



BROADBANDUSA

**Strategies for Broadband Adoption and Digital
Inclusion in Rural Communities**
BroadbandUSA Practical Broadband Conversations

You must dial in to hear the webinar!
Conference Line: 800-593-7190 Passcode: 984-4951#

April 19, 2017

Today's Presenters

Moderator

- Emy Tseng, Senior Broadband Program Specialist, BroadbandUSA, NTIA, US Department of Commerce

Presenters

- Dr. Brian Whitacre, Professor, Department of Agricultural Economics, Oklahoma State University, brian.whitacre@okstate.edu
- Dr. Bharat Mehra, Associate Professor, School of Information Sciences, University of Tennessee Knoxville, bmehra@utk.edu
- Katie Hill, Director, Coffeyville, Kansas Public Library, kh@coffeyvillepl.org

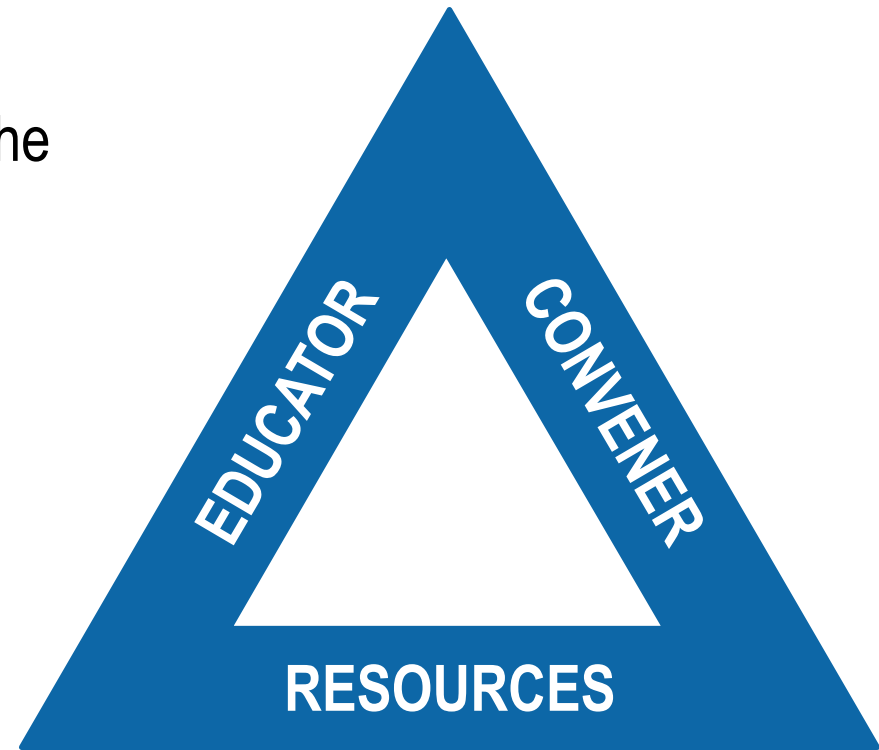
The National Telecommunications and Information Administration (NTIA) advises on telecom policy issues

- NTIA is the Executive Branch agency in the U.S. Department of Commerce that is responsible for advising the President on domestic telecommunications and information policy issues.
- NTIA's programs and policies focus largely on:
 - expanding broadband access and adoption;
 - expanding the use of federal spectrum by all users, and
 - ensuring that the Internet remains an engine for continued innovation and economic growth.



NTIA's BroadbandUSA program educates communities, facilitates relationships and provides helpful resources

- **Arm stakeholders & community leaders with information** to make the right decisions
- **Convene & facilitate the right conversations** with the right people to increase project success
- **Develop guidance for communities** as they pursue solutions to broadband challenges





Broadband and Rural Economic Development: Recent Research & Extension Efforts



NTIA Broadband USA
Webinar Series
April 19, 2017

Dr. Brian Whitacre
Professor and Extension Economist
Oklahoma State University



The Studies

Telecommunications Policy 38 (2014) 1011–1023



ELSEVIER

Contents lists available at ScienceDirect

Telecommunications Policy

URL: www.elsevier.com/locate/telepol



Whitacre, Gallardo, and Stover. 2014a.
Telecommunications Policy

- (2001-2010; National County-level Data)

Broadband's contribution to economic growth in rural areas:
Moving towards a causal relationship[☆]



Brian Whitacre^{a,*}, Roberto Gallardo^b, Sharon Stover^c

^a Department of Agricultural Economics Oklahoma State University Oklahoma State University, Stillwater, OK 74075, USA

^b Mississippi State University, USA

^c University of ...

Ann Reg Sci (2014) 53:649–670
DOI 10.1007/s00168-014-0637-x

ORIGINAL PAPER

**Does rural broadband impact jobs and income?
Evidence from spatial and first-differenced regressions**

Brian Whitacre · Roberto Gallardo ·
Sharon Stover

Whitacre, Gallardo, and Stover. 2014b.
Annals of Regional Science

- (2008-2011; National County-level Data)

COMMUNITY DEVELOPMENT, 2016
<http://dx.doi.org/10.1080/15575330.2016.1212910>



**Broadband and civic engagement in rural areas: What
matters?**

Brian E. Whitacre and Jacob L. Manlove

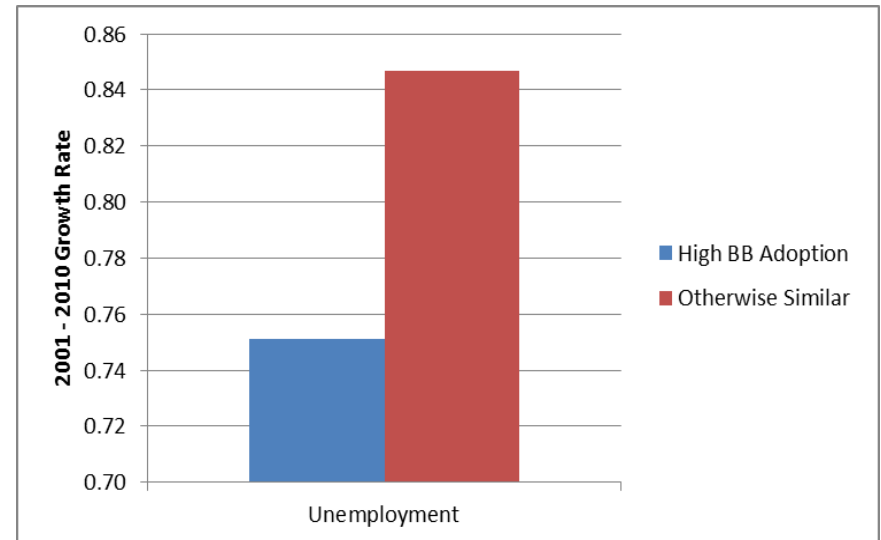
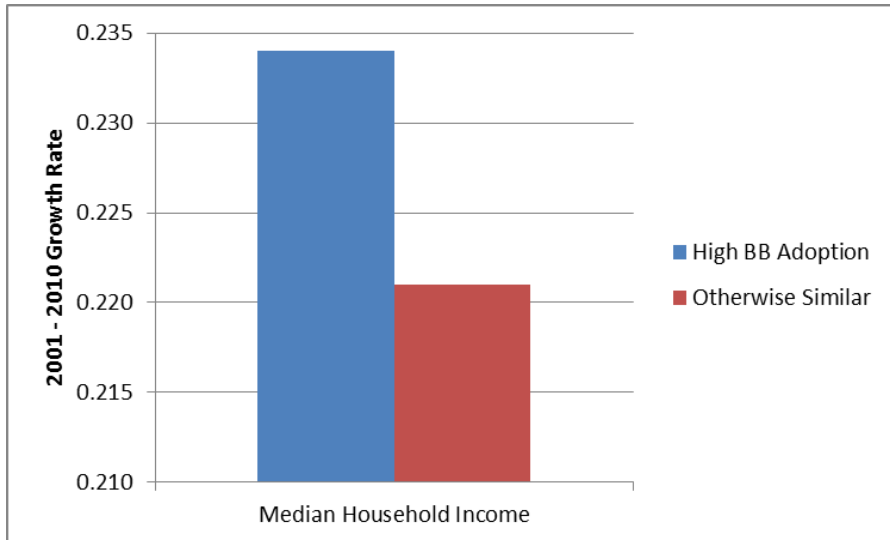
Department of Agricultural Economics, Oklahoma State University, Stillwater, OK, USA

Whitacre and Manlove. 2016.
Community Development

- (2011; State-level Data)

What We Found

We compared rural counties that had high levels of broadband adoption (60+%) with otherwise similar rural counties that did not...

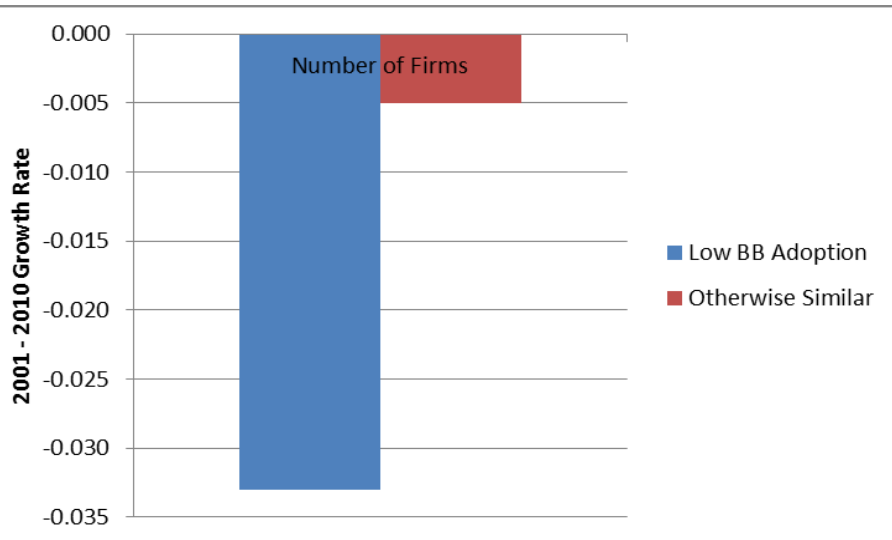


Income Grew Faster

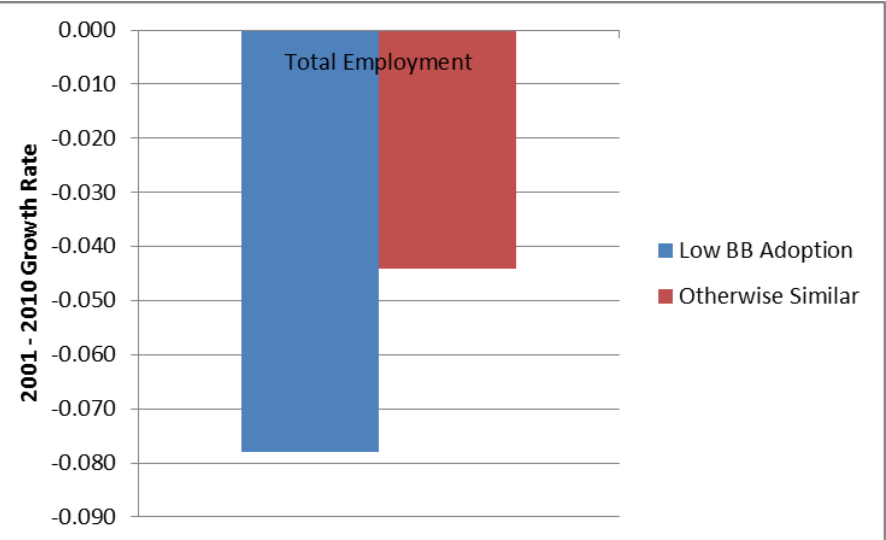
Unemployment Grew Slower

What We Found

We also compared rural counties that had low levels of broadband adoption (<40%) with otherwise similar rural counties that did not...



Lost More Firms



Lost More Jobs

What We Found

Non-metro counties that increased their broadband adoption rates between 2008 and 2011:

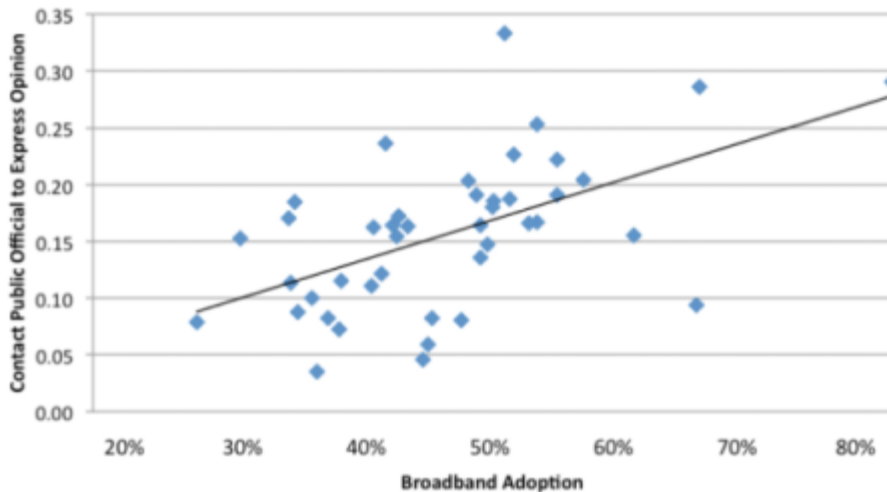
- Saw a **positive impact** on changes in
 - **median household income**
 - **total employment**
- Particularly impressive – focuses on adoption over a short period of time

- No impacts seen when using change in broadband **availability** rather than broadband **adoption**

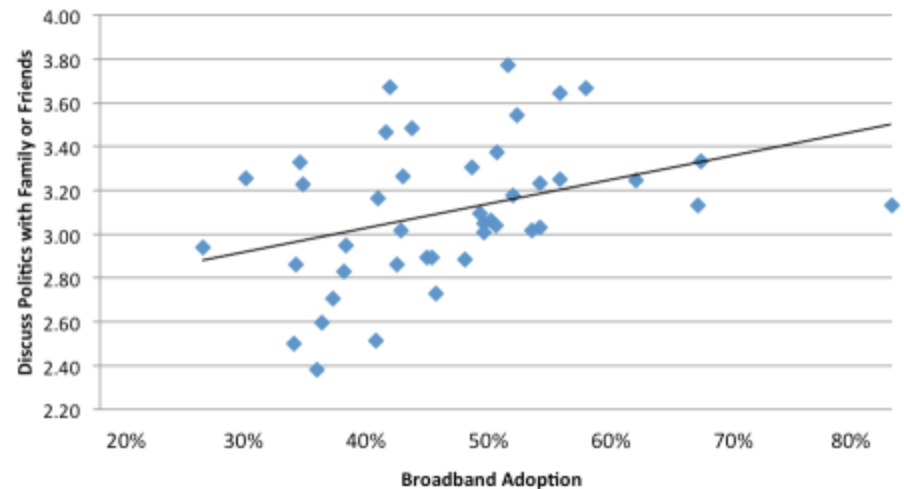
What We Found

- Higher levels of broadband adoption in non-metro portions of states leads to *more* civic engagement (usually)

Contacting a Public Official



Discuss Politics with Family / Friends



BUT...It's Not ALL Positive...

(2016) 46, 171–190



The Review of Regional Studies

The Official Journal of the Southern Regional Science Association



Conley and Whitacre. 2016.
Review of Regional Studies

- (2000-2012; National County-level Data)

Does Broadband Matter for Rural Entrepreneurs and Creative Class
Employees?*

Kelsey L. Conley and Brian E. Whitacre

Department of Agricultural Economics, Oklahoma State University, USA

- High levels of broadband adoption in rural areas may **reduce** the number of entrepreneurs and creative class employees
 - Perhaps due to reducing rates of “necessity entrepreneurs” who found other jobs
 - Or, encouraging out-migration among entrepreneurs / creative class workers to metropolitan areas?

Extension Efforts

- An E-commerce Program for Small Businesses
 - Series of 3-hour, hands-on workshops
 - Typically 5 – 15 in each class
 - Partner with economic development org (take advantage of pre-existing small business contacts)



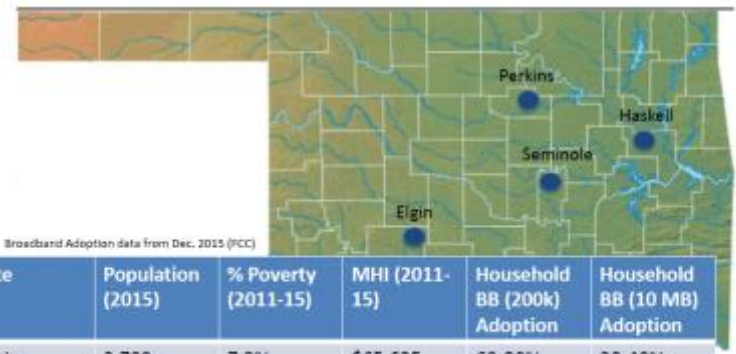
Current OSU E-commerce Workshops

Workshop	Length	Computers Needed?	Avg # of Attendees	Workshops / Attendees (since 2010)
Small Business Websites <ul style="list-style-type: none">•Planning out your website•Website Building 101• Actually building a site using templates	3 hours	Yes	10-15	35 / 600
PayPal 101 <ul style="list-style-type: none">•Implementing PayPal•Actually installing PayPal on an example site•Other PayPal tips & tricks	3 hours	Yes	10-15	18 / 210
Ins and Outs of Online Storefronts <ul style="list-style-type: none">•Getting started selling online•Primer for Amazon / Yahoo / eBay / Etsy stores•Pros and cons of each option	3 hours	Yes	10-15	17 / 215
Search Engine Optimization <ul style="list-style-type: none">•5 proven techniques for SEO•Pay-per-click advertising•Social media basics, including Facebook ads•Installing and using Google Analytics	3 hours	Yes	10-15	28 / 415



Other Extension Efforts

- Pilot Rural Library Hotspot Loan Program



Broadband Adoption data from Dec. 2015 (FCC)

Site	Population (2015)	% Poverty (2011-15)	MHI (2011-15)	Household BB (200k) Adoption	Household BB (10 MB) Adoption
Elgin	2,700	7.9%	\$65,625	60-80%	20-40%
Perkins	2,800	21.6%	\$40,861	60-80%	20-40%
Seminole	7,500	24.6%	\$32,594	20-40%	0-20%
Haskell	1,900	28.3%	\$32,244	60-80%	0-20%



- Under Development:
 - Increasing Broadband Adoption Among Disadvantaged Households
 - Demonstrations of various technology
 - Low-cost options (Fact sheet)
 - Partner with local businesses / non-profits

The Role of Rural Libraries in Promoting Effective Broadband Implementation and Use to Boost Economic Growth and Community Development in the Southern and Central Appalachian Region

[Dr. Bharat Mehra](#)

Associate Professor

School of Information Sciences, University of Tennessee

BroadbandUSA Webinar: Strategies for Broadband Adoption and Digital Inclusion in Rural Communities

April 19, 2017

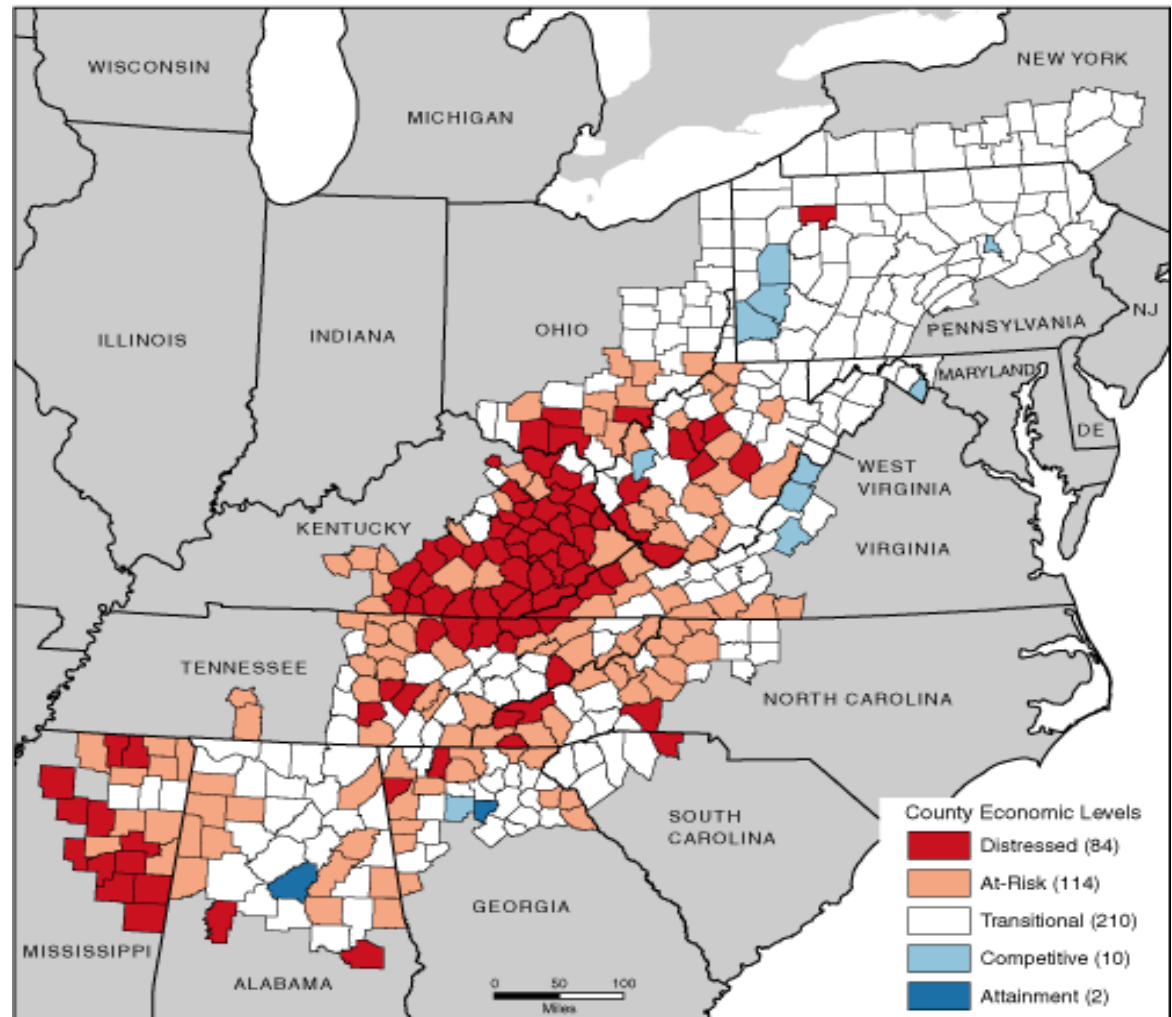


It's More than Broadband Connectivity: How Can People in Rural Communities Effectively USE Technologies to Make a Real Difference in their Everyday Lives?

- ❖ Policy makers and federal/state economic programs can boost digital inclusion efforts in rural libraries to bolster effective Broadband adoption, implementation, and use that leads to greater workforce and entrepreneur development, economic growth, and community impact in rural environments.

The Context

According to an [ARC \(2016\)](#) study entitled “County Economic Status and Distressed Area in Appalachia, FY 2017” of the 420 Appalachian counties, 84 counties are economically distressed, and another 114 considered economically at-risk.



Created by the Appalachian Regional Commission, March 2016
 Data Sources:
 Unemployment data: U.S. Bureau of Labor Statistics, LAUS, 2012–2014
 Income data: U.S. Bureau of Economic Analysis, REIS, 2014
 Poverty data: U.S. Census Bureau, American Community Survey, 2010–2014

Effective October 1, 2016
 through September 30, 2017

Tennessee's Rural Libraries

Map of Tennessee's Regions ([Tennessee State Library & Archives](#))



- ❖ TSLA consists of nine multicounty regions serving 211 small and medium-sized public libraries throughout Tennessee.
- ❖ TN rural libraries face challenges to provide small businesses with access to current/credible information, critically use information, provide benefits of technology in far-flung areas, and collaborate with community agencies to provide better systems and services for all small businesses ([Mehra, 2016](#)).
- ❖ Helping small businesses get started and flourish is an ongoing aspect of community resilience that combats the ever-present crises of poverty in many local economies ([Bishop and Veil 2013](#)).

Results from the 2014 Digital Inclusion Survey show ([Bertot et al. 2014](#)):

- ❖ 73.1% of libraries provide skills instruction that are essential to applying for jobs.
- ❖ 68.3% facilitate efforts to access and use employment databases.
- ❖ Only 31.9% of rural public libraries provide assistance in access and use of online business information resources compared to 67.0% of city locations.
- ❖ Only 22.8% of rural libraries conduct activities to support small business development.

Empowering Rural Librarians as Change Agents in the 21st Century: Developing Community-Based Technology Literacy & Management Outcomes in the Southern & Central Appalachian Region

Information Technology Rural Librarian Master's Scholarship Program: Part 1 and Part 2 (ITRL + ITRL2)

Institute of Museum and Library Services, *Laura Bush 21st Century
Librarian Program* [Funded]

URL: <http://www.sis.utk.edu/rural-librarianship>

URL: <http://www.sis.utk.edu/13-scholarships-available-itrl2>

Information Technology Rural Librarian Master's Scholarship Program: Part I and Part II (ITRL and ITRL2)

- ❖ The ITRL and ITRL2 goal was to train sixteen and eleven paraprofessionals respectively working in the Southern and Central Appalachian rural libraries to complete their master's degree part-time via distance in the UT SIS and improve their IT and management skills essential to serve the unique needs of the region's rural communities.
- ❖ **Information Technology Outcomes:** Technology infrastructure planning and analysis; Web design, development, and usability; Database design and implementation; Building digital library and web portals; Establishing hardware and software networking; Creating Library 2.0 tools.
- ❖ **Rural Library Management Outcomes:** Service evaluation and public relations portfolio for a rural library; Management of a rural library program for adults and children/young adults; Reader's advisory; Grant writing and development.



Rebecca Tedesco developed GeoWeb technologies and web mapping software to analyze geo-data in improving facilities at Cleveland State Community College in Cleveland, TN. She also provided computer service evaluation by creating a Crowdsourcing Web Mapping Application to include user-generated content.

ITRL2 IT Deliverables

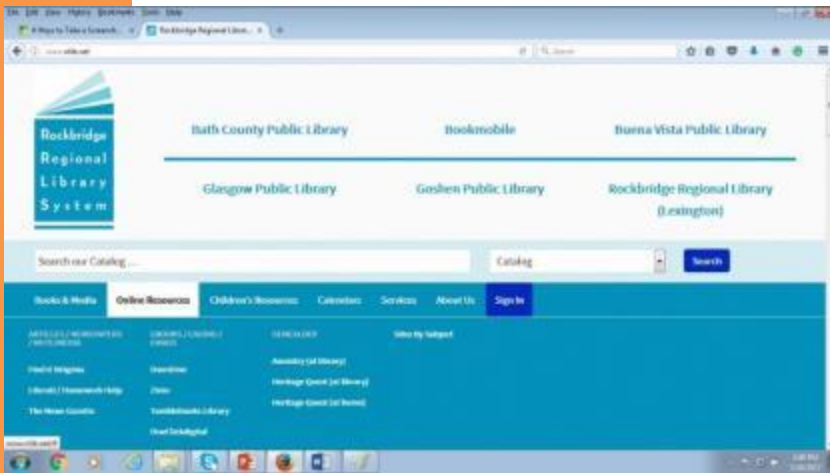
Anjanae Brueland conducted a SpiceWorks system-wide technology inventory for the Sevier County Public Library System in TN. She revamped their website, developed a lending for eReaders, iPads and notebooks, facilitated in the circulation of HD KindleFire devices, and posted "Making the Most Out of Your Librarian" on the agency blog to reinforce the program teachings and share it with her rural community.

Mehra@BroadbandUSA_Webinar—2017



BIG ORANGE
BIG IDEAS

Catherine Tyler improved community technology skills to provide more effective computer services via hardware and software troubleshooting and web design to help patrons resolve issues at Rockbridge Regional Library in Goshen, Virginia.



Ryan Congdon created a YouTube web-video introducing social media and its uses for rural environments such as Rockbridge Regional Library in Lexington, Virginia. He also developed a website that instructs on the use of E-Readers for the agency.



ITRL2 IT Deliverables

Mehra@BroadbandUSA_Webinar—2017



Insights and Recommendations

- ❖ With their information creation-organization-management-dissemination skills applied to ICT use the “embedded-librarian” plays an important role in technology adoption to further Broadband use in rural communities. Their efforts can be integrated in federal/state level efforts of policy formulation and decision-making to further effective operationalization and implementation of future initiatives.
- ❖ Rural librarians have not been tapped in asset mobilization to engage with small businesses, workforce entrepreneurs, and chambers of commerce representatives as well as participate in government policy resource sharing training programs to empower communities and further economic development in rural communities.

Marilyn Pontius, Branch Manager of the Hancock War Memorial Library in Washington County, Maryland, conducted an assessment and evaluation of the agency’s public computers and technology services.

[Student Support for Public Libraries, Office of Community Engagement & Outreach, University of Tennessee, October 1, 2015.](#)



The Role of Rural Public Libraries in Small Business Economic Development in the Appalachian Region

A Case Study of Tennessee (PLSB-TN)

Institute of Museum and Library Services, *National Leadership Grants
for Libraries (Research category)* [Funded]

URL: <http://scholar.cci.utk.edu/plsb-tn>

BIG ORANGE
UTB
BIG IDEAS

Community Action Research in the PLSB-TN

- ❖ *Practical Concern:* In response to the slow economic development in Tennessee, the PLSB-TN developed a potentially practical solution to address the problematic situation.
- ❖ *Tangible Product:* A gap analysis of feedback provided by the two stakeholder groups helped develop a blueprint toolkit design for feedback from key partners in the region to further a strategic action plan in its operationalization and implementation ([Mehra, Bishop, and Partee II, 2017](#)).
- ❖ *Local Partnerships and Collaborations:* PLSB-TN strengthened ties between small business agencies and rural libraries and the toolkit blueprint and preliminary strategic action plan got tested and operationalized in the rural state and the Appalachian region.

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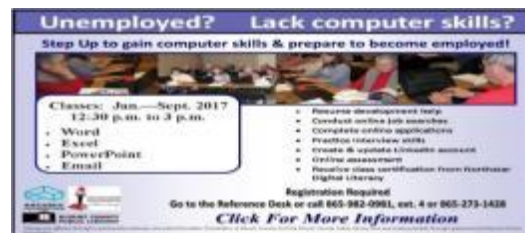
In Nov. 2016 the [Blount County Public Library](#) hosted 30 representatives (e.g., govt. officials, bankers, chamber of commerce/economic council members, etc.) who discussed implementation issues of a toolkit blueprint design that TN's rural public libraries can develop for small businesses in the future.

[The Small Business Community Information Exchange](#)

Efforts to replicate such “Think Tanks” involving local, regional, and national policy makers is essential to identify partnerships and develop/finance such resources towards effective utilization of Broadband that is meaningful to small businesses.


The [Blount County Public Library](#) and others in the Ocoee River Regional Library are supporting organizations of the [Blount County Partnership](#) that provides opportunities for small business, corporations, manufacturing, technology commercialization, leisure travel, and corporate retreats to its 3000 members.

Mehra@BroadbandUSA_Webinar—2017



BCPL provides a wide variety of programming for adults in workforce development training and partners with the local department of labor career coach and small businesses in the region.

Insights and Recommendations

- 
- ❖ Rural libraries can assist small businesses by providing digital resources (e.g., PLSB toolkit) in ways that meet small business needs (e.g., integrating online workshops and remote services).
 - ❖ Currently, rural libraries do not have adequate staff and finances to meet small business expectations, providing scattered services in an ad hoc manner.
 - ❖ Govt. agencies can provide financial assistance to rural libraries develop the PLSB toolkit that will provide a comprehensive framework for their services and effectively use Broadband to deliver a product that will be useful to small businesses.
 - ❖ Resource development: It makes common sense for govt. agencies to allocate investments and expand digital infrastructures in the extensively distributed rural libraries to better utilize Broadband in creating tools relevant to economic growth.
 - ❖ Staff development: With grants and funding support for IT training programs for rural librarians, govt. agencies can help them serve their communities effectively.
 - ❖ Provide subsidies: Creative solutions (e.g., reduced rates from service providers for HotSpot programs) are needed in this regard [approx. \$35/device x 50 HotSpots @ BCPL]. Such efforts will help rural libraries focus on specific user communities (e.g., entrepreneur small businesses) to strategically further effective Broadband implementation and use.

Coffeyville Public Library

Mobile Hotspot Lending Program Overview



Coffeyville, Kansas

General Information

- Located in Montgomery County in Southeast Kansas
- Population 10,295 (as of 2010 census)
- Claim to fame: Dalton bank robbery of 1892



Economic Background

- Montgomery County median household income: \$42,221
 - \$10K less than State median household income
- 24.81% of children in MG county live below 100% poverty level¹

1. Kansas Action for Children (October 25, 2016) KIDS COUNT 2016. Retrieved from <http://kac.org/data-and-research/kidscount/state-and-county-data/>.

Our Library

- Services
 - Book lending (large type, audio, e-book, etc.)
 - Copy and fax services
 - Educational programming for all ages
 - Computer, gardening, resume writing, summer reading, etc.
 - Senior outreach services
 - Part of 43 member library consortium
 - 19 public access computers
 - Free WiFi
- Library Usage (2016 stats)
 - 83,477 visitors
 - 15,275 public computer sessions
 - 378 programs offered with 6,078 attendees
 - 93,447 items circulated
 - 882 e-book downloads
 - 252 mobile hotspot circulations



Summer Reading Program--2016



Medical Benefits Eligibility Seminar--2015



Senior Outreach at local nursing home--2017

How our lending program got started

- New York Public Library had a grant from the Knight Foundation to partner with a rural state for hotspot lending.
- State Librarian of Kansas, Jo Budler, put out a call for interested libraries in the State of Kansas.
- 18 Kansas libraries participated in the pilot lending program and loaned 95 wireless devices during the year long grant.
- The cost was completely paid for by the grant and those 18 libraries received the devices and monthly service at no cost.
- All participating libraries met virtually every month to discuss logistics prior to the start of the program and to discuss problems with policy and procedures as the grant was implemented.
- The State Library of Kansas was crucial in the initial start-up of this program.
- Lending data was collected and compiled. The final report can be found at kslib.info/DocumentCenter/View/4842.



Borrow the Internet @ your library Informational Patron Card

- Check out period is 7 days
- A short patron survey is required upon return of device
- WiFi network/password is displayed on device screen
- Unlimited data usage (Device may not support streaming video)
- Range of signal is approximately 30 feet
- DO NOT PLACE IN BOOK DROP
- Please recharge the device before returning
- Return device on time so others may enjoy the service and you may check out the device again in the future. After 7 days overdue, the device will be turned off
- Overdue Fines- \$1/day
- Replacement Fee- \$50 for lost/stolen/broken devices

Public Response to the Program

- Survey responses were collected during the grant.
- Participants were asked how satisfied they were with the MiFi devices and how likely it would be for them to recommend checking out the MiFi device to a friend. Participants responded with 52.63% very satisfied and 63.93% very likely to recommend.
- Had on average over 40 people on the waiting list for seven devices.
- Biggest complaint about the devices: Slow loading or poor reception.



Grant completed...lending program continues

- At the conclusion of the grant we still had over 40 people on the waiting list.
- The Library Board decided to continue the program at our own expense.
- Verizon Wireless honored the same rates and set us up on our own contract.
 - \$41/month per device
 - Grants and outside donations help offset the cost
- Funded six devices in 2016 and increased to seven devices in 2017.
 - 39 people currently on the waiting list
- Now have a 'rentable' device. Allows patrons to skip the waiting list for a \$5/day fee.



Questions and Comments

- Please type your questions in the chat or Q&A box.
- Slides and Transcript will be posted on the BroadbandUSA website within 7 days after the webinar.

<http://www2.ntia.doc.gov/>

BroadbandUSA

Thank you for attending.

Tune in for the next Practical Conversations Webinars

May 17, 2017 at 2pm ET

Infrastructure Week: A Conversation on Next Generation Technology Deployment

Registration is required for this webinar: <http://www2.ntia.doc.gov/> under *Events*

May 18, 2017 at 2pm ET

Infrastructure Week: NLC, NACo, NTIA Webcast on Smart Communities

More information coming soon

Additional Resources

BroadbandUSA is available to help communities with their broadband access and digital inclusion efforts

BBUSA Resources:

- [Public-Private Partnerships Guide](#)
- [Community Broadband Roadmap Toolkit](#)
- [Introduction to Stakeholder Outreach](#)
- [Using Partnerships to Power Smart Cities](#)

For General Information:



202-482-2048



broadbandusa@ntia.doc.gov



<http://www.ntia.doc.gov/broadbandusa>

To Request Technical Assistance:



Submit Intake Form

Additional Resources

A complete presentation is available at
URL: <https://tiny.utk.edu/Mehra@BroadbandUSA>

Empowering Rural Librarians as Change Agents in the 21st Century: Development of Community-Based Technology Literacy and Management Outcomes in the Southern and Central Appalachia



PROJECT TEAM [alphabetical]: Kimberly Black, University of Tennessee, Knoxville (co-PI) ♦ Bharat Mehra, University of Tennessee, Knoxville (PI) ♦ Christopher Mitchell, University of Tennessee, Knoxville (research assistant) ♦ Nancy Renfro, Watauga Regional Library (partner) ♦ Don Reynolds, Nolichucky Regional Library (partner) ♦ Susan Simmons, Clinch-Powell Regional Library (partner) ♦ Vandana Singh, University of Tennessee, Knoxville (co-PI) ♦ K. C. Williams, Sevier County Public Library System (partner)

About the ITRL Program

The goal of the Information Technology Rural Librarian Master's Scholarship Program (ITRL) Program is to train sixteen paraprofessionals working in the Southern and Central Appalachian (SCA) rural libraries to complete their master's degree part-time in the School of Information Sciences at the University of Tennessee via distance and improve their information technology competencies and management skills essential to serve the unique needs of the region's rural communities. The program combines work experience, mentorship from experienced librarians working in the region along with graduate instruction and curriculum support. This program is funded by a grant from the Institute of Museum and Library Services and support from the University of Tennessee, Knoxville School of Information Sciences.

ITRL students are receiving:

- ♦ Part-time degree in a ALA-accredited program;
- ♦ A structured, individually-tailored IT and rural management curriculum;
- ♦ Rural library practices and needs incorporated into the curriculum;
- ♦ IT competencies in developing rural library work applications;
- ♦ Formal/informal professional mentoring by educators and practitioners;
- ♦ Full-tuition scholarship for two years;
- ♦ Allowance for materials and provision of a laptop computer.

Why ITRL is important:

- ♦ SCA rural librarians experience critical information needs and concerns owing to:
 - ♦ Information poverty and unemployment
 - ♦ Economic challenges
 - ♦ Low levels of information literacy and educational attainment
 - ♦ A lack of access and use of IT
 - ♦ Other unique environmental challenges.
- ♦ Their critical information needs have traditionally been inadequately represented in the LIS professions, and are only recently beginning to get some attention in LIS education.

Information Technology Outcomes:

- ♦ Technology infrastructure planning and analysis;
- ♦ Web design, development, and usability;
- ♦ Database design and implementation;
- ♦ Building digital library and web portals;
- ♦ Establishing hardware and software networking;
- ♦ Creating Library 2.0 tools.

Information Technology Deliverables:

- ♦ Improved technology skills to provide more effective computer services: Julie Forkner developed a mobile laptop lab with 12 laptops, including one for the visually impaired, at E.G. Fisher Public Library in Athens, TN.
- ♦ Provided evaluation and assessment of computer services: Angela Glowcheski reorganized computer classes to better serve community needs at Lumpkin County Public Library in Dahlonega, GA.
- ♦ Developed online communication and evaluation instruments to gather feedback from various constituencies: Lauren Long conducted first online user and staff surveys at Madison County Public Library in Marshall, NC.
- ♦ Participated in "hands-on learning" technology projects: Brittany Fletcher developed and implemented an iPads use plan in the K-12 school classroom project at Mountain City Elementary School in Mountain City, TN.
- ♦ Implemented a DE program in the school system: Becky Grindstaff gained insight and developed a DE program in Knox County Public Schools, Knoxville, TN.
- ♦ Promoted awareness and use of open source software: Susan Macrellis evaluated the suitability of OSS Evergreen as the integrated library system for East Ridge City Library in East Ridge, TN.

Rural Management Outcomes:

- ♦ Service evaluation in rural libraries;
- ♦ Management of a rural library program for adults and children/young adults;
- ♦ Reader's advisory;
- ♦ Grant writing and development.

Rural Management Deliverables:

- ♦ Conducted an internal and external profile analysis of library system: Marilyn Pontius conducted a community scan and a SWOT analysis for Washington County, MD, for the community's Hancock War Memorial Library.
- ♦ Developed a funding profile for a library system: Chris Smith developed a funding profile (including local, state, and federal government resources) and community partnership opportunities for C. Bascom Slemple Memorial Library in Big Stone Gap, VA.
- ♦ Developed a comprehensive public relations plan for a library system: Susan Williams developed a comprehensive PR plan (including press kit, marketing trademarks, etc.) and a community marketing strategy for Highlander Library in New Market, TN.
- ♦ Gained expertise in identifying the role of strategic relational management in developing externally-funded grant projects: Rich Haynes developed a Grant Partnership Agreement for an externally-funded grant project that will expand, market and promote local history resources at the Harlan County Public Library in Harlan, KY.
- ♦ Developed collection development knowledge to select quality children's literature for their libraries: Fran Owen developed a collection for a school under construction at Sevier County Public Schools in Sevierville, TN.

Project Design

The overall project design covered five phases. These phases include: recruitment of ITRL students from rural libraries in the SCA region; needs assessment of library services and information challenges faced by rural regional libraries; implementation of educational/ training activities; mentoring; and evaluation/assessment of program outcomes and dissemination of program results and experiences.

ITRL program information technology courses:

- Technology planning, assessment, and analysis
- Database and web design, development, and usability
- Building digital library, web portals, and Library 2.0 tools
- Establishing hardware and software configurations for networking systems

ITRL program rural librarianship courses:

- Service evaluation/assessment in rural libraries
- Planning/management of a rural library program for youth and adults
- Reader's advisory and other information services
- Grant writing and partnership development



"The ITRL program has benefitted my professional life in so many ways. I have gained enormous respect for the role of the information professional in an of the librarians on staff as a result of my work in the SIS and ITRL programs." academic library setting and have been mentored by several

- An ITRL student

<http://www.sis.utk.edu/rural-librarianship>

<http://www.sis.utk.edu/13-scholarships-available-itrl2>

BIG ORANGE UT BIG IDEAS

Community Partnerships to Further the Role of Rural Public Libraries in Small Business Economic Development: A Case Study of Tennessee (PLSB-TN)

Bharat Mehra, PhD, Wade Bishop, PhD, Robert P. Partee II
Associate Professor Assistant Professor Graduate Assistant
bmehra@utk.edu bbisho13@utk.edu rpartee@utk.edu

Introduction

This poster identifies the community partnerships getting developed in a planning grant entitled "The Role of Rural Public Libraries in Small Business Economic Development in the Appalachian Region: A Case Study of Tennessee" (PLSB-TN) recently awarded by the Institute of Museum and Library Services' National Leadership Grants for Libraries (Research Category) (October 2014 – September 2016) (URL: <http://scholar.cci.utk.edu/plsb-tn>).

PLSB-TN involves collecting quantitative and qualitative feedback based on the needs, expectations, and experiences of small businesses and rural public libraries in the state.

PLSB-TN research conducted so far includes preliminary planning activities, analyzing existing needs and feasibility, solidifying community partnerships, and developing initial work plans, blueprint, and strategic action plan prototype of a *Public Library Small Business Toolkit* that strengthens collaborations between various stakeholders involved.

PLSB-TN is serving as a pilot case experience and assessment tested to expand strategies for the entire Appalachian region and other rural environments in the future.

Statement of Need

The Appalachian region has traditionally faced challenging economic, social, and cultural conditions that have adversely affected the population living in these areas [1; 2; 3]. Rural residents in the Appalachian region additionally face limited financial opportunities, extreme information poverty and unemployment, low information literacy levels and educational attainment, a lack of access to information technology resources, and other unique debilitating environmental circumstances [4; 5]. Rural libraries have a strong potential role to play in economic development and sustainable economic viability of the Appalachian region [6; 7].

PLSB-TN Design

PLSB-TN includes the following phases:

Phase 1: Collecting quantitative and qualitative data about the roles of rural public libraries in Tennessee from the small business community and librarian staff stakeholder groups;

Phase 2: Developing a blueprint of a *Public Library Small Business Toolkit* and a strategic action plan for its operationalization and implementation based on feedback of key partners.

The intended project audience is small businesses, rural library staff and managers/directors, library and information science (LIS) educators and students, rural economic council and chambers of commerce members, and small business entrepreneurs.



PLSB-TN Plan

The PLSB-TN has potential benefits to the (1) rural small business community, (2) rural libraries, (3) educational programs.

The project goal is to research the role rural public libraries play in economic development and economic growth based on the needs, expectations, and experiences of small businesses and rural public libraries with a focus on Tennessee as a pilot case setting. The project objectives to achieve this goal are:

Objective 1: Based on the perspectives of Tennessee's small businesses, what are their information needs, expectations, and experiences and what past and current role have rural public libraries played in assisting these agencies towards economic development?

Objective 2: Collect feedback from Tennessee's rural public libraries regarding existing services and programs they provide to small businesses.

Objective 3: Based on the data collected from small businesses and rural public libraries propose a blueprint towards informing the design and development of a *Public Library Small Business Toolkit*.

Community Partnerships

The table below identifies the community partnerships in the PLSB-TN that have been significant to achieve the various project objectives. In addition, the PLSB-TN partners have played a major role in various grant activities and include representative of Tennessee's: 1) Blount County Public Library; 2) Clinch River Regional Library; 3) Holston River Regional Library; 4) Sevier County Public Library System.

Sr. No.	Project Activities	Partners
1.	Quantitative and qualitative data collection from representatives of Tennessee's small business community about their information needs, information challenges, use of information resources, and how rural public libraries can assist them in managing their small business.	Tennessee's small businesses; Members' from Tennessee's Chambers of Commerce representing its nine regions; Representatives of Tennessee's Small Business and Economic Development Councils and related agencies.
2.	Quantitative and qualitative data collection from representatives of Tennessee's rural public libraries regarding existing services and programs they provide to small businesses.	Tennessee's rural public librarians and staff; Members of the Tennessee State Library and Archives; Members of state, regional, and local library associations; State library data coordinators and others.
3.	Community feedback and analysis of the draft blueprint of the Public Library Small Business Toolkit to develop a strategic action plan for its operationalization and implementation.	The PLSB-TN Advisory Board consists of project partner representatives. It also includes: 1) Teri T. Braham, Executive Director, Economic and Workforce Development, Pellissippi State Community College; 2) Tom Davis, Clyde W. Roddy Public Library; 3) Tammi Ford, Blount Partnership; 4) Virginia Hardwick, StaffSolutions and Workforce Development MFG; 5) Meg Harrison, Clinton Public Library; 6) Kira Kirk, Sweetwater Public Library; 7) Lauren Long, Madison County Public Library; 8) Marissa Snead, Sevier County Public Library Systems.

Conclusion

Expected outcomes of the PLSB-TN include: (1) Providing generalizable data on how rural public library practice empowers communities, (2) Developing a blueprint and preliminary strategic action plan based on datasets systematically collected from the small business and rural library communities towards economic development and economic growth, (3) Laying the foundation for advancing study of the expanding role of public libraries on economic development.

The role of community partnerships has been significant in conducting the various PLSB activities and moving forward towards generating maximum impact and achieving project outcomes. The collaborative work will help inform policy formulation with a vital e-government role public libraries serve. The synthesis of research can also inform how public library and other stakeholders in rural environments may pool resources, plan jointly, and look across needs to achieve economies of scale, better services, and more resilient communities.

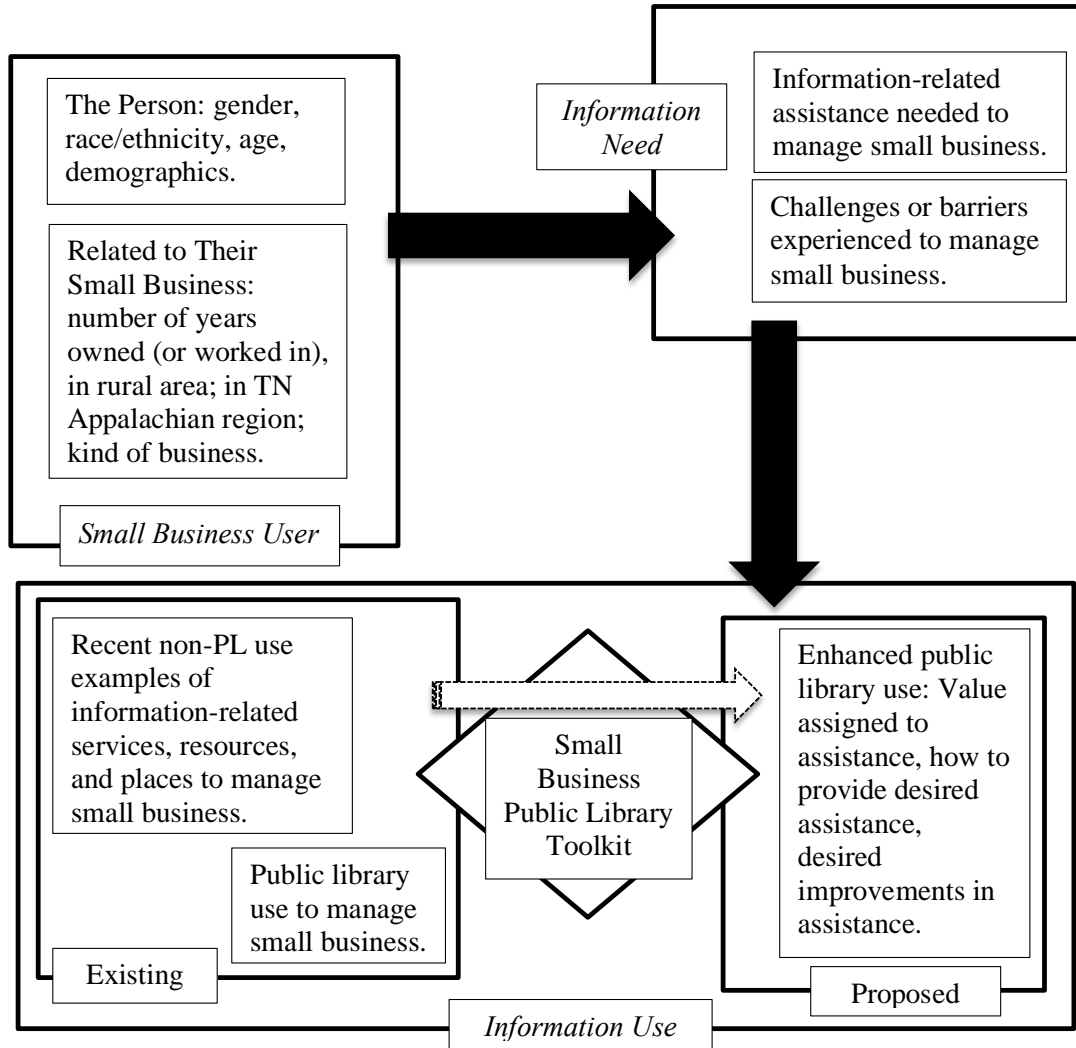
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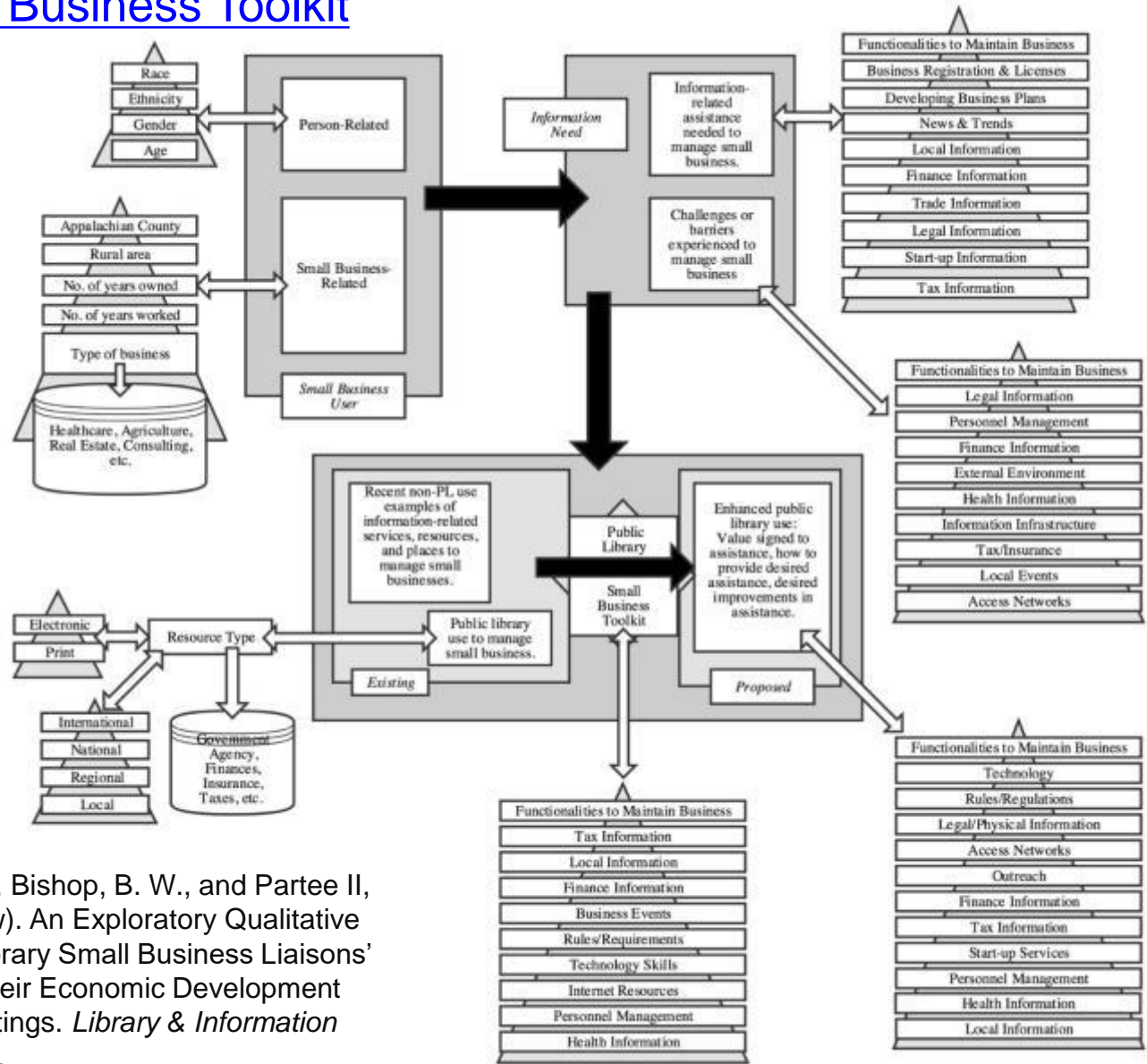


Source: [Mehra, B., Bishop, B. W., and Partee II, R. \(2017\). Small Business Perspectives About the Role of Rural Libraries in Economic Development. *The Library Quarterly: Information, Community, Policy*, 87\(1\), 87\(1\), 17-35.](#)

Figure 1: User/use-based model to represent small businesses.



Blueprint Design of a Public Library Small Business Toolkit



Source: Mehra, B., Bishop, B. W., and Partee II, R. P. (under review). An Exploratory Qualitative Study of Public Library Small Business Liaisons' Perspectives on their Economic Development Roles in Rural Settings. *Library & Information Science Research*.

BIG ORANGE UT BIG IDEAS

Select Action Research Projects

- ❖ Rural Library Professionals as Change Agents in the 21st Century: Integrating Information Technology Competencies in the Southern and Central Appalachian Region (Part II) (ITRL2) (\$478,258). Institute of Museum and Library Services (IMLS), *Laura Bush 21st Century Librarian Program*, October 2012 – September 2016 (PI: B. Mehra, Co-PI: V. Singh). [Funded].
URL: <http://www.sis.utk.edu/13-scholarships-available-itrl2>.
- ❖ Rural Library Professionals as Change Agents in the 21st Century: Integrating Information Technology Competencies in the Southern and Central Appalachian Region (ITRL) (\$567,660). IMLS, *Laura Bush 21st Century Librarian Program*, October 2009 – September 2013 (PI: Mehra; Co-PIs: Black, Singh). [Funded].
URL: <http://www.sis.utk.edu/rural-librarianship>.
- ❖ Mehra, B. (2012). Small Businesses' Information Seeking Practices and Use of Broadband in the Southern Appalachian Region: An Exploratory Survey of the Perspectives of Tennessee's Rural Librarians (panel presentation). Panel Title: Information Outsiders of the 21st Century: Access and Implications for Information Behavior Research. *ASIS&T 75th Annual Meeting: Information, Interaction, Innovation*. Baltimore, MD, 26-30 October, 2012.

Select Action Research Projects

- ❖ The Role of Rural Public Libraries in Small Business Economic Development in the Appalachian Region: A Case Study of Tennessee {PLSB-TN}. (\$49,557). IMLS, National Leadership Grants for Libraries – FY 2014 Guidelines (Research category), Oct. 2014 – Sept. 2016. [Funded]. [PI: Mehra, Co-PI: Bishop].

URL: <http://scholar.cci.utk.edu/plsb-tn>.

- ❖ [Small Business Community Information Exchange at the Blount County Public Library in East Tennessee](#) (\$1650), 2016-17 Community Engagement Incentive Grant, Office of Community Engagement and Outreach, Univ. of TN. [Funded]. [PI: Mehra].

- ❖ Assessment of Rural Library Professionals' Role in Community Engagement in the Southern and Central Appalachian Region: Mobilization from Change Agents to Community Anchors" (CA2CA@SCA-RL) (\$49,848). IMLS, Laura Bush 21st Century Librarian – FY 2017 Guidelines (Community Anchors Project Category). [Applied]. [PI: Mehra; Co-PI: Singh].