Starting a Rural Library Hotspot Lending Program

Brian Whitacre
Oklahoma State University
SRDC Webinar Dec 6, 2017
Agenda

• Background on the Digital Divide
• What We are Trying to Do
• Hotspot Lending Program Basics
  • Pilot OK Program
  • Implementation
• Biggest Challenges
  • Cost
  • Availability
Low-income households have only ~50% adoption (compared to 95% for high-income).

Income-based digital divide has actually increased over time.

Rural broadband adoption rates persistently lag those in urban areas.
What We Are Trying to Do

- Help households without a consistent high-speed connection to the Internet
  - Households without a high-speed connection to the Internet are increasingly at a disadvantage (Horrigan and Duggan, 2015)
- Increase use of broadband in rural OK
  - Studies have shown that it is broadband ADOPTION (not simply having availability) that matters for changes to rural economies.
Why Hotspot Lending Programs?

• Rural libraries are uniquely positioned to impact the digital environment of their communities

• Specific possibilities:
  • Shrinking the “homework gap”
  • Helping patrons search for employment / job opportunities
  • Keeping in touch with family / friends
  • Accessing health information
  • Offering connectivity at community-wide events
Hotspot Lending Program Basics

- Connects via a cellular (wireless) service provider (i.e. AT&T, Verizon, Sprint)
  - Area must have coverage for the device to work!
- Emits a Wi-Fi signal that users can connect their personal devices to (laptop, tablet, smart phone)
  - Can connect 8-10 devices at once
- Mobile – works wherever the service provider has coverage
- Speeds based on provider signal (4G LTE is best)
- Similar to data plan of cell phone
  - Unlimited plans available (but more expensive)
Library Hotspots

- Library hotspot lending started out as an urban idea but is quickly gaining traction in rural locations.
- In 2015, New York Public Library started a hotspot lending program for NY residents without broadband at home.
- Lent out 10,000 devices (for a full year!) with over $1M in support from Google and others.
- NYPL partnered with 24 rural libraries in KS and ME to see how the program might be different in more remote areas.
Oklahoma Pilot Program Overview

- Program began late May / June 2017
- 4 libraries, 4 hotspots each
  - 1 week checkouts (2 weeks in Elgin)
- Participating libraries:
  - Thomas-Wilhite Memorial (Perkins)
  - Rieger Memorial (Haskell)
  - Elgin Community Library
  - Seminole Public Library
## Community Statistics

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<td>$65,625</td>
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Broadband Adoption data from Dec. 2015 (FCC)

4 libraries, 4 devices each
Library Hotspot User Survey

1) On a scale from 1-10, with 1 being low and 10 being high, how would you rate the following?

<table>
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<th>Overall, how satisfied with the library hotspot program are you?</th>
<th>How likely are you to recommend the library hotspot service to a friend?</th>
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2) Demographic Information:

- What is your ethnicity?
  - African American
  - Caucasian/White
  - Hispanic/Latino
  - American Indian
  - Asian
  - Other

- What is the employment status of the head of your household?
  - Full-time
  - Part-time
  - Not employed

- What is your annual household income?
  - Under $25,000
  - $25,000 - $40,000
  - $40,000 - $60,000
  - $60,000 - $74,999
  - $75,000 - $124,999
  - $125,000 or more
  - Prefer not to answer

- What is the highest level of education of any adult in your household?
  - Did not graduate high school
  - High school, GED, or Equivalent
  - Some College / Associates Degree
  - College Degree
  - Post College Degree

- What year were you born?

- How many adults live in your household?

- How many children K-12 live with you?

3) Internet Use Information

- Which of the following devices did you connect to the hotspot? Select all that apply.
  - Desktop computer
  - Laptop
  - Smartphone
  - Tablet (e.g. iPad)
  - E-Reader (e.g. Kindle)

- For each of the price points below, how likely is it that you would purchase broadband Internet service for your household in the next six months?

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Additional Comments on Library Hotspot Program:

All information collected here is part of an OSU research project and is completely voluntary. If you have questions about this survey, please contact either Brian Whelan at (405) 744-9623 or the OSU/RE staff at (405) 744-9377.
OK Pilot Program – 6-month Summary

- Extremely well received!
  - 4 devices each; high demand even without significant amount of marketing
  - Texts / calls when devices are ready – being picked up within 20 minutes!
  - Immediately request being put on waiting list upon return
- Surveys reveal most are being used in conjunction with smartphones / tablets
- Most use by lower-income households, likely to purchase home broadband service for $10 / month (but not $30)

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Pilot program to provide internet access in Haskell

Apr 20, 2017

STILLWATER — Oklahoma State University’s Division of Agricultural Sciences and Natural Resources and public libraries in four Oklahoma towns are joining forces to provide broadband access to residents in some of the state’s more rural areas, a news release states.

OSU, public libraries team up to bridge ‘digital divide’ in rural Oklahoma

From staff reports • Published: April 25, 2017 5:00 AM CDT • Updated: April 25, 2017 5:00 AM CDT

A new partnership between Oklahoma State University and public libraries in four Oklahoma towns soon will provide broadband access in rural Oklahoma, the groups said Monday.

The effort is led by OSU’s Division of Agricultural Sciences and Natural Resources along with the Elgin Community Library, the Rieger Memorial Library in Haskell, the Thomas-Willhite Memorial Library in Perkins and the Seminole Public Library.
Q1a. On a scale from 1-10, with 10 being high, how would you rate your satisfaction with the library hotspot program?
Q2c. What is your annual household income?

- Under $25,000
- $25,000 - $49,999
- $50,000 - $74,999
- $75,000 - $124,999
- $125,000 or more
- Prefer not to answer
Q2f. How far do you drive to get to the library?

- More than 10 miles
- 5-10 miles
- 2-5 miles
- 1 mile or less
Q2h. How many children K-12 live with you?
Q3a. Which of the following devices did you connect to the hotspot (choose all that apply)?

- Desktop Computer
- Laptop
- Smartphone
- Tablet (e.g. iPad)
- E-Reader (e.g. Kindle)
- Other
Q3b. Please mark your TOP 3 uses of the device

- Entertainment
- Research
- Keeping informed of current events
- Connecting with family and friends
- Helping my child with schoolwork
- Learning job-related skills
- Other
Q3d. Please rate your Internet skills before and after using the device

- Stayed the same
- Declined
- Improved

Roughly 1/3 felt their Internet skills IMPROVED
Sample Comments from Users

- “It was great!”
- “Very educational for my kids”
- “Beautiful, and thank you, Job well done”
- “It’s a total blessing”
- “Great for research and helping my kids do their homework”
- “I greatly appreciate it as I am a full-time student without Internet at home”
- “Thank you, thank you, thank you. It’s great!”
- “It’s great just wish there were more so there wasn’t such a long wait to check out.”
- “Everything worked well, very good program thanks!”
14464 NE 79th Street  
Fletcher OK 73541  
June 25, 2017  

Dr. Brian Whitacre  
Oklahoma State University  
504 Ag Hall  
Stillwater, OK 74078  

Re: Broadband Access in Rural Areas  

Dear Dr. Whitacre,  

We recently checked out a hotspot from Elgin Library through the OSU sponsored grant program and it really opened our eyes as to what high speed unlimited internet in rural areas could be like. Even though we are 3½ miles from both Fletcher and Elgin, we do not have good internet. We have DISH internet which has monthly limited data. Service is not always fast and the only thing it is good for is answering email and on-line shopping. We cannot do streaming.  

Before DISH internet, we tried Wichita Online Broadband. This worked well for a while. We had unlimited data. Then the trees in the pasture behind us grew, blocking the signal from the Fletcher tower. (The pasture is not ours.) When we left Wichita Online, we were paying $65 a month. With DISH internet, we are paying $80.48 a month.  

Hilllary Communications recently put in fiber optics one-half mile to the south of us along Watts Road. When my husband went by their offices in Elgin, they said they weren’t coming down our road as it is not cost effective. Along Watts Road is a new neighborhood with about 100 houses. Along our road, there are only six houses. So just ¾ mile to the south of us is fiber optics with unlimited data but the company is not laying fiber optics our way.  

Over the past five years I have managed to build a surface design shop on line through Spoonflower. Spoonflower is a North Carolina based company that digitally prints fabric. I upload my designs from my home computer to its site and my designs are printed on various types of fabric. If I am so lucky to have a good connection with DISH internet, I have to watch out how much data I use per day; if I do have a connection, the speed can be as slow as a turtle crossing the road; sometimes it just times out. My husband is an industrial hygiene consultant and he watches webinars to maintain his annual certification. He has to get up early to watch them because that is when the bulk of our usable data comes — between the hours of 2 a.m. and 8 a.m. I would like to increase my knowledge of surface design by taking on line courses but, again, our major quantity of data comes between 2 a.m. and 8 a.m. During daylight hours we get 10 GB of data per month. If we use that 10 GB up before the next billing cycle, we can buy a GB for $10, increasing our monthly bill.  

My husband is 67 and I turn 65 this year. We are on a fixed income. Being able to go on line and check Social Security or Medicare rather than driving to Lawton, twenty miles to the south, is important to us. We need fast reliable internet access. Once we saw how well the hotspot checked out from the Elgin Library worked, we realized we needed something better so we have been researching options. We do not qualify for Lifeline programs. We checked into PCs for People, but our income is $6,000 above the maximum for a 2 person household.  

Rural areas need fast internet too. Unlimited data is wonderful. People can work on line and go to school on line. In 2017 fast reliable internet is as necessary as electricity was in the 1930s. It should be part of our state’s overall infrastructure.  

We enjoy our life in the country. We have lived here for over thirty years. This is where we raised our children. We now raise chickens and have a nice garden. We don’t want to move to a city just so we can have high speed internet.  

We think this OSU program is wonderful and we hope that somehow it can continue. Thank you for your time.  

Sincerely,  

Carl W. Astley  
Deborah Astley  

Cc: Elgin Community Library  
Elgin OK 73536
Best Practices in Setting Up a Program

- Our “How-to-Hotspot” guide was developed specifically for small, rural libraries
- English and Spanish Versions available online
  - Hotspot Basics
  - Monthly Bill
  - Implementation
  - Outreach
  - Challenges
The Biggest Challenge: COST

• Need to work with local / national providers
  • Verizon / US Cellular:
    • $40 / device / month = $480 / year
    • This is problematic for most rural libraries
• A great option: PCs for People / Mobile Beacon!
  • $200 / year / device for unlimited data
  • Only $120 after 1\textsuperscript{st} year!
  • Limited to Sprint Network

https://www.mobilebeacon.org/hotspot/
- User Guide / Getting Started Guide
Another Big Challenge: AVAILABILITY

• Sprint Coverage in Oklahoma:
Other Challenges

- **Throttling**
  - If you don’t have an unlimited plan, users may be “throttled” (speeds greatly reduced)
  - Maine program had 2 GB limit
  - KS program initially had 5 GB limit, moved to unlimited

- **Loss / Theft / Damage**
  - User agreement / checkout policies vital
  - Determining if / when to call police

- **Waitlist**
  - Reached several months in some cases
  - Some explored implementing a sharable calendar to allow specific checkout dates

- **Marketing**
  - Not really a problem for most communities
  - Social media, newspaper, radio, word of mouth, events
Packaging
HOTSPOT CIRCULATION POLICY

The Elgin Community Library (ECL) is providing WiFi Hotspots as a means to provide patrons in our community with high speed internet access. With this program, students can use the internet for help with homework, employees can travel with reliable internet access to meetings, and patrons can have home access to surf the internet. Range of signal is approximately 30 feet.

A Hotspot can connect up to ten devices. ECL is not responsible for any liability, damages or expense resulting from use or misuse of the device, connection of the device to other electronic devices, or data loss resulting from use of device. Wireless security is not implied. The user acknowledges and accepts all risks associated with the use of the wireless data device. There is no warranty, express or otherwise.

Checking Out:

1. Only current Elgin Community Library (ECL) cardholders in good standing may borrow a Hotspot device. The borrower must be at least 18 years old.
2. The checkout limit is one Hotspot device per household at any given time.
3. ECL reserves the right to refuse service to anyone who abuses equipment, returns a Hotspot device late more than twice, or who returns a Hotspot device in the book drop.
4. Library staff will verify that the Hotspot device is in good working order at the time of checkout.
5. The patron will need to complete a “Hotspot Device Agreement” prior to each checkout, acknowledging financial responsibility for lost or damaged equipment.
6. Hotspot devices check out for two weeks and are NOT renewable.
7. After 7 days overdue, the Hotspot device will be turned off and patron account will be blocked until device is returned.
8. Once a Hotspot device is checked out, it becomes the responsibility of the patron until returned to library staff.
User Agreement Example (cont’d)

Checking In:

Hotspot devices must be returned directly to a staff member at the circulation desk, and not placed in inside or outside bookdrop.

1. Library staff will check in the Hotspot device
2. Verify the Hotspot device is in operating condition
3. Do a visual check to ensure that the following items are returned in good condition:
   * Hotspot device
   * power adapter (2 pieces)
   * quick start guide
   * container
4. Request User Survey Completion
5. Recharge Hotspot device if necessary

Fees and Liabilities:

1. $5.00 fee for returning a Hotspot device in the book drop
2. Late fines are accessed at the rate of $2 per day. There is no grace period for Hotspot devices.
3. Patron is responsible for the full replacement cost of $50 if the Hotspot device or any parts are lost, stolen, damaged, or otherwise not returned.
4. If any technical problems are encountered, the Hotspot device should be returned to ECL as soon as possible.

Approved by Library Board 4-3-2017 and City Council 4-11-2017
Rural library hotspot lending programs gaining momentum
• Very high demand
• Rated extremely high by users!

Significant potential to impact the “digital divide”

Cost / availability are biggest challenges
• 4 devices for a library ~$500 – 800 / year (through PCs for People)

Let libraries set their own policies regarding:
• Checkout length
• User agreements
• Checkout forms / surveys
• Actions for late / non-return

Extension can help get these programs started!
The FCC provides Census Tract-level household broadband adoption rates:
https://www.fcc.gov/internet-access-services-reports