



Assessing Information Technology Educational Pathways that Support Deployment and Use of Rural Broadband

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The National Science Foundation Advanced Technological Education program announced that Florida State University, College of Communication & Information (CCI), School of Library and Information Studies, Information Institute will receive an \$844,825 award to support the four year project *Assessing Information Technology Educational Pathways that Promote Deployment and Use of Rural Broadband*. The project is one of a number of science, technology, engineering, and mathematics (STEM) initiatives underway at the FSU College of Communication & Information, specifically extending and expanding the work of the Information Institute in rural broadband deployment for economic development.

Charles R. McClure PhD, Francis Eppes Professor and Director of the Information Institute will lead the project as the Principal Investigator. Marcia Mardis, Ed.D, Associate Professor, and Ebrahim Randeree, Assistant Dean at CCI are Co-Principal Investigators as are James P. Froh, PhD, Dean, School of Business and Technology at Chipola College and Kathryn M. Stewart, Dean, Technology & Professional Development at Tallahassee Community College. The FSU, Chipola College, and Tallahassee Community College will collaborate closely with a number of industry and private sector firms and organizations to study the needs of rural communities engaged in economic development efforts.

This action-based research project was prompted by the growth of broadband use in economic development by many industries in rural communities. Rural communities, in particular, are in danger of being left behind of much of the economic development activity in the Internet-based society, where over 40% of rural households lack broadband capability and rural, low-income, minority households lag behind all other groups in broadband availability.

Low adoption rates in rural communities can be attributed in part to decreased availability of broadband service, expense of computers and Internet service, and a perceived lack of need for a household connection. But if rural communities are going to capitalize on the benefits that broadband can bring for economic development, they will need more employees with advanced, diverse technology skills.

According to the U.S. Bureau of Labor Statistics, the computer systems design and related services industry will be in the top five growth industries for 2008-2018, with the strongest growth occurring in network systems and data communications analysis. As government services, health care, business and commerce, and social networks are incorporated into this

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technological advance through the use of broadband connectivity, rural communities that are not prepared to exploit broadband will be left without technical support for a range of services that further economic development and will slide further behind the digital divide. Thus, there is a significant workforce need for information technology (IT) workers with skills and knowledge of broadband technology that support the needs of rural employers and industries.

The project's research will focus on the educational and career pathways of individuals working as IT technicians who support broadband deployment in rural communities in Northwest Florida. The project team will identify the workplace roles and economic development importance of broadband technicians; the education needed to develop skills to be successful in these roles; the processes to sustain partnerships between educational and industry stakeholders; and the ways that rural economic development can be promoted by individuals with these key skills.

The goals of this four-year project are to strengthen the employee pool of IT technicians, and to improve broadband, telecommunications, and networks education for current and future IT employees in rural Northwest Florida, and to understand how to share these benefits with other rural Florida markets. The project will:

- Analyze current curricula at Tallahassee Community College and Chipola College
- Expand the network of rural stakeholders such as employers, industries, community institutions and technician educators;
- Develop a needs assessment for both educators and employers;
- Compare the paths student take to obtaining degrees or certifications; and
- Solicit faculty and employer feedback of the study findings with recommendations for improvement and for promoting economic development.

The results of this project will support educating flexible workers who can manage a constant stream of new knowledge about broadband technology, and support work functions that are key to economic development and that are increasingly broadband dependent. Project activities will match the efforts of teachers and administrators directly to the needs of rural employers and industry as they integrate continued broadband deployment initiatives for economic development.

Additional information about this project and other work related to broadband deployment and use for economic development can be obtained from Dr. Charles R. McClure (cmcclure@lis.fsu.edu) Director, FSU Information Institute or found on the project's website at <http://broadbandpathways.cci.fsu.edu/>.

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