A Targeted Program to Increase Digital Inclusion Across All Ages in Elkins, Arkansas

Project Title: A Targeted Program to Increase Digital Inclusion Across All Ages in Elkins, Arkansas

Entity Name: Elkins Public Library
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1 Project Justification

1.1 Identification and Significance of the Problem or Opportunity, and Approach

Digital inclusion as a concept evolved from concepts such as the digital divide and digital literacy. IMLS defines that there are three main aspects of digital inclusion ("What Is Digital Inclusion? | Digital Inclusion Survey" 2013):

Access: availability and affordability

Adoption: digital literacy

Application: workforce development, education, health care and civic engagement

A rural library such as the Elkins Public Library presents both a challenge for digital inclusion as well as an opportunity. A small library in a fast-growing rural town has limited resources. However, much digital

Figure 1: Elkins Public Library, constructed 2016

technology required to facilitate engagement in the digital future (computers, software) has relatively small upfront cost and, unlike traditional printed media, can quickly provide access to a large number of patrons and be quickly "updated" as new media and software becomes available.

The Elkins Public Library (Figure 1) sits as in important resource in the municipality of Elkins AR. With a population of ~2500 at the last census, Elkins is a rural community that has been growing rapidly since the late 1990's (Figure 2). In this time, Elkins has begun transitioning from a primarily rural, agricultural-based economy and workforce to being a satellite community of Fayetteville, AR, itself at the epicenter of a more than decade-long growth phase centered around large logistics (JB Hunt Trucking) and supply chain (Walmart, Tyson) based businesses ("Our Region By the Numbers" 2018).
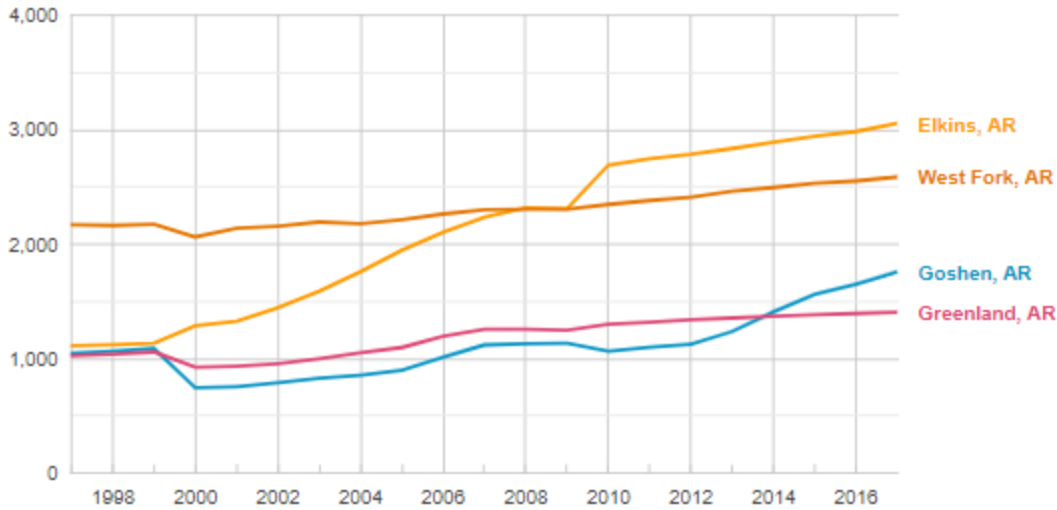
**Figure 2: Elkins City growth relative to similar cities in Washington County, AR
(“Population in the U.S. - Google Public Data Explorer” 2019).**

The community of Elkins is facing digital inclusion challenges related to digital inclusion that span three distinct demographic age groups (Table 1).

Table 1: Challenges and Opportunities for Elkins Demographic Age Groups

Group	Digital Inclusion Challenges
Children/Young Adults (K-12)	Access to learning materials to prepare for employment or secondary education in a digital economy
Working Adults (21 to 65)	Access to skills and retraining to adapt to 21st century jobs, creating competitive small businesses and sole proprietorships in digital age
Retired/Seniors (65+)	Access to enrichment activities, preservation of community heritage for learning in next generation

An opportunity exists to address gaps in digital inclusion across these three age groups, by enhancing existing K-12 programs and creating two new areas that will increase access to underserved adult and senior groups.

The proposed project focuses on addressing the inclusion challenges of these three groups through three interlinked program thrusts:

1) Coding, robotics and electronics education
2) Digital life/business skills for workforce development
3) Digital history/historical archiving

2 Project Work Plan

The three thrusts cover the three main demographics, with emphasis in specific areas. For example, the coding, robotics and electronics education activities, while primary focused on K-12 students, leads to workforce development (thrust 2), where our current and future businesses

struggle with owners and employees having the necessary digital communication/marketing abilities and access. Thrust 3, digital history, focuses on events and activities that lead to creation of a digital archive that, in full circle, become a resource for local K-12 students in activities such school-based history assignments and reports.

Within each thrust, a number of activities are proposed. Each set of activities is made possible not only by library staff, but with the cooperation of local non-profits, as well as strategic use of consultants where needed.

2.1 Thrust 1: Coding, Robotics and Electronics Education

The definition of digital inclusion for children has probably changed more rapidly than for any age group. Anyone who has observed even a very young child using a digital device has likely been impressed with how quickly they learn what, for those of us much older when the technology was introduced, we still struggle with. However, as our technology progresses, what is expected in terms of technology skills of this and forthcoming generations is much higher than we ever experience as children. The workforce these children will be entering will be extremely automated and require STEM knowledge that thus far has been considered specialized.

Arkansas as a state has recognized this gap and challenge, and addressed it head on with the Governor Asa Hutchinson Computer Science Initiative ("State Board of Education | Arkansas Department of Education" 2019). This program requires all Arkansas High Schools to offer computer science classes and provides support to schools to put the needed qualified teachers in place. Through this program, Arkansas had over 8000 high school students enrolled in coding as of the end of 2018 ("Gov. Asa Hutchinson's State of the State Address Transcript" 2019).

While this initiative is remarkable, gaps remain. In particular, students in elementary/middle school are not as well addressed at this time. And, while coding is a core skill, applying coding to application, e.g. creation of robotics/electronics for manufacturing of the future is not readily addressed.

To meet these needs, the students of Elkins High School formed their own Robotics and Electronics Club in the fall of 2017. Through a partnership with the Ozark Section of the Institute of Electrical and Electronics Engineers (IEEE) ("IEEE Ozark Section | Representing IEEE in NWA" 2019), the club has created projects ranging from smart lighting for a fashion show to a web-based control system for a camping ground. Further, the group has put together an outreach program that provided opportunities for younger students (K-8) to learn basics to coding and electronics/robotics through activities such as "squishy circuits" and electronic art.

An opportunity exists to formalize both the existing high school program, as well as create a series of K-8 classes at the library to teach the basics of electronics and coding and encourage these students to pursue courses in HS and secondary education that make them competitive in this digital century.

Provided funding would be used to enhance the existing HS program with the availability of additional laptops for coding/design activities. Working in partnership with IEEE (see letter of support), library staff would help organize two outreach events per year for K-8 students and receive training from IEEE members (all practicing engineers/scientists) to ensure the activities can be pursued beyond this project.

Activities:

- Weekly Robotics Clubs Meetings (Activity 1)
- Twice yearly K-8 Hands On library events, including staff cross-training (Activity 2)

Workplan and Resources:

- Events coordinated by Program Director, in cooperation with IEEE
- Library staff to create and collect surveys including attendance and student interest to measure progress
- Digital resources (laptops, monitor) used for weekly and bi-annual K-8 activities

Goals:

- Create ~10 new high school events per year through robotics club, double teen programs per year (2 to 4) with targeted hands on activities and increase attendance in weekly teen events by at least 50% (10 to 15+)
- Manage risk by partnering with experienced local volunteer group IEEE

2.2 Thrust 2: Digital Marketing and Access for Small Business

In a growing, traditionally agricultural community such as ours, local businesses and potential entrepreneurs can find themselves at a disadvantage due to a digital divide. In the 21st century, running and marketing a business requires navigating not just basic "word processing" challenges of decades past but learning and mastering new skills such as digital marketing and communication. This issue is magnified by an environment of small businesses and sole proprietorships that offer excellent services but have few resources in terms of access to professional development resources.

The library serves as an ideal location and resource to fill these digital inclusion gaps. The library will develop and deploy a series of targeted activities both for individuals with existing business and for those interested in starting new ones. The library will partner with Startup Junkie of Fayetteville, AR to create these activities. Since 2008, Startup Junkie Consulting, and since 2015, Startup Junkie Foundation has served the entrepreneurial ecosystems in Northwest Arkansas through one-on-one consulting, events, workshops, and programs.

Library staff will undertake interviews and surveys of local business owners to determine specific needs within the community. Library staff and Startup Junkie personnel will use survey results to create two digital marketing/communication fairs over the course of the program. These fairs/events will team local businesses with digital marketing providers and serve to educate and network regional digital marketing resource providers with Elkins businesses. Periodic information gathering through follow-up surveys and interviews will lead to development of a longer range calendar of events to continue assisting our area business owners in identifying digital needs.

Activities:

- Needs gathering in community by library staff (Activity 3)
- Yearly Digital Marketing/Communication Fair to be held at library (Activity 4)

Workplan and Resources:

- Fairs coordinated by Program Director, in cooperation with Startup Junkie
- Library staff to create and collect surveys including attendance and business follow-up

Goals:

- Increase adult programs by at least 50% (4 to 5 or more)
- Manage risk by partnering with experienced consultant Startup Junkie

2.3   Thrust 3: Historical Archiving

Elkins has a large and active senior population much of which, by virtue of the small-town size, is located within walking distance of the library. Many seniors currently utilize the library as an important digital resource – broadband internet access is not universal in our rural community. An opportunity exists to engage this community further with targeted activities. Much of our senior population is unique in they are life-long residents of the community.   Elkins is located in the Boston Mountains, which in turn is deep in the Ozark Mountains.   Elkins is a combination of two former unincorporated communities; Harris and Hood. The current City of Elkins was established in 1964 ("Elkins, Arkansas" 2018). We have many citizens who experienced life in the area before founding of the city. While some photographic history has been preserved, much is still in analog form and in private possession. Further, the stories behind each picture and artifact are in many cases only available in oral form.

In this thrust, the staff of the library staff will first undertake training at a local regional resource, the Pryor Center, to facilitate a series of activities. "The Pryor Center was created in 1999 at the urging of former US Senator David H. Pryor and Barbara Pryor of Arkansas, who have long had an interest in Arkansas history. The Center's mission is to document the cultural heritage of Arkansans by collecting audio and video resources to share with scholars, students, and the public." ("The David and Barbara Pryor Center for Arkansas Oral and Visual History" 2019)

Twice yearly events will be facilitated at the Elkins Library. A scanner will be purchased as part of the proposed grant used to capture historical photos and documents. Oral and written history will be transcribed to go with each artifact. It is envisioned that the archive will be accessible as a "timeline", that will facilitate future young scholars research for school reports and assignments.

Activities:

- Staff training at regional resource Pryor Center (Activity 5)
- Twice yearly historical archiving events held at library (Activity 6)

Workplan and Resources:

- Archiving events coordinated by Program Director
- Laptops and screens purchased with this funding used to facilitate events
- Library staff to create and collect surveys including attendance and archive size

Goals:

- Increase adult programs by another 50% (6 to 8 or more)

- Manage risk by including training at regional resource Pryor Center

3   Project Outcomes

3.1   Results and Outputs

The Elkins Library has grew in patron attendance by 8% from 2017 to 2018 (47,013), with a total of 68 events scheduled across all age groups in 2018. By targeting digital inclusion in these programs, the library will be able to offer an additional 27 programs per year, a nearly 40% increase. New and innovative events such as the digital marketing fair and historical archiving programs will target traditionally underrepresented demographics (teen, adult and senior) will serve as a model to improve access to these groups for the future.

3.2   Reporting and Data Collection

Data reporting and collection will be facilitated via surveys of performance and attendance at teach event. Library staff under the direction of the Program Director will collect feedback from participants at each event and report during quarterly telecons to IMLS partners. Best practices will be collected and reported to the Library Board on a quarterly basis and provided to grant administrators as desired.

3.3   Sustainment

Sustainment of the programs is ensured through several parallel paths. First, the project as proposed builds and strengthens alliances through existing funded entities such as IEEE (private, non-profit), Startup Junkie (public/private and federally funded) and the Pryor Center (state funded).

Second, success of the programs make the case for increased funding from the Elkins City government. The 20% of annual $132k library budget is currently provided by the city, with a 2% increase proposed for 2019. The success of this program and increased attendance at library events makes a strong case for increased budgeting in the future and cement the library as a critical resource for the community.

Third, the success and lessons learned provide a path for the library to obtain further public/private funding by demonstrating the impacts these programs have made on local students, businesses and seniors.

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Year 1

Task	Activity:	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1	HS Robotics Club (weekly)	■	■	■	■	■	■	■	■	■	■	■	■
2	K-6 Robotics Outreach		■					■					
3	Digital Marketing - Survey/Prep			■									
4	Digital Marketing - Fair						■						
5	Digital Historical Archiving - Training/Survey	■	■									■	■
6	Digital Historical Archiving - Events				■				■				
	Quarter	Q1			Q2			Q3			Q4		
	Month	1	2	3	4	5	6	7	8	9	10	11	12

Year 2

Task	Activity:	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1	HS Robotics Club (weekly)	██	██	██	██	██	██	██	██	██	██	██	██
2	K-6 Robotics Outreach	██						██					
3	Digital Marketing - Survey/Prep											██	██
4	Digital Marketing - Fair						██						
5	Digital Historical Archiving - Training											██	██
6	Digital Historical Archiving - Events				██				██				
	Quarter		Q1			Q2			Q3			Q4	
	Month	1	2	3	4	5	6	7	8	9	10	11	12