



Building Resiliency in Rural Communities for the Future of Work

PREPARING STUDENTS FOR THE DIGITAL ECONOMY

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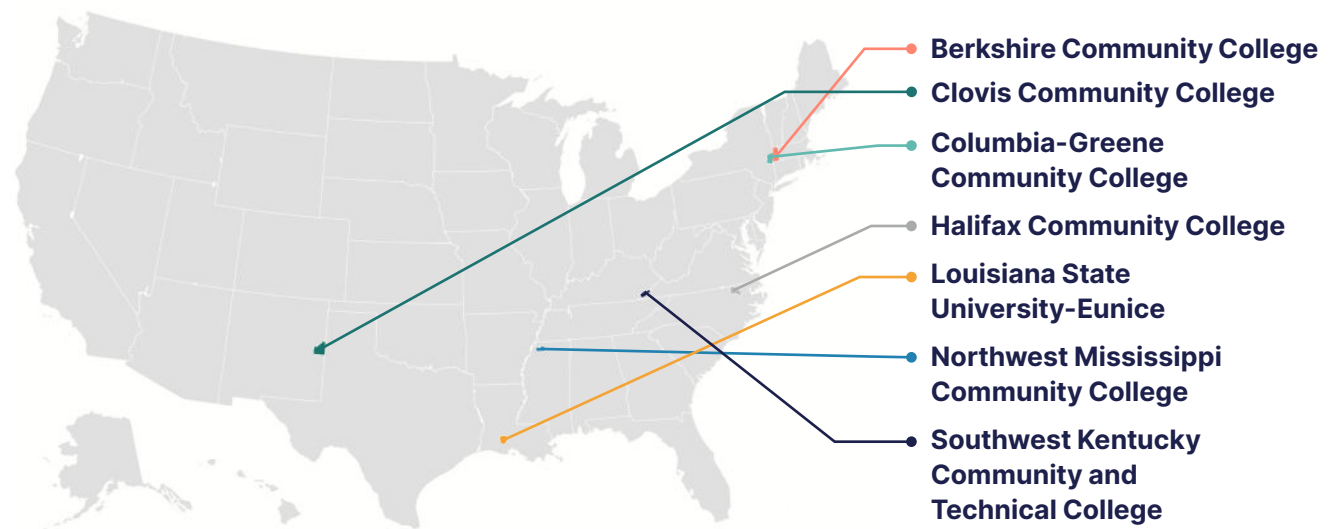
Introduction

Rural community colleges are a key source of economic development for their communities.^{i,ii,iii} They also serve as regional hubs providing educational, cultural, and health and wellness resources to the communities they serve. Yet rural community colleges are often located in high-poverty and geographically isolated areas and face challenges with lack of resources, student recruitment and enrollment, building ties with universities and employers, and recruiting and retaining faculty and staff. Recognizing the importance of rural community colleges, Achieving the Dream (ATD) launched the *Building Resiliency in Rural Communities for the Future of Work* initiative in December 2020 to coach and support rural colleges as they work toward four goals:

- 1.** Prepare and connect students to careers in the digital economy
- 2.** Develop and strengthen community partnerships
- 3.** Identify and close equity gaps
- 4.** Foster a culture of evidence

In January 2021, ATD selected the first cohort of seven rural colleges (see figure 1).

Figure 1. Colleges in the rural resiliency cohort



Over three years (January 2021 to December 2023), ATD is facilitating and supporting this cohort of rural community colleges in their work to meet the four goals of the initiative through a series of targeted and ongoing activities at each college. To identify lessons learned through this work, ATD partnered with Education Northwest to conduct a qualitative, participatory, and formative evaluation of the initiative. Education Northwest conducted site visits at each of the colleges to speak with administrators, faculty members, advisors, board of trustees' representatives, students, and community partners about their successes and challenges while working toward the four goals of the project.

ATD supports for the rural resiliency cohort colleges include:

- One-on-one support from two expert coaches
- Tools and resources including a partnership analysis tool and digital skills program review tool
- Convenings and opportunities to engage in shared learning with other rural community colleges

The following sections provide an overview of the evaluation findings triangulated with the literature and other secondary data sources with a specific focus on the first goal of the project, **preparing students in rural areas for careers in the digital economy**. Community colleges and their partners can use this brief as a resource as they embark on efforts to improve students' access to technology and the digital skills needed for jobs that pay family-sustaining wages.

Rural communities face unique challenges in preparing students for the digital economy that can be addressed by rural community colleges

Across the country, rural, low-income, and BIPOC communities have less access to affordable, reliable, broadband internet; large screen devices; and other information and communication technologies compared to non-rural, high-income, and white communities.^{iv,vi} Lack of access to technology contributes to fragmented knowledge—when someone is comfortable with digital tasks they engage in frequently (e.g., taking and editing photos or videos) but lack other skills such as formatting text in a document or entering data in a spreadsheet.^{vii} Equity gaps in access to technology and fragmented knowledge are particularly concerning given that every industry in America reports digital skill gaps.^{viii,ix,x}

Preparing students in rural areas for careers in the digital economy is crucial because jobs across industries increasingly require employees to have foundational computer skills. Even industries in rural communities that did not traditionally require digital skills, such as agriculture or manufacturing, now require

employees to engage with technology. Furthermore, jobs that require higher levels of digital skills pay higher salaries. Therefore, supporting digital skills by providing access to technology and digital skills training is a key strategy to support economic mobility and reduce pay equity gaps for students in rural areas, who come from low-income families, or who identify as BIPOC.^x

Rural community colleges are well positioned to address these equity gaps and prepare students for well-paying occupations that require digital skills. To provide students with the skills they need to be successful in the digital economy, colleges need to address common challenges like limited resources and capacity to support students' access to technology and digital skills.^{xi,xii} This brief draws upon the literature and the ongoing work of the rural resiliency cohort colleges to provide several strategies and recommendations.

Aligning digital skills efforts with other initiatives can support shared understanding and sustainability

The literature highlights the importance of aligning efforts to improve digital skills with other campus-wide initiatives such as accreditation to allow for a shared understanding, sustainability, and ongoing evaluation of the work.^{xiii} To be successful, strategic planning around supporting digital skills should include:

- Clearly articulated categories of digital skills that reflect competencies needed by employers
- Supporting student access to devices and broadband
- Faculty and staff training in use of technology and teaching digital skills
- Regular needs assessment processes to identify gaps in technology resources, knowledge, and capacity

The importance of this strategy was reinforced by interviews with administrators and faculty members at the colleges. Many of the colleges in the rural resiliency cohort are adopting this recommendation by adding digital skills to the program review process to assess current course and program offerings and gaps around digital skills. Administrators found that program review helped with faculty engagement by providing faculty members with a familiar process by which to review their own programs and courses for digital skills. Program review also helped the colleges to create a shared definition of digital skills and fostered motivation for increasing such offerings.

Halifax Community College developed a tool to organize digital skills into three categories (communication skills, practical skills, and professional skills) and used the tool to engage advisory committees in a review of associate degree programs to identify gaps within each category.

Assessing students' digital skills helps colleges understand and address fragmented knowledge and equity gaps in access to technology

The literature and the interviews at the colleges highlighted the importance of assessing students' digital skills to identify their areas of strength and to understand individual and aggregate needs. This information can then be used to develop and implement tailored educational opportunities and resources to address gaps, guide instruction, and measure student progress.^{viii,x,xi} In addition to assessing students' digital skills, colleges can gather information from students to ensure that they are able to access the materials and supports needed to acquire digital skills.^{xi, xiii,xiv} These supports should include:

- Broadband internet, which can be provided through hot spots, partnering with internet service providers, funds to pay for home internet, or assistance with applying for low-cost or free internet programs
- Large screen devices, which some colleges have found it helpful to gift to students when they complete the program
- Software or access to programs needed to be successful during and after college
- Learning supports such as digital navigators, which are particularly valuable for students who have not previously had access to broadband internet or a large-screen device
- Access to maintenance and technical assistance and support so that students do not lose access when their computer crashes or their software needs to be updated

Some of the rural resiliency cohort colleges are working to identify a tool to assess incoming students' skills (see appendix for assessment resources identified in the literature review). Others are piloting virtual modules or small-group workshops and gathering data from participants to understand digital skill training needs. The colleges are also assessing students' needs for technology, often through one-on-one advising meetings. Other highlights from the rural resiliency cohort include:

- Berkshire Community College has hired digital coaches to provide students with access to technical assistance and support
- Clovis Community College distributes a basic needs survey each fall that includes questions about students' needs for technology

Colleges should provide varied opportunities to acquire digital skills focused on adaptability and problem-solving

Supporting students with fragmented skills requires differentiated instruction that builds on students' strengths and interests. Colleges with limited capacity to provide individualized or differentiated support should focus on creating learning experiences that support problem-solving and adaptability, which benefit students across a range of skill levels. Example practices include applying a skill in a variety of contexts, collaborative or self-directed learning, and using artificial intelligence or virtual reality settings to apply digital skills.^{ix,xi,xv}

Community colleges can also expand access and leverage resources, equipment, curricula, and instructor expertise by adapting digital skills course materials for a variety of formats and platforms. These can include noncredit courses, microcredentials, for-credit courses, certificates, digital badges, and online programs.^{xiii} Across these formats, colleges should prioritize learning that results in a badge, certificate, or other form of “skills validation,” which are associated with student motivation and self-confidence as well as with job promotion and higher wages as students enter the workforce.^{xi,xvi}

In our interviews with faculty members at the rural resiliency cohort colleges, we learned about a variety of strategies they are using to support students' digital skills including guidance on internet navigation and file management and focusing on information literacy. The rural resiliency cohort colleges also shared how they are exploring opportunities to integrate opportunities for “skills validation” in various formats including digital badges and certificates.

- Columbia-Greene Community College uses noncredit courses and microcredentials to serve as a pilot for new programs and courses and respond quickly to student or community partner needs. One example is a health care facilitator microcredential which trains students to be a telehealth counselor. The college provides financial support for students if their program does not allow them to use financial aid for microcredentials.
- Louisiana State University at Eunice provides students with access to digital badges through Northstar Digital Literacy that range from foundational to advanced computer literacy skills.

Community partners can expand colleges' capacity to support digital skills

The literature and interviews at the colleges demonstrated how community partners can expand colleges' often limited resources and capacity in ways that benefit students, the college, and the community. Asset mapping can help colleges identify and leverage resources available in the community, including the following:^{viii,x,xvii}

- Employers that can provide applied learning opportunities
- Nonprofits or community-based organizations that can support access to devices or training, and outreach efforts to underserved populations
- Federal, state, or local organizations that can identify funding opportunities for digital access
- National organizations, for-profit companies, and industry-based associations that can provide access to technology bootcamps or other accelerated learning opportunities for in-demand skills

Many of the colleges in the rural resiliency cohort reported using ATD's partnership analysis tool to review their partnerships and are developing or strengthening partnerships with the goal of supporting students' digital skills. For some colleges, this included engaging community partners in the program review process (as described above) or in strategic planning for new pathways or programs that would prepare students for new or emerging careers in the digital economy. Others engaged in specific partnership to provide applied learning opportunities. Examples include:

- Northwest Mississippi Community College is partnering with Base Camp Coding Academy to provide students with college credit for participating in a yearlong coding program.
- Southeast Kentucky Community and Technical College has a partnership with Toyota to support students' digital skills in the auto mechanic program. Toyota donated machinery and other equipment to help students engage in applied learning of digital skills.

Summary and conclusion

Although rural communities may face challenges in preparing students for jobs in the digital economy, the rural context also provides unique opportunities to address these challenges. The literature and data collected from the colleges identified key strategies to help rural community colleges plan and implement new strategies to support students' skills. These strategies include aligning digital skills efforts with other initiatives, identifying and using assessment tools to understand students' needs for training and devices, embedding instructional practices focused on problem-solving and adaptability to support students' digital skills acquisition, and leveraging community partners to support students in acquiring technology and digital skills.

Through interviews with the rural resiliency cohort, we learned that the small campus size and commitment among staff and faculty members to meet students' needs allowed the colleges to engage in campus-wide conversations about integrating digital skills across the curriculum and begin to assess and address gaps in a relatively short time. Rural resiliency cohort colleges also demonstrated the value of close, responsive relationships with community partners, who expanded their capacity to support student access to devices and applied learning. Through this work, the colleges have benefited from opportunities to learn from one another about strategies and challenges in supporting students' digital skills to prepare them for living wage jobs in the digital economy.



Appendix.

Digital skills resources

The following tables provide links to and descriptions of resources from the literature that could support rural community colleges in their work to prepare students for careers in the digital economy.

Table 1. Resources to support digital skill development in rural contexts

Linked resource	Source	Description
<u>Asset mapping tools</u>	The National Digital Inclusion Alliance	Tools to support rural community colleges with uncovering resources in the community that could support digital skill development.
<u>Public library resources</u>	Public Library Association	Tools to support engaging public libraries as partners in workforce development efforts.
<u>Rural broadband resources</u>	Rural LISC	Information about funding and other resources to support access to broadband internet.
<u>Digital skills self-assessment for educators</u>	EdTech Center @ World Education	A self-assessment to help educators understand their comfort level in using technology and identify gaps and opportunities for professional development.
<u>Digital Skills Library</u>	EdTech Center @ World Education	A repository of free instructional resources to support digital skill development.

Source: Authors' review of the literature.

Table 2. Resources to support digital skills assessment

Linked resource	Source	Description
<u>Digital Skills Assessment Guidebook</u>	International Telecommunication Union	A guidebook that provides resources and recommendations for implementing digital skills assessments.
<u>Selecting an Assessment checklist</u>	Digital Resilience in the American Workforce	A tool to support institutions with planning for and selecting a tool to assess digital literacy.
<u>Assessment inventory</u>	Digital Resilience in the American Workforce	An inventory of assessments that could be used to understand students' digital skills.
<u>Digital Literacy Action Plan Tools</u>	Wakelet	Tools to support educators with understanding students' needs and goals and differentiating instruction.
<u>Northstar Digital Literacy assessment</u>	Northstar Digital Literacy	An online tool to assess students' computer skills.
<u>California civic objectives and additional assessment plans</u>	CASAS	Assessment tools for the California civic objectives. Civic objectives 47, 48, and 73 address digital skills.
<u>Programme for the International Assessment of Adult Competencies Survey of Adult Skills (PIAAC)</u>	Organization for Economic Cooperation and Development	An assessment of adult skills. The PSTRE domain focuses on problem-solving in technology-rich environments. This measure is used across the United States and the world to understand workplace needs and employees' skills. The <u>online assessment</u> can also be used as a diagnostic tool for educational institutions.
<u>DQ Index Assessment</u>	DQ Institute	A free online assessment tool that compares users' scores to global benchmarks.

Source: Authors' review of the literature.



Resources to support equitable access to digital skills

Resources to support the use of digital navigators

- **Digital US resources** including training guides, accessibility tools, and communication recommendations
- **National Digital Inclusion Alliance resources** including job descriptions, intake forms, and a follow-up survey

Badging and certification programs

- **Northstar Digital Literacy**
- **Certiport** administers the Internet Core Competency Certification (IC3) Digital Literacy Certification, an internationally recognized benchmark for computer literacy (as well as a variety of other digital skills certifications)
- **Coursera**
- **Microsoft Learn**
- **Grow with Google**
- **LinkedIn Learning**
- **Essential Skills Program** (focused on digital soft skills)
- **Digital Promise** (a microcredential in social media marketing in partnership with Facebook)



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