Opportunities for Higher Education and Digital Learning in Infrastructure Workforce Training

While awaiting further developments with the Build Back Better legislation, higher education planners should not lose sight of the training and education components of the recently passed federal Infrastructure Investment and Jobs Act (IIJA) of 2021 and other recent workforce funding. The IIJA infuses $1.2 trillion ($550 billion in new investments) to improve roads and bridges, rail, transit, ports, airports, the electric grid, water systems, and broadband. While IIJA does not include many funds for higher education directly, the overall infrastructure wave presents opportunities for higher education.

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What is **Digital Learning?**

Digital learning includes a broad range of content and communication tools, curricular models, design strategies, and services that personalize instruction for students in blended and online learning environments. Evidence demonstrates digital solutions lower the cost of course materials, improving access to them. In addition, digital solutions, such as adaptive learning, paired with active learning have the potential to improve course outcomes for poverty-affected students, and Black, Latinx, and Indigenous students.

Infrastructure Workforce Training

The IIJA physical infrastructure funding infusions will increase demand for skilled and unskilled labor in construction and manufacturing trades, among other industries. Job and skills demand will increase in related industries and occupations, as well, such as in manufacturing, operations and cybersecurity related to the public works and energy investments.

Participating in Workforce Training through IIJA, COVID Relief and FY 2022 Funding

So how can institutions of higher education leverage workforce training funding, let alone for digital learning, and contribute to the skilled infrastructure worker solution? Most of the IIJA resources will be released through agencies related to public works and are not specifically dedicated to institutions of higher education. Higher education is not explicitly named as a recipient for much of the workforce training resources. A bulk of physical infrastructure construction is unskilled or semi-skilled work, and with the IIJA and other recent funding, there has been (further) shifting towards skills training through career and technical education providers other than institutions of higher education.

However, IIJA does provide money for training and education that higher education institutions may participate in, including:

The Digital Equity Act. The act provides some potential funding for digital learning innovations, because digital literacy skills training is an express allowable use. This includes the National Telecommunications and Information Administration (NTIA) funding for three grant programs. And impacting digital skills in the workplace, as well as households, could be particularly relevant to improving labor market equity.

See ELE's "Broadband Funding" flyer for more on how IIJA supports equitable access to high-speed internet, as well as opportunities for digital learning from that perspective.

Additionally, under Energy Efficiency and Building Infrastructure, there is a $40 million competitive grant program to eligible states to train workers to do energy audits; $10 million in grants to institutions of higher education to establish modern building technologies training and assessment centers; and a federal share of associated career skills training programs

under which students concurrently receive classroom instruction and on-the-job training to obtain an industry-related certification to install energy efficient buildings technologies.

Similar provisions are included for wastewater and stormwater workforce development and training in the Drinking Water and Wastewater Infrastructure Act of 2021.

Postsecondary institutions may also have a role in assisting Native American, Alaska Native and Native Hawaiian entities administering the Tribal Broadband Connectivity Program (established by the December COVID-19 relief package and supplemented with $2 billion in IIJA). Assistance could include broadband deployment, digital inclusion, workforce development, telehealth and distance learning.

In addition, there were investments in workforce development in the 2020 and 2021 COVID recovery bills still being implemented, including $189M to support students particularly at community and rural colleges, as well as $500 million for collaborative skills training systems and programs through the Good Jobs Challenge.

Broadening the Vision for Postsecondary Institutions as Providers of Digital Learning

With the IIJA and other recent funding, there may be a resurgence of skills training delivered through career and technical education providers. This may provide opportunities for institutions of higher education to develop and increase digital learning offerings or to deploy digitized course content for use within other training contexts. For example:

- The open education resources generated through the TAACCCT grants provide examples of how more hands-on trades and construction content can be delivered online or digitally, and ways to enhance classroom components of apprenticeships through digital learning (for example, virtual labs, virtual reality, 3-D, and gamification).
- Beyond this, digital learning may cater to some already digitized components of skilled trades and building, such as computerized control systems, software, computer assisted design, mobile applications that are increasingly used on worksites, and so on.
- Further, TAACCCT grants had a focus on online and technology-enabled learning strategies that provide some inspiration around using technology to enable rolling and open enrollment processes, modularize content delivery, simulate assessments and training, and accelerate course delivery strategies.
- Other ideas might include digital learning for entrepreneurship training, especially for minority business development; improving the delivery, accessibility and support for postsecondary skills offering for working adults through online; and hybrid and digital innovations that increase and improve how STEM gets accessed and utilized by individuals of color to progress into higher-level skilled trades.

Being a Strategic Actor in Infrastructure Workforce & Training Planning

Recognizing the significant workforce and training issues, the IIJA creates various taskforces, workgroups and state planning initiatives to focus on workforce training and recruiting, and higher education should pursue a key role in these planning mechanisms—as well as be fully engaged partners in states' overall workforce planning.

- Activities to increase digital skills are an eligible expense in the broadband and Digital Equity portions of IIJA, as well as some of the remaining COVID relief funds. Therefore, the more connected higher education is to this planning while states develop their plans, the more likely that higher education can find a role in the deployment of training. In fact, it behooves higher education to be involved in the planning if only because college students may be among the beneficiaries of such training.
- By systematically engaging with policymakers and business leaders, higher education will become aware of and be positioned to proactively work to reduce legislative, regulatory or other barriers to implementing credential pathways at scale.
- These engagement efforts (locally and through national associations representing industry) are also a way for higher education to think beyond immediate opportunities for funding in IIJA, and become a driving force in workforce development and training related to advanced and renewable energy technologies.

More information about strategies for equitably scaling digital learning is available on the Every Learner Everywhere website at everylearnereverywhere.org. Contact our staff to discuss how your institution can utilize federal relief funding to improve equity through investment in digital learning.

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