Teacher Surveys		Parent Surveys	
Updated 02/2 11:00 AM -DM		District	Submissions	District	Submissions
Has Responded		Carson City	1	Carson City	
Has Not Responded		Churchill County	111	Churchill County	
		Clark County	1	Clark County	2
		Douglas County	1	Douglas County	447
		Elko County		Elko County	
		Esmeralda County		Esmeralda County	
		Eureka County		Eureka County	
		Humboldt County	29	Humboldt County	
		Lander County		Lander County	
		Lincoln County	1	Lincoln County	
		Lyon County	1	Lyon County	62
		Mineral County	1	Mineral County	
		Nye County		Nye County	
		Pershing County	1	Pershing County	23
		State Charter Authority		State Charter Authority	
		Storey County		Storey County	
		Washoe County		Washoe County	
		White Pine County		White Pine County	4

Thank you for your participation,

Daniel Monk
Graduate Research Assistant
SETNA - State Educational Technology Needs Assessment

APPENDIX F

RECOMMENDATIONS FOR FUTURE SETNA REPORTS

During the execution of the 2016 SETNA, the RRC research team compiled a list of recommendations to improve future iterations of the SETNA. The following is a list of those recommendations with explanations as necessary:

- Revise the research questions to account for NR21 implementation
- Shorten the length of the Technology Coordinator survey
- Change question four of the Technology Coordinator survey from an open-ended response to multiple choice
- Provide technology coordinators with a PDF version of the Technology Coordinator Survey in their initial informative letters so they can prepare for the surveys.
- For the Teacher Survey:
 - Shorten the length of the survey
 - Questions that were under the sections, classroom technology use: teachers, students, and school-wide were redundant. Being the final sections of the survey, the data provided from these sections were incomplete and unusable due to survey fatigue. These questions could potentially be eliminated from future Teacher surveys
 - Define some of the uncommon terms and programs mentioned in the survey
 - Inquire about technology labs
 - Use “I don’t know” in place of “N/A” when necessary
 - Consider the virtual charter schools when constructing new questions
- Add a question to the Parent Survey that asks how they were referred to the survey