



**CONNECT WITH POSSIBILITY:  
KUEN LOCAL CONTENT AND SERVICE  
REPORT TO THE COMMUNITY FOR 2017**



Utah Education and Telehealth Network



Utah Education and Telehealth Network

## UETN NETWORKS FOR EDUCATION AND HEALTHCARE.

Welcome to *Connect with Possibility*, KUEN's annual report for 2017. Known locally as UETN, we connect people and technologies to improve education and healthcare in Utah. We are proud to present to our community, governing board, and the Corporation for Public Broadcasting the following report that highlights our three main service areas:

UETN's **NETWORK SERVICES** operate and maintain the state's education and telehealth technology infrastructure, including statewide broadband access and three statewide television stations. Our **APPLICATION SERVICES** deliver a suite of high quality tools, programs, and resources that support education and telehealth and lower costs. We also provide ongoing **SUPPORT SERVICES** to optimize the potential of the network and keep it affordable for public institutions.

With the ongoing collaboration of community partners, these services make UETN one of the nation's premiere networks for education and healthcare. Utah Governor Gary R. Herbert's strategic plan, *Utah Education Roadmap: 2018-2027*, articulates our valuable role.

As we look back on 2017, we also look forward to promising partnerships, new content, and innovative services that help Utahns successfully engage with and benefit from our work. We invite you to learn more in the following pages.

Sincerely,

Laura G. Hunter, Ph.D.

KUEN Station Manager  
UETN Chief Operating Officer

Available across Utah through a statewide system of broadcast translator stations and local cable companies, KUEN provides 24/7 educational television through digital broadcast channels, cable TV, On Demand, and satellite. In addition to UEN-TV, which provides educational programming tailored to public and higher education and the general public, KUEN has two other over-the-air stations: MHz Worldview carries international news and cultural programs, and FNX (First Nations Experience) presents Native American and indigenous programming.



## **UETN IN STATE'S EDUCATION ROADMAP**

Released in January 2018 by the Office of the Governor, the *Utah Education Roadmap* is a strategic plan to unite the efforts of educational entities throughout the state with a shared vision. With the goal of maximizing Utah's investment in education to ensure a bright future for those who call Utah home, the Roadmap identifies four key areas of focus: Ensure Early Learning, Strengthen and Support Educators, Ensure Access and Equity, and Complete Certificates and Degrees. UETN plays a valuable role in each:

- UETN's technology infrastructure connects PreK through 20+ learners, educators, parents, and caregivers with resources and opportunities.
- Thousands of pre-service and licensed educators rely on UETN Professional Development courses and related services to build their capacity, enhance effective teaching and learning, and save time with digital tools.
- In addition to providing the wide area network that links rural areas to the world, UETN supports UtahFutures, the virtual career and education planning resource for Utah youth and adults.
- UETN supports the use of stackable credentials with the technology and services that link high school classrooms with colleges and universities, empowering more learners to earn certificates and degrees before they graduate.

## **ONLINE COURSES PROMOTE HIGHER EDUCATION FOR EARLY CHILDHOOD TEACHERS**

High quality early education has been shown to help children succeed in school and in life, yet Utah has a shortage of well-prepared early childhood teachers. To help low-income early childhood workers access higher education, UETN collaborated with the Utah Head Start Association, Utah State Board of Education, Southern Utah University, Weber State University, and Early EdU to launch *Opportunity Utah: Access for Early Childhood Workforce*.

The project features online courses that introduce participants to college-level work in early education. Through the courses, participants can improve their knowledge, gain confidence in their academic potential, and learn about local programs through which they may earn degrees to advance their careers.

"The goal of *Opportunity Utah* is to increase the number of early childhood professionals who can provide high-quality instruction while providing an on-ramp to higher education for people who would otherwise not consider entering a degree program," says Dr. Sheila Anderson, a professor in the Department of Child and Family Studies at Weber State University. "UETN is an essential partner in this work."

**AS UTAH'S PUBLIC MEDIA NETWORK FOR EDUCATION, UETN PLAYS A VALUABLE ROLE IN THE STATE'S EDUCATION STRATEGIC PLAN.**



*UETN is an essential partner.*

**DR. SHEILA ANDERSON,  
ASSISTANT EARLY  
CHILDHOOD PROFESSOR,  
WEBER STATE UNIVERSITY**

**UETN TECHNOLOGY HELPS LEARNERS GAIN MARKETABLE CREDENTIALS**

High school students who take college courses via Concurrent Enrollment (CE) get a jump on college and career readiness. In addition to gaining credits they can apply toward both high school and post-secondary credentials, they learn how to do college-level coursework when they still have daily access to familiar resources such as academic counselors and parents.

Through UETN's Interactive Video Conferencing (IVC), Snow College delivered from rural Ephraim 101 sections of 37 different courses to 59 Utah high schools last year. That means 2,853 high school students earned transferrable credits at a mere \$5 per credit hour—a fraction of what they'd pay for the same credit as undergraduates.

With Snow College's CE program, a motivated student at even the most remote high school in Utah can now earn a General Education Certificate of Completion or an Associate's Degree while still in high school—all through courses delivered via UETN. During the last year, Snow College and UETN worked together to allow students attending online high schools to participate in CE individually from their homes. "It's been great to work with UETN. They're our main support, truthfully. And everyone that we've worked with has been just fantastic," says Cathy Beal, IVC Manager at Snow College.

**UTAHFUTURES HELPS JOB SEEKERS AND STUDENTS**

Utah learners seeking to bridge the gap from education to career are turning in greater numbers to UtahFutures.org. Fans of the online portal include employment counselors working with adult job-seekers.

"It's a lot of fun helping people get back to work," says an Ogden-area counselor. "UtahFutures is a really great resource to help develop that relationship with customers and be a piece of their success."

The online portal directly supports education planning and career exploration with resources for teens beginning to assess their options through adults looking for jobs. Since UETN assumed oversight of the portal in 2015, registered user accounts have increased by 285%, with visitors spending 25% more time on each visit, the equivalent of \$3.5 million in job counseling services.

**UETN SUPPORTS GOVERNOR HERBERT'S DECLARATION THAT 2018 IS "THE YEAR OF TECH ED" WITH ONGOING INITIATIVES TO HELP MORE UTAHNS DISCOVER AND ADVANCE ALONG REWARDING CAREER PATHWAYS.**



*UtahFutures lets you see everything you want to know about a career so simply and easily. It's all right there. After UtahFutures, I definitely got excited about my future and seeing what I could do.*

**MIA, HIGH SCHOOL STUDENT,  
SALT LAKE CITY**

**REACHING MORE  
UTAH LEARNERS WITH  
UETN DISTANCE ED**

To help teachers integrate arts education into the classroom, the Utah Museum of Fine Arts (UMFA) provides hands-on, interactive curricula. “Art provides safe spaces for expression and creative learning,” says Laura Decker, Associate Curator of Education at the UMFA. It also prepares students to become leaders who can navigate ambiguity, solve problems, and collaborate. Until recently, the UMFA’s capacity to bring these benefits to students throughout the state was limited by geographical distance.

In 2017, UETN’s Distance Education service changed that. After working with the UMFA to identify the best solution, UETN provided the platform and training that empowered their instructors to deliver content to any Internet-enabled location. With UETN’s help, UMFA staff can focus on working with teachers and students, confident that the tech will run smoothly.

Since their first virtual art class in November, UMFA’s Distance Learning program has served more than 100 students, and they expect to reach many more in 2018. Decker says, “We were nervous to jump into the world of teaching via technology but now really look forward to the sessions because of UETN’s help. I can’t imagine this program being more seamless.”

**GOING TO THE FROGS:  
KUEN AMPLIFIES CITIZEN  
SCIENCE PROGRAM**

How do you transform citizens into scientists? If you’re Kayleigh Mullen, a wildlife biologist with Utah’s Hogle Zoo, you get more people out into nature to assist with real-world field research.

Last summer, KUEN’s crew filmed one such outing for “Citizen Science—Boreal Toads,” which aired as a segment of the major market group initiative called *SciTech Now*. As Mullen explains, volunteers help professional scientists like her track the population size and health of a toad species native to Utah.

“It’s kind of on-the-job training and the data are going back to the wildlife biologists,” Mullen says. By spotlighting the work of Utah science educators through productions aired on *SciTech Now*, UETN helps local education programs reach a wider audience.

**UETN BENEFITS  
PARTNER CONTENT  
AND PROGRAMS.**

*UETN is important to the work we do at Utah’s Hogle Zoo. They help connect us to students all around the state of Utah and even beyond. Without their help, these kids wouldn’t be able to see elephants, rhinos, and owls that inspire them about the natural world.*

**TAUNI SUTHERLAND,  
DISTANCE LEARNING AND  
OUTREACH COORDINATOR,  
UTAH’S HOGLE ZOO**



*The Utah Education and Telehealth Network plays an important role in our great state, helping Utahns advance their education and receive telehealth services. I commend UETN for supporting critical technology and infrastructure.*

**GOVERNOR GARY R. HERBERT**



#### **2017 NETWORK HIGHLIGHTS**


- Completed transition to new joint master control for television broadcasting
- Conducted second statewide inventory of K-12 technology
- Pilot-tested ubiquitous wireless access tool called EduRoam
- Created 11 new education websites for the Utah State Board of Education
- Launched Canvas learning management system for all K-12 schools statewide
- Opened new Operations Center, benefitting over 1,500 networked sites statewide
- Recovered \$15.8 million telecommunications E-Rate funds
- Released Sokanu career exploration tool on UtahFutures
- Sustained average Internet utilization of 63 Gbps without cost increases
- Upgraded distance learning bridge benefitting over 39,000 courses
- Upgraded distance learning capabilities in 18 classrooms, lesson plan and rubric online tools, and network backbone for Internet 2 south of Salt Lake City

#### **UPDATED OPERATIONS CENTER ENHANCES SECURITY AND SERVICE**

Governor Gary Herbert helped UETN unveil its Operations Center with a virtual ribbon-cutting ceremony on November 9. Located in a remodeled section of UETN's headquarters on the University of Utah campus, the new center combines the functions of the former Network Operations Center (NOC) and the Technical Support Services Center (TSSC) for UETN's Distance Learning department. With the new center comes enhanced monitoring of the broadband network on which nearly 1,500 Utah schools, postsecondary institutions, libraries, clinics, and hospitals rely.

Highlights of the ceremony included a conversation between Governor Herbert, located in the Operations Center, and students and staff located in Alpine High School, connected via UETN's Interactive Video Conferencing service. Former Utah Governor Michael Leavitt shared his remarks via video, stating, "UETN is a model that other states and nations seek to emulate, and today's Operations Center beautifully displays Utah's historic technical leadership."

**NEW OPERATIONS CENTER MONITORS NETWORK ACTIVITY SO STAKEHOLDERS CAN DEPEND ON FAST, RELIABLE SERVICE FOR EDUCATION AND TELEHEALTH.**



As an ed tech specialist, my job is to help increase student achievement through supporting teachers and students in their use of technology. UETN has a huge impact on what we do.

KATHRYN BLUNT, CANYONS SCHOOL DISTRICT

#### **COURSES BUILD CAPACITY FOR DIGITAL LEARNING**

As part of Utah's Digital Teaching and Learning Grant program, UETN partnered with The Friday Institute to create *Leadership in Blended Learning*. This professional development series prepares school principals and district superintendants to plan and implement blended learning in their schools. The training includes a five-month course for principals that combines online and face-to-face engagement so participants can experience technology integration as learners. UETN Professional Development instructors facilitate the courses with school district leadership and rural regional service center staff. *Leadership in Blended Learning* is a key component in Utah's \$12 million-plus Digital Teaching and Learning Grant program.

#### **PROFESSIONAL DEVELOPMENT SUPPORTS UTAH'S EDUCATION COMMUNITY**

The annual conference for the Utah Coalition for Educational Technology (UCET) draws thousands of educators from around the state seeking ways to integrate technology into their teaching.

UETN staff shared their expertise at the 2017 conference through numerous sessions and supported the organization through participation on its board and in #UTEdChat, a digital engagement event hosted weekly throughout the school year. The Twitter meet-up allows educators and policy-makers across the state to connect beyond the conference to share thoughts and tips for engaging students and enhancing learning through technology.

#### **UETN STAFFERS EARN ED TECH CREDENTIAL**

Demonstrating UETN's commitment to education, seven more staff members have earned the Certified Education Technology Leader (CETL) credential offered by the Consortium for School Networking (CoSN). Preparing for the exam involved nearly a year of collaborative learning with other educators in the state. Distance Education Specialist Charice Carroll says the experience will help her anticipate the needs of teachers and learners: "Understanding the technology landscape and challenges in education with the CETL Certification can help me offer better solutions to stakeholders."

Utah CoSN Chapter Chair Tim Smith has cited UETN staff for their commitment to ed tech leadership. He says that through the process of learning the CETL framework, they will become more familiar with "the diverse knowledge and skills needed to define and successfully build 21st century learning environments."

### **THOUSANDS OF UTAH EDUCATORS TURN TO UETN PROFESSIONAL DEVELOPMENT FOR ED TECH TRAINING.**



*With UETN, we're able to reach rural locations and improve the quality of care, lower medical costs and reduce the burden on patients who would otherwise need to travel an hour or more for services. The result is higher patient satisfaction overall.*

**TARA LARKIN, TELEHEALTH OPERATIONS DIRECTOR, INTERMOUNTAIN HEALTHCARE**

## HEALTHCARE PROVIDERS RELY ON UETN TO IMPROVE PATIENT CARE IN RURAL AREAS.

### **TELEHEALTH BRIDGES GAPS IN HEALTHCARE DELIVERY**

In a health crisis, hours can mean lives. With more than 50 member sites, UETN helps rural healthcare providers overcome the distance between patients in need and specialized medical services. Using UETN's high-definition interactive videoconferencing and network, patients can receive care for urgent conditions such as stroke and burns. Mental health and other services are also provided, reducing the burden of travel and associated risks for rural patients in need of such services. Healthcare educators are also using UETN to extend the reach of Nursing PhD programs, Grand Rounds, and regional leadership education.

Partners such as Intermountain Healthcare rely on UETN to connect their highly trained specialists with healthcare providers at rural sites that lie outside their own network, such as medical centers in rural or remote Kane, San Juan, and Duchesne counties.

"UETN extends the skill sets of Intermountain Healthcare to locations without in-person access to specialists such as neurologists, behavioral health specialists, or neonatologists. Without UETN, these patients would face more travel, more expense, and more time away from home, family, and work," says Brian Wayling, Intermountain's Assistant Vice President of Telehealth Services.

Tara Larkin, Telehealth Operations Director for Intermountain cites additional benefits of telehealth, such as lower mortality rates and shorter hospital stays. The service also helps practitioners at rural sites "advance their professional skills as they collaborate with our highly trained specialists at places such as Intermountain Medical Center and Primary Children's Hospital."

### **NETWORK DESIGNATED HUB FOR REGIONAL TELEHEALTH**

In 2017, UETN was selected by the Office for the Advancement of Telehealth, the Federal Office of Rural Health Policy, the Health Resources and Services Administration, and the Department of Health and Human Services to host the Northwest Regional Telehealth Resource Center (NRTRC). UETN will assist healthcare providers with the adoption and implementation of telehealth serving Utah, Idaho, Alaska, Washington, Oregon, Montana, and Wyoming. The NRTRC also coordinates with 11 other regional and two national telehealth resource centers. UETN's new role as the NRTRC will help keep Utah on the forefront of telehealth, which benefits local patients, care providers, and communities.



### 2017 GENERAL SESSION HONORS UTAH PUBLIC TELEVISION

On the 50th Anniversary of the 1967 Public Broadcasting Act, UETN was unanimously recognized by Utah's Legislature and Governor in *House Concurrent Resolution (HCR) 4*. Introduced by Representative V. Lowry Snow, *HCR 4* cites UETN, KBYU and KUED for their groundbreaking role in Utah.

"Our public broadcasters have unparalleled, high-quality programming on the air and they also provide valuable services on the ground in local communities throughout our state," said Rep. Snow.

Acknowledging the impact for students and teachers, the resolution cites UETN's "educational resources and services that have resulted in students earning higher education credits equivalent to more than 4,145 bachelor's degrees since 2010 and over 5,000 Utah educators learning how to integrate education technology to enhance teaching and learning each year."

### MENTORING AIDS JOURNALISM STUDENTS

Media production skills are increasingly valuable in a variety of occupations from journalism, marketing, instructional design, and beyond. With support from UETN, high school students are learning the nuts and bolts of television broadcasting through the *PBS NewsHour Student Reporting Labs* program. UETN media producers provide feedback

on student work, share information on careers in public media, and mentor youth in interview basics, lighting, and camera setup.

### UEN SCIFI FRIDAY CREATURE LANDS AT STEM FEST

Who's round and green and lots of fun? Creature, the new face of *UEN SciFi Friday*, was a hit with youth participating in the 2017 STEM Fest. Nearly 2,000 children stopped by the UETN STEM Activity Center to grab Creature stickers, create their own earbud holders, and snap pics in the UtahFutures American Graduate photo booth. Along the way, they learned about station resources for science, technology, engineering, and math. Featured programs included *SciTech Now* and *UEN SciFi Friday*, the award-winning program that pairs classic films, aired on KUEN each Friday at 9 p.m., with online information on STEM concepts and careers at [uen.org/tv/scifi](http://uen.org/tv/scifi).



100% OF KUEN PROGRAMMING  
SUPPORTS LEARNERS.



*There's never been a more important time to teach students about critical thinking. Our mentors at KUEN have been a valuable resource in not only helping my students learn to use technology effectively but also in providing advice on how to tell good stories. There's been a renewed interest in students at my school for journalism and the need for fact-based reporting. Teens today feel more hopeful when they're empowered with the means to tell stories that matter to them to a wider audience.*

DR. CHRIS SLOAN, ENGLISH AND MEDIA INSTRUCTOR, JUDGE MEMORIAL HIGH SCHOOL

### **UTAHFUTURES SPOTLIGHTS UTAH AMERICAN GRADUATE CHAMPIONS**

The Utah American Graduate project and UtahFutures combined forces on two events to recognize Utahns who are helping learners get career-ready. In May, UETN recognized 20 educators who work with Youth in Care as part of the 38th Annual Conference for Agencies and Organizations Serving Promising Youth. In October, 14 members of the education community were guests of honor at the UtahFutures Celebrates Stories of Champions Dinner, which focused on the value of mentorship leading to technical career pathways.

Both events were funded by grants from WNET-Thirteen, which produces *American Graduate Day*, a broadcast event that airs annually on KUEN. Selected by their peers for their positive influence on learners, Champions report that by spotlighting their work, the recognition raises awareness of the people and programs they serve.

### **SUPERCOMPUTING CONFERENCE GETS WIRED FOR SPEED**

Each year, members of UETN's Technical Services join an international army of volunteers to design, build, and support the world's fastest temporary network. Known as Scinet, the network linked nearly 13,000 participants at the SC17 Conference location in Denver to the world. UETN Chief Technology Officer Jim Stewart co-chaired this year's Scinet team, helping guide the creation and deconstruction of 280 WiFi access points and 60 miles of fiber (that's from SLC to Provo). Solving the challenges of setup and breakdown is more than great, geeky fun for UETN's team: it's also

a unique opportunity for professional development and in-person networking, which in turn helps UETN stay on the leading edge of education and telehealth network services.

### **UETN ASSISTS HIGHER EDUCATION WITH ACCESSIBILITY**

Working with Utah's eight colleges and universities, UETN developed a streamlined process for captioning online courses and lectures. UETN conducted a competitive process to qualify providers and pre-purchase minutes of closed captioning service at a bulk rate. The result is that the institutions can access the services they need through UETN at a lower per-minute cost with most videos captioned and returned within 48 hours. In addition, UETN supported statewide procurement of software to fully convert online courses into ADA compliant file formats, including audio files of PDF documents and Braille and screen readers.

By administering consortium purchases for commonly used instructional software and tools, UETN saves Utah institutions about \$1.5 million per year as compared to individual licensing. These include the state's learning management system Canvas by Instructure, captioning providers, plagiarism detection, Kaltura for media encoding and hosting, online exam proctoring, research databases and libraries, Ally by Blackboard for accessibility, and EverFi for sexual violence prevention curriculum.

## **UETN CONNECTS PEOPLE AND RESOURCES THROUGH DIGITAL PLATFORMS AND EVENTS.**

*It was nice to know that others recognize the work that goes into creating successful educational environments and to be honored with the American Graduate Champion award was very fulfilling. Since receiving the award, I have had many colleagues congratulate me and tell me how they felt it was well deserved. This type of recognition—although not expected—makes me more excited to keep helping students succeed.*

**LISA BIRCH, DIRECTOR,  
TECHNOLOGY AND SERVICE  
PROGRAMS MOUNTAINLAND  
TECHNICAL COLLEGE AND  
UTAHFUTURES AMERICAN  
GRADUATE CHAMPION**



IN 2017 UETN CONNECTED

**652,348**  
K-12 STUDENTS AT **1,186**  
SCHOOLS AND FACILITIES

**70+** HOSPITALS, CLINICS,  
AND HEALTH  
DEPARTMENTS

MORE THAN

**230,000**  
POSTSECONDARY STUDENTS AND TRAINEES

AND

**~63K** PRE K-20+  
EDUCATORS  
AND STAFF

MORE THAN

**\$15.8 MILLION**  
IN TELECOMMUNICATION FUNDS  
RECOVERED FOR UTAH SCHOOLS  
THROUGH THE E-RATE PROGRAM

PUBLIC LIBRARY PATRONS USED UETN TO ACCESS THE INTERNET

**2,652,824** TIMES

**89%** OF UTAHFUTURES.ORG USERS  
REPORT THE SITE HELPS THEM  
LEARN ABOUT CAREERS

**17,162** UTAH EDUCATORS PARTICIPATED IN  
UETN PROFESSIONAL DEVELOPMENT  
ACTIVITIES

**9 million+**

visits to uen.org,  
UTAH'S PUBLIC MEDIA  
WEBSITE FOR  
EDUCATION

**66,944** visits

TO PRESCHOOL PIONEER  
AND ESCUELA PREESCOLAR,  
UTAH'S BILINGUAL LIBRARY  
FOR YOUNG LEARNERS

**312,902**

STUDENTS PARTICIPATED IN  
COURSES VIA UETN'S LMS

**650+**

CONCURRENT ENROLLMENT  
COURSES DELIVERED VIA UETN'S  
INTERACTIVE VIDEO CONFERENCING HELPED STUDENTS  
EARN POSTSECONDARY CREDIT

**1,500+**

EDUCATION AND  
COMMUNITY SITES  
ARE CONNECTED  
VIA UETN'S WIDE  
AREA NETWORK



**178,368**

VIEWS OF VIDEOS ON  
UETN WEB PAGES

MORE THAN

**1.3 MILLION**

VISITS TO  
Utah's  
Online Library

**231,723**  
VISITS TO EMEDIA

**24/7**

EDUCATIONAL PROGRAMMING ON  
KUEN'S THREE DIGITAL CHANNELS:

UEN-TV 9.1 MHZ WORLDVIEW 9.2 FXN 9.3

**949,000**

HOUSEHOLDS IN  
KUEN'S VIEWING AREA

Updated February 2018

WE NETWORK FOR EDUCATION AND HEALTHCARE.  
UEN.ORG | UETN.ORG