

Riverside Unified School District's learning on the Go Pilot Report

Feb 24th, 2012

Riverside USD has been at the forefront of what we call the “Digital Learning Revolution” and we understand that teaching, learning and being an active part of society as we know and define it has fundamentally changed. Students no longer need to rely solely on their local institutions or classroom teachers as long as they have access to rich, cloud-based content and instruction. Students with this access can use free educational resources like iTunes U, Khan Academy, state and locally adopted resources, as well as direct access to online courses being offered across the country. At the same time our institutions and policies in many areas have not adapted or not adapted quickly enough, leading to a national crisis in education, career preparation and international competitiveness. The Learning on the Go Pilot is a much needed tool that provides a way to change institutionalized thinking, policies and implementation by providing students who do not have their own technology and Internet a means of accessing these resources with rich, anytime anywhere learning opportunities and high quality content.

Riverside USD recognizes that no one entity, including the Federal Communications Commission, can solve this crisis on its own and that what is needed is many different organizations, vendors and our community working together to leverage each entity's area of expertise. For instance, as a local school district, we cannot bemoan the lack of technology or broadband access for our students on the one hand while at the same time confiscating or preventing the use of student-owned

technology in our system. LOGO in RUSD targeted 2500 students at five different middle schools, but LOGO only reached about 50% of the total population at those sites. Riverside USD incorporated what we call “Open Access” allowing those students who have technology and their own network to bring them onsite and in class effectively reaching the entire populations of these campuses by simply leveraging what students already had. Riverside USD also leveraged two of our partners, SmartRiverside and Verizon. SmartRiverside provides free Wi-Fi access to about 70% of our community, providing Internet to students who owned a device but did not have a network. Verizon understood that broadband access without a device to connect to it with was not effective and provided RUSD 2,500 netbooks with unlimited 3g access that were deployed equally at the five sites. Riverside USD’s participation in the LOGO pilot incorporated our city Wi-Fi infrastructure, Verizon’s wireless network, our parent community, the FCC exemplifying the need for many different partners to make this project work. Digital citizens work and play in an online world 24/7-365 yet we still design and spend millions of dollars maintaining and building school networks that are used 8:00-5:00, five days a week at best. The LOGO pilot has made it possible for our typically underserved students to learn anywhere, anytime, not just at school.

The Child Internet Protection Act is aimed at keeping students safe on the internet but education typically relies on ineffective filters that only make the adults “feel” safe. Students can work around them quickly and easily and do not have these filters in the “real” world. Our focus and policy must be on training students and parents how to actually be safe on the internet. Riverside USD has incorporated the FCC’s resources in teaching parents and students what digital citizenship is and that

orientation/training is required by all students receiving not just the LOGO equipment but all district-owned technology. Parents and students were required to attend a two-hour face-to-face training and were provided online resources for further learning and activities to do at home with their students. Ninety Eight percent of all participating families sent at least one parent to the scheduled trainings and the schools required the parent or guardian to come in during the day for the orientation for the two percent who did not attend. Riverside USD does employ filters as required by the FCC with the intent of filtering out truly objectionable content. The filtering was provided at the device level by Verizon employing a basic movie rating system. RUSD personnel have the ability to add approved sites or additional blocks to that filter as needed.

In a world where technology changes and advances every day we can no longer expect that teachers be experts in technology. Teachers are and should be experts in their curriculum areas and only need to know how and where to place resources that students can access and learn from in the web 2.0/3.0 environment. How much money would it take in your district or library to train teachers to be as proficient as our students in technology? Riverside USD recognized that teachers needed to have some training on how to use our online tools but not extensive training on devices and other hardware. Learning on the go participating teachers received two additional hours of training on the use of online tools with ongoing training as needed via the same learning management system that they students use <http://www.rusdlearns.net>

The increasing simplicity of new technology, as well as the ability of students of all ages to learn technology quickly is also changing the old paradigm of how to provide tech support. Each LOGO site has identified student technology teams that provide

initial tech support as well as training for students. These students are also providing tech support for teachers when needed. Riverside USD's "Open Access" policy also provides students the ability to personalize district equipment as well as admin level access to update, fix, install programs, and other tasks as needed. This policy has dramatically reduced the number of damaged or lost devices because students take ownership of the devices and they keep the devices with them all the time, unlike other educational resources. Riverside USD deploys all district devices using this philosophy and also treats the devices just as we used to treat textbooks. The devices are checked out at the beginning of the year and returned at the end of the year and if the device is damaged, lost, or stolen parents are responsible for replacement costs. RUSD provides information on 3rd party insurance that parents may take advantage of for \$30.00 per year. Replacement costs are \$350 per device as opposed to the \$700 cost to replace paper textbooks. All content is digital and provided via the device for LOGO students.

Riverside Unified School District acknowledges the critical importance of the LOGO pilot and urges either the continuation of the pilot, or better yet, making these resources available to all districts and libraries under revised E-rate rules. This could and should be done by incentivizing districts beyond the free and reduced lunch criteria and driving districts to provide proof that they are implementing things like BYOD programs, digitizing content, going paperless or other areas where they are actually saving dollars based on increased efficiencies and moving away from static, location-based networks to dynamic anywhere/anytime networks. Riverside USD's LOGO pilot has been an unqualified success in terms of student and parent engagement, access to

our online educational resources and communication and collaboration with a parent group that previously was not able to communicate electronically.

Project Benefits:

(a) a description of how the wireless devices were integrated into the project's curriculum and Objectives (including approximately how many times per week the wireless devices were used to access program materials remotely and how many wireless devices were used during this period of time);

Each of the five participating sites incorporated the LOGO pilot based on their instructional needs. Each of the targeted schools is a Program Improvement school that has failed to meet their Adequate Yearly Progress as identified by NCLB. Each site has provided the LOGO resources to the student population that has been traditionally underserved and has not performed well on state testing. Riverside USD goals are instructionally focused providing additional electronic support and access targeted with best initial instruction in class. All sites encourage daily at school and at home use of the devices to access online learning activities, curriculum resources, grades, and attendance as well as communication and collaboration between teachers and students. Verizon data and domain data from our learning management system on the number of times students accessed educational resources indicates high usage of broadband across the 24/7 spectrum by all participating LOGO students. Programs at each site

were implemented in late August 2011, during the first two weeks of school Specific program plans for each site are below:

Chemawa Middle School:

Chemawa implemented a computer cohort of approximately 500 7th and 8th grade students with an interdisciplinary team of teachers at each grade level and all students in the cohort had a computer with unlimited 3g access. Students who had neither internet access at home nor a device received priority and we have made adjustments in the master schedule to accommodate serving these students' needs. Other than this consideration, the cohort closely resembled the current demographics of Chemawa MS.

The curriculum for these students is in line with the state adopted materials; students will be using digital texts and online educational software for the purpose of the differentiation of instruction. The purpose of the cohort is to build both student and teacher capacity in the use of technology and learning software, and to explore the obvious potential of asynchronous, 24/7 learning. Both cohorts are provided PLC time to share, plan, revise, adjust, and refine practices that benefit students learning outcomes. Training opportunities for parents occur throughout the year in addition to the required two-hour orientation. All non-LOGO students are allowed to bring devices to school and access our wireless network to engage in lessons where the teacher utilizes information posted on our Haiku Learning Management System or other online educational media.

Central Middle School:

Central selected a cross section of its 7th and 8th grade students and added existing campus technology making it RUSD's only one-to-one middle school implementation at this stage. Central focused on its English learner population providing the LOGO broadband access to those without technology or Internet access at home. In addition to the parent and student orientations Central provided 24 hours of staff development in web 2.0 tools; specifically, those designed to engage students who previously were not. Central is a year 5 Program Improvement school and indicators from initial benchmark exams indicate that they will meet this year's AYP requirements. Central has also gone paperless, all content is provided digitally through the district online learning management system (Haiku) and RUSDlearns.net (Google Apps for Education Domain). Central administration reports a 50% rise in digital communications from Spanish speaking parents who did not previously have internet access. Parents and staff use Google translate to be able to communicate regardless of natural language.

Educational Options Center Middle School Programs:

Students at the Educational Options Center include those at Summit View Independent Study, Riverside Virtual School, and the district's Opportunity Program. The socioeconomic status of the combination of students varies greatly. Some students have access to a computer and Internet outside of school; however, a large number of students do not. This presents a lack of equity relating to accessing the academic programs of the schools once students leave for home. With so much educational content now available to students via the publisher websites and a widening base of

open educational resources (OER) available via the Internet, students who do not have access to the Internet do not have the same educational opportunity as those whose families can provide access in the home. To bridge that gap and ensure all students have equal access to educational opportunities, we have implemented the plan below.

During the first week of school, each of the schools surveyed returning students in order to determine which students currently have access to computer and Internet at the home. Once identified, students and their parents who did not have access were invited to participate in an informational meeting in which the AUP was reviewed and parents signed an equipment checkout form. Parents were given the opportunity to purchase replacement insurance for the device. Netbooks were distributed through our bookroom and checked-out in the same manner as a textbook. Throughout the remainder of the school year, the survey will be conducted as a part of our New Student Orientation. Parents of students without computer or Internet in the home will attend the AUP portion of the informational meeting prior to the student's enrollment. Equipment checkout will occur as students are assigned textbooks on their first day of school. Students who have access to their own technology will be allowed to bring that onto campus, once they have completed the AUP process.

While students will be encouraged to use the technology to support learning in all subject areas, the focus of our work will be to support learning in math and science. At Summit View, students will be exposed to the ALEKS math program and use Khan Academy lessons to build understanding of math concepts and prepare for state assessments. Science students will access UCCP learning modules and textbook publisher content as a means to support classroom learning. In the COPE Opportunity

program for the district's suspended expulsion students, access will support continued learning using the NovaNet curriculum at home. At RVS, students will use the devices to access their online courses.

Teachers in the math and science departments were trained during the third week of August. Students are trained during "Boot camp" at RVS, and in math and/or science courses at each school.

Sierra Middle School:

Objective: *Increase student learning and engagement both inside and outside of the school walls.*

Anticipated Outcome: *Meet or exceed AYP and API goals.*

Target Population: All 8th grade students (approx. 450) and a cohort of 7th grade students determined after 8th grade students received computers.

Resources:

500 new 3G netbooks have been purchased and have arrived. We also have approximately 100 additional netbooks purchased during the 2010-2011 school year that we will use to supplement our allocation depending on student need. Our hope is that we will end up having all students who can either bring their own laptops or use one of ours!

Process:

- Teachers meet to "teach other" and brainstorm how they can maximize their instruction by moving into the digital age.
- During the registration process in late August, all parents visited our library where they completed our on-line Open Access Survey.

- All parents signed up for Parent Direct and learned how to use AERIES to check grades on-line. *This will be an essential requirement for all parents!*
- Survey results were used to determine which students currently have access to computer and Internet in the home. Once identified, students who do not have Internet access or resources to obtain this access participated in an informational meeting where Acceptable Use Policy (AUP) was reviewed and parents signed an equipment checkout form. These students received the 3G computers.
- Students who do have internet access at home but do not possess their own equipment received the netbooks purchased during the 2010-2011 school year.
- Those students who DO have access to their own technology and internet provider in the home will be allowed to bring that onto campus, once they have completed the AUP process.
- 8th grade students will receive computers first, followed by a cohort of 7th grade students.
- Parents will be given the opportunity to purchase replacement insurance for the device. Netbooks will be distributed through our library and checked-out in the same manner as a textbook

Training:

- Teacher Training: All 8th grade teachers and selected 7th grade teachers receive ongoing training and support throughout the year. Many of these teachers attended two brainstorming/training sessions this summer and attended the Haiku training in August. Staff meetings are technology-centered and specific

training pertaining to departments will occur during PLC time. Each department will present how they are integrating technology into instruction at a staff meeting. Achievement Data will also be shared during the staff meetings.

- Parent/Student Training: Parents and students attended a training prior to students receiving computers. Training was be differentiated for parents based on the results of our initial Open Access Survey that parents completed on computers during the August Registration Process.
- Student Training: Students receive training/support during a scheduled library visits. Curriculum: The curriculum for these students will utilize district-adopted materials that support the state standards, with additional programs used to reinforce the state standards. i.e. Study Island, Lexia/Reading Plus, Accelerated Reader, ALEKS and Flex Math.

University Middle School:

Target Population - 7th graders and online/hybrid 8th grade classes Initial parent information was provided at registration (Spirit Day). Parent orientations were scheduled and conducted by members of the Technology Committee. Students had an orientation and receive on-going training during 5th period which is our not so silent-silent reading period, 35 minutes-four days a week.

(b) if available, a detailed summary of any data collected by the school or library on the project's outcomes and achievement of the project's goals, including usage of educational and research resources by students and library patrons and number of devices actually used;

for schools, include any data collected regarding the impact on test scores or other

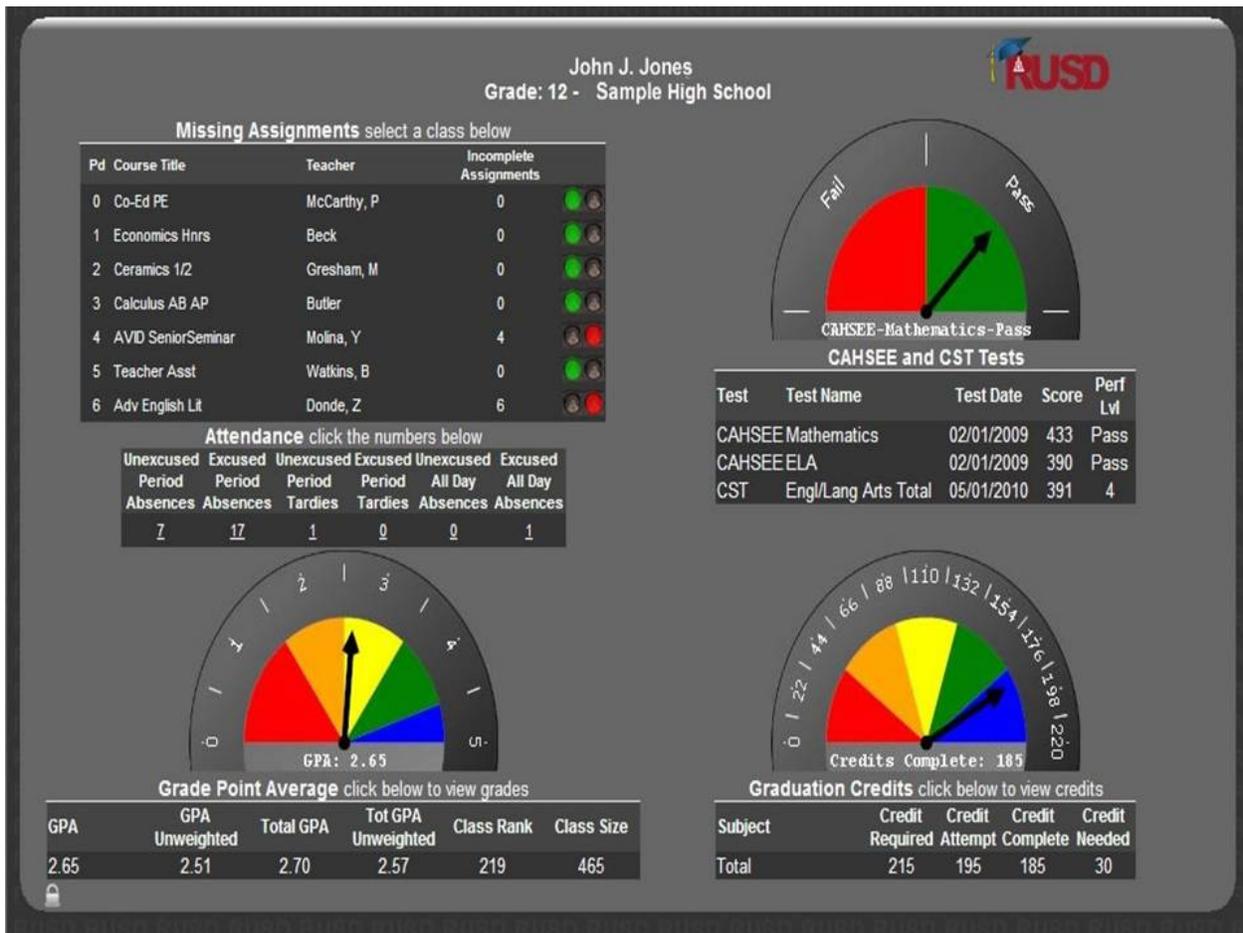
Measures of achievement levels for those students participating in the off-premises

Wireless project.

Riverside USD has collected data on each school as well as its many online systems relating to the LOGO pilot. Early indications have shown growth across the board in all categories. Riverside USD urges the FCC to extend this pilot in to year two as it will gain a much clearer portrait of what is working and how. The information shown below reflects data collected up to February of 2012. In talking with other districts we found that many did not implement until as late as December. We began in August and have more data than some others but it is still only a partial picture of what has been achieved. Our tests and those of the state do not necessarily test all that is being measured in this project. Technology in and of itself does not necessarily correlate directly to increased student achievement, nor should it distract from it. The main purpose of technology is to make us and our students more efficient.

Student Achievement:

Each site has given one district benchmark exam in Math and Language Arts. Participating LOGO students scored 4% higher in math and 5% higher in language arts than the similar age group tested last year at this time. Teachers and parents report a higher level of engagement both at school and at home. One of the aspects of the pilot being implemented is a student centered data dashboard (below)



The dashboard is loaded on each device and is also available via the Web. It is designed to provide real time information to students and parents in a simplistic form; green is good, red is bad. Since implementation in August the dashboard application has had 650,000 individual hits leading to a much higher rate of parent and student

follow up on missing assignments, attendance, progress towards graduation, and a higher level of understanding how state scores affect their lives. The dashboard is a huge hit with Parents and Teachers both commenting on how great it is to be able to see at one quick glance how their student is doing. Students have had the same type of response except many no bemoan the fact that they can no longer “hide” until progress reports or report cards are sent home.

Student Access to Online Learning Resources:

Riverside USD deployed an online learning management system at the same time the LOGO pilot was deployed. Our statistics show a staggering 90% plus participation by our LOGO students. Each individual site’s total number of hits is below. The numbers reflect a student or a parent logging into Haiku since August 2011. It’s important to note that all of our digital resources are contained in our LMS and where you see a large fluctuation in numbers it reflects actual classroom level implementation such as an online discussion. The majority of these logins took place after school hours.

Haiku LMS Hits by School

Chemawa: 320,000

Central: 451,173

Sierra: 104,421

University: 265,741

EOC: 248,232

Student Access to Broadband:

Riverside USD provided unlimited 3g access as part of the LOGO pilot. This was critical for a variety of reasons. The first was that there were no additional dollars available to pay for any overages in data and the second was that it is impossible to regulate if the student is accessing the broadband for educational purposes or entertainment. Think of how you and I use the internet for both work and play. While we certainly focus on students accessing these resources for learning we also understand that to provide them a device that does only one thing will lead to a lack of interest and care for that device. Based on the numbers above and other pilots that we have completed, Riverside USD believes that it is crucial that students take ownership of these educational resources leading to ownership of their own educational progress as well. In terms of total access through the end of January 2012, we have used 31,294,544.48 Megabytes or over 29 Terabytes of bandwidth.

(c) if available, a copy of any results or summary of the results of any survey given to students, teachers, parents or library patrons to assess any aspects of the off-premises wireless project;

All surveys will be given at the end of this year in order to gain the most comprehensive information. Our original surveys were very basic; asking only "Do you have your own technology and broadband access or not?" We then allocated our resources to those who did not have access. End of year results and surveys will be included in the October 2012 report.

(d) for the Southern Tier Library System, a description of how the off-premise wireless project

facilitated access in the community to any needed services, such as job applications, governmental services, job training, online learning opportunities, and any other community services (including any available data of the number of patrons that were able to complete job applications, seek governmental services, or access educational opportunities).

N/A

Project Costs

(a) an analysis of the per student or per patron cost of the off-premises connectivity;

for schools, specify, by term used by the school (for example, by quarter or semester), the number of students and teachers involved or served as part of the project, the number of those students and teachers involved or served that were able

to participate as a result of E-rate support, and, where appropriate, the number of students at each grade level using the wireless devices for Internet access for each

specified term; and

o for the Southern Tier Library System, indicate the number of library patrons involved

or served as part of the project and the number of those patrons involved or served

that were added as a result of B-rate funding during the trial period.

Total Off Premise Cost (Broadband Only)

This number is difficult if not impossible to quantify unless we just run time of day resources were accessed which misses part of the opportunity made available by the LOGO pilot. In many of the LOGO schools the network was not capable of handling 500 additional wireless devices and because our devices were unlimited 3g we leveraged them at school and at home. If we had to use a formula we would use the actual time away from school. Students are in school approximately 7 hours a day five days a week (35 hours) and away from school or at least class a total of 133 hours a week so approximately 30% of the time students were using broadband access at school while 70% of their usage is away from school. Riverside USD per student cost for broadband is \$37.99 per month, prior to E-rate or other discounts, and for this project we have 2,500 7th and 8th grade students accessing the Internet over a period of 10 months for a total of \$949,750 of which 70% (\$664,825) was or will be used off-premises.

Effectiveness of Protective Measures

(a) A detailed description of the measures, including specific software or filtering mechanisms, that were taken to ensure compliance with the Children's Internet Protection Act as well as a description of measures that were taken to protect against waste, fraud and abuse; and

(b) A detailed description of what, if any, issues arose in ensuring that the wireless devices were used only for educational purposes.

Much of this information is mentioned previously but in summary, Riverside USD utilizes a combination of filtering, provided at the device level by Verizon, as well as a detailed responsible digital citizenship orientation for parents and students incorporating the FCC content as well as other web-based resources. We believe that simply fencing kids in doesn't work and is not the best way to keep kids safe while on the Internet. The way we deploy and handle devices is also a key element as without student ownership of devices the loss rate would be too great to sustain, and we would not see the increase in student achievement. We want students to take ownership of their education and just as you and I are able to work and play 24/7, they can learn and play 24/7. Riverside USD emphasizes the use of technology to learn, access rich curriculum resources and learning opportunities, communicate and collaborate online and to use other resources available on the Internet to manage their educational path. Riverside USD experienced very few problems in implementation because it used a student centered approach and utilized already existing databases and management structures (Library Media Centers and textbook tracking software). With over 2500 devices deployed only about 3% have been lost, damaged, or stolen and that is with no extra protection measures in place. The only area where we have had difficulty was with how Verizon had structured their rate plans. We have a large population of Hispanic students who travel to Mexico on weekends and holidays and initially Verizon identified "Roaming Charges" on these accounts which after discussion they agreed that our contract was for unlimited 3g regardless of what area they were physically visiting in.

Lessons Learned

(a) a description of any technical, operational, or administrative problems or issues associated with implementing the project (such as barriers in using the wireless devices or difficulties with the service) and a description of how those issues were addressed or are being addressed

Our main issue, which was resolved by the students participating in the LOGO pilot, is the lack of an affordable “student access” account. The FCC could help in this area by incentivizing providers in such a way that a student account in the \$10.00 a month range is viable. Providers will make their money in the long term by providing excellent service and once a student has used a given provider they are likely to be lifelong consumers. The extension of the E-Rate pilot or moving it to practice would go a long way in this area especially if one of the requirements for providers was the creation of a student access account. Riverside USD was fortunate that Verizon had already pre-built coverage in the district area and has continued to expand that access. It simply makes more sense to pay a provider who already has a Wi-Fi system in place and whose expertise is in this area rather than what we currently do and hire pseudo “network specialists” to “duplicate” Wi-Fi coverage simply because that’s the way it’s always been done. Millions if not billions could be saved and better more reliable service provided 24/7-365 days a year.

(b) a narrative of the lessons learned as a result of the off-premise wireless project (for example, based on what you learned from the project, how would you plan and implement your project differently if you were doing it over again?).

In terms of what we would do differently it would be the need to expand or continue this pilot. What we are doing is working in RUSD and what the LOGO pilot has done is make that available to more students. The world has changed and to remain competitive we must change our policies and practices and what the FCC has done with LOGO is a very important first step, but it is only the first step. Again, RUSD urges the FCC to either extend the pilot or move it to program by making these resources available to all districts via the E-Rate process.

Final Overview:

One Size Fits None:

The days of district providing everything for everyone is long gone, ERate and other district dollars should be used to provide access for those that don't have it while allowing students with their own to use it in our systems.

Effective & Efficient Systems:

Broadband access 24-7 365 is the goal and our systems and access must be mobile not fixed to a time or a place. Effective use of resources prevents waste and provides a network that is always "with" you rather than a network that sits unused at a school site for more than 60% of the week

Ownership and Responsible Use is the Key to Success:

Students must feel a sense of ownership of their educational experience and how to conduct themselves responsibly. This includes the devices and access that we provide them as well.

Empowering Students:

Ultimately all of our students will become digital citizens and the difference between responsible digital citizenship and irresponsible digital citizenship will largely depend on how well we train and empower them to function in the digital realm. The key difference is empowerment rather than containment.

The World has changed-We have not:

Technology has changed the way we work, the way we play and should also change the way we learn but because of outdated policies and philosophies formal education has not. In order for the United States to remain great our children must use the same types of tools being used elsewhere in the world.