

June 29, 2020 AZBSN COVID-19 Digital Access Task Force Teleconference Report

Attendees

Steve Peters, Oris Friesen, Henry Goldberg, Mark Goldstein, Tracey Beal, Amanda Bruno, Kirk Busch, Sam Butcher, Michael Cohen, Jerry Crow, Alexandra Dominguez, Derek Ferguson, Terence Ford, Ian Hathcock, Steve Hill, Brittany Holmes, Bob Jacobson, John Kelly, Ilana Lowery, Derek Masseth, Sophia Mayberry, Mala Muralidharan, Peter Newbegin, Mauricio Orozco, Cody Pedersen, Lawrie Prickett, Tracy Rexroat, Jeff Sobotka, Dan Stormont, Nicole Umayam, Karen Ziegler

Labster Presentation

Steve Peters explained Labster is a company that provides virtual laboratory simulations, which is headquartered in Copenhagen, Denmark and has its U.S. office in Boston. GAZEL's Arizona Innovative Learning Collaborative in partnership with ATIC and AzTEA has held a number of meetings in the past with Labster to explore the potential for establishing a statewide consortium to offer Labster virtual lab modules to all Arizona educational institutions (universities, community colleges, K-12 schools) at a low discounted cost. He asked Sam Butcher, who handles large-scale implementations of Labster, to present on their offerings to the task force. The Labster presentation will be posted on the task force website. Following is a summary of key points from the presentation.

The higher-education sector has faced challenges of reducing costs for students and with the COVID-19 crisis education has had to migrate in a major way to online teaching. Labster's virtual lab simulations are effective in addressing both of these challenges by empowering educational institutions to offer remote science instruction effectively with a quick transition at lower cost than traditional physical labs.

There are four core components of Labster virtual labs: 1) fully-simulated lab scenarios allow students to readily change relevant variables; 2) story-telling based on real-world problems to increase student engagement and interest; 3) multiple-choice quiz questions to improve student understanding and retention of knowledge; and 4) 3D simulations are also available. Each simulation takes about 45 minutes to complete and is intended to complement the material taught in one classroom lecture. A 2014 article in Nature showed 101% increase in learning outcomes using Labster compared to traditional teaching, and it is particularly effective for students with the greatest learning gaps.

Labster currently offers about 150 lab simulation modules covering 18 science courses in areas such as biology, chemistry, and physics. Over 500 community colleges and universities in the U.S. currently use Labster virtual labs. The California Community College System, with about 100 campuses and 29,000 students, has recently implemented Labster within two weeks.

Labster provides a range of services to assist instructors in using their modules. Their offerings are rapidly integrated into learning management systems. Modules are mapped against course lectures. Webinars and training as well as a support team are provided.

Labster cost per course is about \$4 - \$20 per student per year. This is much less than building new physical labs or providing lab kits that cost \$150 - \$400. Labster is a cloud-based service that provides regular updates to its modules, so there are no additional costs as the modules evolve.

Dan Stormont asked if Labster is providing lab simulations for K-12 schools, and Sam responded that they have a set of simulations that are typically used in high school advanced placement courses in biology, chemistry, and physics. Dan also asked if Labster simulations can replicate physical hands-on skill such as working with pipettes, and Sam responded that their simulations can focus on knowledge related to such areas but there are limitations in terms of teaching fine- motor skills.

Mala Muralidharan asked about the bandwidth requirement students need to use Labster from home. Sam Butcher explained that the simulations are not run in real-time but rather about 40 MB of data must be downloaded before starting a module which typically takes about 30 seconds to 2 minutes (as long as a student can play a 10-minute YouTube video on their computer they will not have a problem).

Steve Peters asked if engineering simulations will be developed in the future, and Sam responded they have a simulation platform builder that will allow them to develop new modules (likely next year) in areas such as life sciences, engineering, and clinical subjects.

Mala commented the Labster cost quoted is fairly affordable, and Steve Peters noted the proposed Arizona consortium would make its adoption more affordable for all educational institutions. Michael Cohen wondered if there were extra costs involved in using Labster. Terence Ford remarked it is important to understand the overall system requirements for using it.

Updates: State Broadband Director, ADE, Arizona State Library

State Broadband Director Update

Jeff Sobotka, State Broadband Director, reviewed his recent activities. There will be quite a bit of funding available for rural broadband infrastructure under the Governor's Emergency Education Relief (GEER) Fund, and details will be forthcoming. The Economic Development

Administration (EDA) grants are also very supportive of broadband, and Jeff will be looking into helping communities apply for these grants.

ADE Update

Sophia Mayberry, Project Manager in the Office of the Superintendent of Public Instruction at the Arizona Dept. of Education (ADE), stated with the Governor's "AZ Cares: Flexibility and Funding for Schools and Families Plan", the ADE has announced priorities for use of the funding.

The Governor is the only one who can close all the schools if needed to respond to the COVID-19 crisis. A lot of schools are considering delaying their openings, with difficult decisions to make on how to offer instruction. ADE is adding to its guidance for safe reopening of schools to include guidance for support staff.

Arizona State Library

Mala Muralidharan, E-rate Administrator for Public Libraries at the Arizona State Library, noted the Arizona State Library is nearing completing implementation of the IMLS CARES Act funding received that was discussed at previous task force meetings.

Subcommittee Activities

Education and Libraries Subcommittee

The Education and Libraries Subcommittee met on June 25th. Steve Peters provided the following draft recommendations discussed and revised at the subcommittee meeting.

Issues to be addressed

1. Data Requirements and resources
2. Current assets and resources
3. Connectivity: Free or affordable high-speed Internet for schools and libraries, and to the home for students, parents, library patrons, community
4. Technology options and alternatives
5. Tech Support Strategy-Local and Statewide – to provide tech support to schools, libraries, and all citizens in the state, including students, parents, seniors, library patrons, community - – Identify and coordinate existing resources and strategies
6. Access to Devices: Ensure all schools and libraries, students, parents, library patrons, community have access to devices
7. Professional development and training for Educators: K-12, Community Colleges and Universities on remote/hybrid instruction, and for libraries on virtual programming (best practices for effective remote instruction and virtual class management)
8. Safe Operations of Schools and Libraries in COVID-19 environment
9. Digital Resources and Digital Literacy
10. Affordable and equitable devices and connectivity

Recommendations

1. Explore short and long-term potential of extending the Sun Corridor Network from three state universities to all community colleges, schools, libraries, and possibly telehealth, to

provide high-capacity statewide education and research network with national access to Internet2. In addition to connectivity may be hub for Tech Support, Labster Consortium and more

2. Expand AZ StRUT throughout the state
3. Identify, coordinate and develop locally relevant collaborative strategies for all organizations including school districts, libraries, universities, community colleges, nonprofit organizations currently or planning to provide local and statewide tech support to schools, libraries, and all citizens in the state, including students, parents, seniors, library patrons, and community. May include Arizona State Libraries Tech Support Initiative, school districts, community colleges, universities, Gen YES program, Insight Help Desk, ADOE and nonprofit organizations. (FYI GenYes trains students and provides them opportunities to be information technology leaders in their schools and communities)
4. Identify, coordinate and develop collaborative locally relevant strategies for all organizations including school districts, libraries, universities, community colleges, nonprofits currently or planning to provide professional development and training for Educators on remote/hybrid instruction,
5. Digital literacy support for families, parents, etc & K-12 student and teacher service desk support
6. Utilize input from Technology Team on multiple technology solutions to provide free or affordable high-speed Internet for schools and libraries, and to the home for students, parents, library patrons, community
7. Directory of consultants for grant writing
8. Identify and publicize government, and public and private funding sources
9. Explore statewide Virtual Labs Consortium such as Labster
10. Support creation of community Broadband Action Teams that may include schools, libraries, community organizations, local government, telehealth, etc
11. STEM - Engage students in developing solutions

Funding and Resources Subcommittee

The Funding and Resources Subcommittee met on June 26th. Steve Peters provided the following draft recommendations discussed and revised at the subcommittee meeting.

Funding and Resources Recommendations Digital Equity-Digital Divide

The COVID-19 Digital Access Task Force is developing a strategy to support Arizona communities, education institutions, telemedicine and nonprofit organizations in identifying and providing access to funding and resources to address their digital access requirements. While we know that there is federal and state money becoming available, we also want to find additional sources of funds and resources such as foundations, donation campaigns, volunteer support, refurbished equipment donations, corporate funding and equipment donations, etc.

Recommendations **(Note many of the following recommendations will require some form of state, corporate or foundation funding for implementation):**

- While there will be millions of federal dollars coming available to address these issues, most of the grant programs require very complex applications as well as management and reporting requirements. Many schools, libraries and telemedicine programs and communities do not have the personnel and expertise to prepare and manage these

applications. As a result, Arizona misses out on millions of dollars in federal funding. To address this issue, we have adopted the following:

- The Task Force has developed and maintains a directory of individuals and organizations that provide consulting services for grant writing, community assessment and planning. Most are fee for service. The directory is available for schools, libraries, and communities.
- Secure state or other funding to enable schools and libraries to contract with consultants for grant application development, community assessments and planning.
- Providing updates on federal broadband infrastructure grants and other funding
- The State should provide funding to the Arizona Commerce Authority (ACA), the Grants Office? or the Arizona State Library for a private sector/foundations research assistant to set-up, research and maintain a technology funding portal/web site to provide easy access to other non government funding and resources such as foundations, corporate donations, etc including support for access to eCIVIS
- The State should provide funding for additional staff to support the Arizona Commerce Authority (ACA), the Arizona State Library, the Arizona Department of Education, and the Arizona telemedicine organizations to also assist Arizona communities, education institutions, telemedicine and nonprofit organizations in grant application development community assessments and planning.
- Explore development of a State Broadband Office to enable state coordination, grant application development, community assessments and planning assistance, coordinate with broadband providers, reducing or removing barriers to broadband deployment
- Collaborate with the Arizona Commerce Authority and Arizona Broadband Director, and to provide easy access to state and local government funding opportunities
- State funding to provide school district/community access to the eCIVIS Database to identify funding opportunities
- Solicit support for broadband access funding for communities via the AZCares fund created by the Governor's office.
- Launch a major foundations/corporate fundraising/donations campaign to compliment other fundraising activities
- Increase state funding education and libraries technology to support local school districts and libraries for connectivity, devices, applications, and professional development on
- Develop an ongoing Communications Strategy/Campaign to inform the public about funding and resource opportunities
- Explore use of the Arizona Universal Service Fund for broadband via the Arizona Corporation Commission
- Support the Governor's 2020-2021 budget request for \$10 million dollars for ACA Rural Broadband Development Grants and additional funding for State Highway Fiber Infrastructure
- Distribute info about Tech Soup technology donations and discounts for 501(c)(3) organizations (Libraries and other nonprofits?)
- Collaborate with AzSTRUT to expand their device refurbishment and donations program to all schools/libraries/communities in Arizona. Set-up guides, processes and procedures
- Support Libraries PPE and COVID recovery Donation Funding drive in collaboration with Arizona State Library to support public libraries in the state
- Raise funds to support AZBSN operations and coordination

- Support and promote Arizona’s aggressive pursuit of Digital Equity/Digital Divide funding opportunities through the Federal Reserve Community Reinvestment Act (CRA).

The federal 1977 Community Reinvestment Act (CRA), CRA requires all banking institutions that receive Federal Deposit Insurance Corporation Insurance (FDIC) to provide equitable access for those living in “low and moderate income” (LMI) communities to banking services as well as investments for community development (i.e., enhancing economic opportunity) in LMI communities. Banks must meet their CRA obligations through a mix of volunteerism, grantmaking and investments., In 2016 the Federal Reserve, in collaboration with the National **Collaborative for Digital Equity (NCDE)**, issued guidance encouraging the nation’s banks to invest CRA resources in digital equity. **NCDE has launched a “One Percent for Digital Equity” campaign, advocating that banks and their community partners nationwide strive to reach a target of one percent of CRA funding to close the digital divide, as this would unleash fully \$1 billion annually.** The challenge now is to educate banks about how to work with local communities, education organizations, to provide digital equity funding, and how educational organizations can apply for support. CRA funding may support services such as broadband and broadband infrastructure, hardware, tech support, librarian assistance, numeracy (or “math literacy”), financial literacy education, “digital age skills” development (such as coding), and educational content.

Technology Subcommittee

The Technology Subcommittee met on June 23rd. John Kelly, co-facilitator of the this subcommittee, noted this subcommittee wants to provide technology solutions relevant for meeting the needs identified for Education & Libraries as well as Telehealth. In addition to presentations currently planned, Insight has one-page briefs on various solutions options, and there are lists of discounted Internet services for low-income households available during the COVID-19 crisis (from Jeff Sobotka, Lea Marquez Peterson of the Arizona Corporation Commission, and the Arizona State Library).

At the June 23rd subcommittee meeting, Cynthia Duggar of Insight delivered a presentation on their offering of an LX40 LTE router for use in homes by students and the MP70 Wi-Fi Gateway Router for use on school buses deployed at various locations that can be accessed by students for Internet service. This presentation will be posted on the task force website.

The next meeting of the Technology Subcommittee will be on Tuesday June 30th at 10:00 am (not the usual 9:30 am). There will be two presentations at this meeting: one by the Grand Canyon State Electric Cooperative Association (rural electric coops are now allowed to offer broadband services) and one by Viasat. Steve Hill, co-facilitator of this subcommittee, stated the Viasat presentation will include satellite broadband Internet services offered in combination with a wireless mesh network community access for students doing distance learning (which is being implemented by a Native American tribe).

Mark Goldstein added he will deliver a presentation on next-generation wireless access technologies at the July 7th Technology Subcommittee meeting at 9:30 am.

Communities Subcommittee

In the absence of Alan Pruitt and John Lucas, co-facilitators of the Communities Subcommittee, Steve Peters reported on a June 24th meeting arranged by Alan Pruitt with Joselyn Cousins, District Manager – Field Group and Community Development of the Federal Reserve Bank of San Francisco, who is the CRA policy-point person for Arizona. Frances Sakaguchi, Economic Development Integrator of the US Dept. of Commerce Economic Development Administration in their Seattle Regional Office, attended this meeting. Steve explained the meeting was intended to begin discussions on obtaining CRA funding to address digital equity issues in Arizona.

Steve stated a 501(c)(3) organization must apply for the CRA funding, not school districts directly. Bob Jacobson, who attended the meeting, commented that it was his impression that only rural communities who have an existing broadband service provider can obtain CRA funding. Steve added the next meeting with Joselyn Cousins will look at how organizations can apply for CRA funding.

Steve Peters stated he intends to ask Joselyn Cousins to present to the whole task force as well. Steve will send out a link to the task force on CRA webinars that have been and are being held. Mala Muralidharan provided a link in the Appendix Chat on the basics of CRA.

Preliminary Recommendations Document

Steve Peters stated he will be assembling a preliminary recommendations document for the task force that will include the approved recommendations from the Education and Libraries and Funding and Resources subcommittees. Task force participants should send Steve any comments they have on the draft recommendations shown in this meeting summary.

Next Steps

The next AZBSN COVID-19 Digital Access Task Force overall meeting will be held on Monday, July 13th at 7:30 am (no meeting on July 6th because of July 4th weekend). Overall task force meetings will continue through July as needed to finalize the task force's preliminary recommendations document.

This week, the Technology subcommittee will meet on Tuesday June 30 at 10:00 am. The Education and Libraries and Funding and Resources subcommittees will not meet this week.

Next week, the Technology subcommittee will meet on Tuesday July 7 at 9:30 am, the Education and Libraries subcommittee will meet on Thursday July 9 at 9:30 am, and the Funding and Resources subcommittee will meet on Friday July 10 at 10:00 am.

Steve Peters will arrange a meeting for some people to discuss opportunities related to a broader role for and evolution of the Sun Corridor Network (as discussed at previous task force meetings and in the Education and Libraries subcommittee draft recommendations).

Henry Goldberg and Oris Friesen will write up a summary report of today's task force meeting.

Appendix: Chat from Zoom

From Mark Goldstein to Everyone: (7:31 AM)

House Democrats introduced the Accessible, Affordable Internet for All Act, broadband legislation which is included in the text of the Moving Forward Act (2K+ page PDF of bill) and

proposes \$100B for broadband initiatives. See the House announcement at <https://energycommerce.house.gov/newsroom/press-releases/house-democrats-release-text-of-hr-2-a-transformational-infrastructure-bill>. See <https://www.telecompetitor.com/accessible-affordable-internet-for-all-act-proposes-100-billion-for-broadband/> for more.

From Dan Stormont - TEALS Program to Everyone: (7:58 AM)

I appreciated the U of U picture in the deck. My daughter was a Ute! :)

From Bob Jacobson to Everyone: (7:59 AM)

We have DSL. Would this work with DSL? So each student needs a PC. Okay.

From Derek Masseth to Everyone: (8:00 AM)

It should, just takes more time to download

From Terence Ford to Everyone: (8:01 AM)

Minimum end-user system requirements and does this have a high-availability infrastructure.

From Bob Jacobson to Everyone: (8:03 AM)

We have an issue that's local but probably not unique.

From Ilana Lowery to Everyone: (8:07 AM)

[file:

/Users/oris/Downloads/common_sense_media_report_final_6_26_7.38am_web_updated.pdf]

From Ilana Lowery to Everyone: (8:07 AM)

[file: /Users/oris/Downloads/common_sense_media_report_infographicfinal.pdf]

Wanted to share this recent research with all of you.

From Bob Jacobson to Everyone: (8:27 AM)

USDA Educatoin grant deadline is July 13.

From Malavika Muralidharan to Everyone: (8:28 AM)

To answer my own question - a link to CRA 101

https://www.richmondfed.org/~media/richmondfedorg/conferences_and_events/community_development/2012/cra_intro_050212.pdf

From Tracey Beal to Everyone: (8:29 AM)

Have a great July 4th!