

Abstract

Many rural communities suffer from high unemployment and a growing gap in educational performance and business competitiveness due to the absence of technology and digital literacy skills training. Lack of broadband access also limits access to health, civic, and legal information, job application and telework opportunities, and social interaction. As community anchor institutions, rural libraries whose librarians have expertise in digital literacy and a deep understanding of unique communities can be an important part of efforts to improve quality of life for residents. However, traditional library education does not include the development of students as future leaders of community growth. Defined as the use of information and communication technology (ICT) to facilitate desired changes in communities, Community Informatics (CI) recognizes ICT as a “fundamental tool in the new digital economy” (Gurstein, 2003) and uses participatory action design to work toward change.

Texas Woman's University (TWU), a designated Hispanic-serving institution, is the nation's largest university primarily for women, and houses the School of Library and Information Studies (SLIS) known for its quality Master of Library Science (MLS) program conducted entirely online. In recent years, SLIS has expanded its traditional MLS to include a Community Informatics (CI) focus, with faculty explicitly hired with this expertise.

Transforming Libraries into Community Anchors in Rural Texas (TLCART), as proposed, addresses the major objectives of the IMLS Laura Bush 21st Librarian Program, Community Anchors Project Grant. The project team, with Dr. Ling Hwey Jeng as Project Director and Drs. Carol Perryman and William Senn as co-PIs, will combine expertise in community informatics with experiential learning to educate future leaders in rural libraries. In partnership with the Texas Library Association, the TLCART project will span 3 years, June 2018 - May 2021, and build on the existing MLS degree program and CI track to create a comprehensive and sustainable MLS/CI curriculum designed to educate a cohort of 20 librarians from small, rural communities in Texas. The MLS/CI program is an intentional extension of traditional library roles by getting librarians out into their communities, working with community leaders and other residents to facilitate needed and wanted change.

Courses in the TLCART program of study include community engagement, needs assessment, data and technology in communities, project design, grant writing and management of community focused projects, culminating in a supervised capstone experience in a rural community. Recruitment for the TLCART cohort will focus on small rural communities in Texas, particularly those selected for participation in the e-Rate Initiative located in border regions. Direct and indirect assessment will be based on course performance and participation in virtual and in-person training, networking with peers, mentors, and community stakeholders throughout the program. Dissemination of products, including curricular planning and student work, will be accomplished through conferences and publications shared through the open access repository at TWU.

Through the TLCART project, we will put concepts to work in the real world and strengthen the visibility and feasibility of the MLS/CI curriculum as a natural approach to community engagement in small rural communities in Texas and elsewhere. The inclusion of community informatics in LIS education will elevate the entire LIS profession by preparing librarians whose work strengthens communities. In addition, we will use the TLCART project as a launchpad for the professional development of librarians, whose practice settings and involvement can extend far beyond bricks and mortar.

For the project, we request \$260,000 funding for student supports, \$145,372 for non-student supports from IMLS, with \$179,917 in cost share.

Statement of Broad Need

Lack of access to increasingly digital services and resources contributes to growing disparities for small and rural communities across the United States, impacting residents' quality of life. Residents in rural communities fare significantly worse than those in urban areas in terms of per capita income, education, health, employment, and tend to be older (RHI Hub, 2017; U.S. Census Bureau, 2010 Census). This particularly impacts minority populations, as "the geographic isolation and relative segregation of rural minorities living in majority-minority census tracts continues to be an important component of poverty and substandard housing in many rural and small town communities" (Housing Assistance Council, pp.2). Jobs lost in the recession are not being recovered at anywhere near the same rate as those in urban areas (US Dept. of Agriculture Economic Research Service). Jobs that once formed the core identity of small communities are often no longer available. As Theide, et al., have said, "How do you communicate your communal identity when the work once at the center of that identity is gone?" (2017).

Rural communities are not homogeneous; they are diverse and have unique local characteristics and issues (Bolin, Bellamy, Ferdinand, et al., 2015). This means any initiative for improvement must use an approach appropriate to the locality to capitalize human and other resources among local stakeholders to facilitate positive and sustainable community changes.

In Texas as elsewhere, projected trends in urbanization also posit that the decline of rural populations "could leave large areas of Texas with more limited access to employment, medical care, educational opportunities, and other goods and services" (Texas Demographic Center, 2017). Texas ranks second in size and population among all states with 38.4% Hispanic and 11.9% Black. According to the 2010 Census, more than 95% of the land in Texas is rural and home to more than 15% of the state population, with just under 25% of all Hispanic individuals in the entire nation living in rural and small-town Texas (Housing Assistance Council, 2012). The 172 rural counties in Texas are experiencing severe workforce shortages for teachers, social workers, and healthcare workers (Ayala, 2017, Hawkins, 2015, Horton, 2016).

Libraries in Texas' small rural communities serve as primary connection points, but only 6% of Texas libraries have the minimum broadband speed recommended by the FCC (Siwinski, 2017), and most rural Texas libraries do not have an MLS librarian. Librarians in rural communities throughout America face multiple challenges, including lack of sustained funding, limited digital access in public libraries, limited digital literacy, outdated equipment, inadequate staffing, and lack of professional training and education to assist with civic engagement and community development (Real, Bertot & Jaeger, 2014).

Librarians educated through this project, Transforming Libraries into Community Anchors in Rural Texas (TLCART) will establish their libraries as anchor institutions within their communities by identifying assets and needs, and partnering with community organizations to enhance broadband access, build coalitions, and support the health, education, and wellbeing of residents in their own communities. Their contributions in rural libraries as community anchors will help support positive change.

Community informatics uses information and communication technology (ICT) to facilitate desired changes in communities. Gurstein defines the discipline as "a technology strategy or discipline which links economic and social development efforts at the community level with electronic commerce, community and civic networks and telecentres, electronic democracy and on-line participation, self-help and virtual health communities, advocacy, cultural enhancement, and others" (2000, p.1). The very purpose of this project, and central to its modeling for other LIS programs, is to develop a new generation of librarians highly competent in using data and technologies to empower their own communities. In the spirit of community informatics, learning goes not just *one way* from librarians as experts to residents, but *all ways*, with interdependency, shared ownership and disparate expertise, and shared learning for sustainable solutions unique to the communities.

Modeled after earlier community projects in Appalachia (Mehra, Black, Singh, et al., 2011), TLCART, is designed to support a cohort of students empowered to engage more effectively within their communities, within and beyond the walls of libraries, to broaden the reach of existing information services and create sustainable, community-defined solutions to issues of shared concern. Our aims are best described by the COMMUNITY ANCHORS category, particularly 1) the development of skills, and competencies by providing experiential education to a cohort of students; 2) the integration of theory and practice, supported by coursework and hands-on activities; and 3) design, development, and testing of participatory community-based programming specifically intended to facilitate engagement with underserved populations in rural Texas and other rural communities.

The conceptual model for TWU SLIS program development in community informatics (CI) is informed by the work of scholars such as Mehra (multiple publications, e.g.: 2007, 2010, 2011, 2014, 2017) and Real, Bertot, and Jaegar (2017). We plan to build on this excellent body of work by applying it in a different region, thus tailoring efforts to this large state. Mehra's work has been based in the Appalachian region, which has a very different rural population makeup. Nearly 25% of the Hispanic population in the entire United States lives in Texas rural communities, while 7.7% are African American (Housing Assistance Council, 2012). Growth in the Texas border regions, in particular, has shown a 41.8% increase of Hispanic populations between 2000-2010 (Texas Health & Human Services, 2011). Comparing the overall rural populations, the entire 13-state region of Appalachia matches Texas' rural population (25.2 million in Appalachia versus 25.1 million in rural Texas) (Pollard & Jacobsen, 2011). Another difference is our recruitment criteria: rather than recruiting paraprofessionals only, TLCART will recruit from rural libraries and communities targeted by Texas State Library and Archive Commission (TSLAC) for broadband funding, and will not require paraprofessional library status of the cohort.

The design of TLCART encompasses several key concepts in particular. Lankes calls for new librarianship with increased community engagement, with librarians serving in facilitator roles to bring about desired change by moving out from behind desks, bricks, and mortar to collaborate with community stakeholders (2011). Lankes' new mission for librarians has been highlighted as the 2017-2018 presidential theme of the Texas Library Association (Jeng, 2017). The Assets-Based Community Development (ABCD) model (e.g., Kretzmann & McKnight, 1993, McKnight, 2013, 2017), already in use in TWU SLIS educational preparation, provides guidelines for "lifting up" communities from within by identifying desired change, and facilitating alliances among stakeholders with skills, expertise, and passion to enact those changes. Masten (2016) encourages universities to build longer-term relationships with the communities they purport to serve through opportunities such as "internships with community-based organizations, jobs for community members to work on university projects, scholarship opportunities and ongoing education support for members of targeted communities, and an expansion of 'service' to specifically include community engagement" (pp. 9).

TWU's MLS is offered as a distance education program to students across America. Recognizing the need to expand the role of librarians in their communities, SLIS has developed a community informatics focus and hired faculty explicitly for this purpose. TLCART will provide a platform for testing and refining this expansion of the traditional program to incorporate a more experiential and community centered focus.

Project Design – Goals and Objectives

The TLCART project intends to educate a cohort of 20 librarians from small, rural communities in Texas in Library and Information Studies, and to extend the role of librarians with educational and experiential focus on community informatics. By doing so, we will create and test a sustainable curriculum that extends the traditional role of librarians, and that can be modeled beyond TWU SLIS.

To achieve these aims, we have established the following program elements:

1. *Cohort education:* Using the cohort model, 20 students will earn an MLS degree with an emphasis on community informatics between Spring 2019 and Fall 2020. Coursework will consist of required classes for the MLS, and a 6-course track in community informatics.
2. *Mentorship, Networking, and Support:* In keeping with the online SLIS program, participants will learn and interact online throughout the program of study, with in-person opportunities at conferences for community building, learning, and sharing experiences.
3. *Community informatics curriculum development:* The co-PIs have begun to identify specific competencies in community informatics and integrate them in both the MLS and the Community Informatics track courses to facilitate student learning in effective sequence and gradual complexity.

During the TLCART project, we intend to:

1. Create a pathway for a cohort of 20 graduate students living or working in rural environments to earn an MLS while learning concepts and skills in community informatics that include the effective use of data, ICT, and information resources to support the role of community anchors. *Measures: Student learning outcome assessment as part of the existing compliance reporting for SACS and ALA accreditations.*
2. Establish a virtual community to support durable and lasting interactions between members of the cohort and anchor institutions that will serve as a resource for the cohort and their communities. *Measures: Completion of networking and communication resource (web-based) and usability.*
3. Build and sustain a strong support network of librarians in rural libraries to maximize participants' ongoing learning and effective productivity. *Measures: Ongoing evidence of communication, including activities reported and work products shared.*
4. Assess the effectiveness of all aspects of the TLCART project (overall program, learning outcomes, online community of practice, and community impacts). *Measures: Multiple, including direct and indirect learning outcome assessment at both course and program levels.*
5. Provide a virtual online presence for dissemination and open sharing of lessons learned from the project and its participants. *Measures: Establishment of open access site usable for dissemination.*
6. Ensure sustainability and raise awareness of new LIS CI approaches to community engagement in both academic and professional circles. *Measures: Documented evidence of both conference and web dissemination.*
7. Develop a plan to further online education options, outreach, extended training and professional development, and penetration to the wider library community. *Measures: Plan documentation of continuing education and professional development.*

Project Design – Student Learning Objectives

Twenty students will be recruited and admitted to the TWU MLS degree program in Spring 2019, who will proceed with the program of study as a project cohort. Of the 12 required courses, six are new. The existing program will be modified to frame student education within the context of community engagement, including experiential learning. For example, the existing course, Information and Communication Technology (ICT), incorporates concepts relevant to the management of information and communication technology related to library and information work, such as databases, networking, and web technologies. It emphasizes social and ethical aspects of ICT as applied to libraries and information agencies. With the addition of CI as a framework ICT will prepare students to apply their skills in a community setting. The six new courses are entirely dedicated to community informatics. For example, Grant Writing and Management enables students to gain the skills necessary to compete for community based funding, and Community-Based Project Design focuses on the study of design and social innovation and the role of libraries and nonprofits as community anchor institutions in society. The capstone will be a culmination of student learning outcomes for the informatics program through an organization and/or community-based interdisciplinary/interprofessional project supported through informatics and technology.

Upon completing their MLS degree, they will achieve the same MLS program objectives as all other MLS students:

1. Apply professional competencies in acquiring, organizing, delivering, and preserving information and knowledge;
2. Demonstrate evidence-based practice in professional decision-making;
3. Plan for community-embedded services to meet the needs of diverse constituencies;
4. Apply technologies to meet information needs in a variety of contexts;
5. Disseminate professional knowledge through venues such as teaching, research, publication, and service activities;
6. Plan for continuous, career-long professional development.

The following student learning objectives are specifically designed for students in the community informatics track and will be integrated in course work for the TLCART cohort:

1. Critically analyze the history, literature, settings, and purposes of community informatics;
2. Effectively use data, ICT and information resources to support the role of community anchor institutions;
3. Reflectively consider ethics, values, laws, diversity, and fundamental principles of participatory community engagement;
4. Successfully apply knowledge and skills in design and implementation of a community based project.

Project Design – Program of Study

The program of study for TLCART cohort is built around the existing MLS degree program with the Community Informatics track (MLS/CI), designed to emphasize experiential education. The MLS degree requests twelve courses (36 credits) of which half will focus on topics in community informatics. MLS/CI students will also be required to participate in a program capstone, which offers students an opportunity to apply what they have learned in community settings. The courses are:

LS 5083: Foundations of LIS (MLS required)

LS 5043: Information & Communication Technology (MLS required and MLS/CI)

LS 5053: Information Retrieval (MLS required)

LS 5903: Special Topics: Community-Based Project Design (MLS/CI)

LS 5023: Information Organization (MLS required)

LS 5903: Special Topics: Communities in Knowledge Economy (MLS/CI)

LS 5903: Special Topics: Grant Writing & Management (MLS/CI)

LS 5003: Collection Development (MLS required)

LS 5263: Information Sources & Services (MLS required)

LS 5383: Library Management (MLS required)

LS 5903: Special Topics: Trends & Issues in Community Informatics or Assessment in Practice (MLS/CI)

LS 5923: Capstone in Informatics (MLS/CI; to meet MLS practicum requirement)

The design framework for the online community informatics courses, as described by Masten (in press), involves crafting each course around a set of values and creating authentic assignments based on steps in a broader process (e.g., technology planning, grant writing, etc.). By incorporating technologies, community engagement, and data analytics throughout the online classroom experience, the aim is to make the learning experience community-centered, asset-based, innovative, and collaborative. One example of the integration of community informatics skills and knowledge throughout the TLCART curriculum is data analytics. Information & Communication Technology, a core course, introduces the concepts of informatics in use to more effectively plan for change. In the Information Retrieval course, students learn about retrieval and use of public datasets, while in Community-Based Project Design, needs analysis based on data will inform proposed activities. By the time the TLCART cohort are working on their Capstone project, they will be well grounded in data sources and

use, ready to build on existing information to plan for change in their own communities. From the initial Foundation course through the Capstone, ALA principles of social justice are equally integrated throughout both the MLS and the MLS/CI track.

For students without library experience, the practicum required for the MLS degree will be included in the LS 5923 Capstone course, and will include hours spent in a local library with an MLS site supervisor. This will allow the integration of practicum with the capstone project to focus on community, outreach and engagement, and related experiences, ensuring students' ability to gain hands-on skills, knowledge, and professional connections.

The TLCART project aims to provide competencies specific to community informatics, including community needs analysis, project planning and technology implementation, community leadership and coalition building, and community-based project design. They are integrated in various courses throughout the program of study to ensure progressive learning outcomes in community informatics competencies. The program of study is completed with the submission of a Final Exam Portfolio.

Project Design – Other Required Program Activities

In addition to the formal coursework in the program, TLCART students will participate in the following additional activities as required program elements:

Required Program Orientation Although the program is entirely online, students of the TLCART cohort will be required to attend an in-person orientation in their first semester at the 2019 TLA annual conference, where they will be introduced to technology and other academic support systems necessary for student success. The effectiveness of the cohort will be significantly enhanced with the opportunity to meet each other in person at the beginning of the program. This will strengthen the personal bonds that will develop among peers and also facilitate online socialization of the group throughout their study.

Cohort Showcase Members of the cohort will be expected to design, organize and facilitate a program at the 2020 and 2021 TLA annual conferences to showcase the work products of their classroom learning to librarians in Texas and beyond.

Project Design – Student Support

Learning Management System All of the instruction in the degree program is offered online utilizing the Blackboard courseware platform. TWU SLIS faculty have extensive experience teaching in an online format. Course content is provided primarily in an asynchronous structure, but online synchronous participation is also enabled. Course content typically includes textual presentations, PowerPoint and video presentations, and extensive reading in both textbooks and professional journal literature. Central to most courses is active student participation in online discussion forums in the learning management system. The TWU Office of Teaching and Learning with Technology provides substantial support via Instructional Design staff. The TWU Office of Technology staff provides strong infrastructure and software support. The TWU Libraries provides outstanding support of online instruction with substantial digital resources and collections and with a staff designated specifically to aid off-campus students. In addition, a number of initiatives are available for support, including the TWU Quality Enhancement Program, Experiential Learning, Pioneer Center for Student Excellence, and the Center for Faculty Excellence.

Advising Members of the cohort will have the same support system available to all MLS students. This includes initial advising by the staff academic advisor who will provide initial SLIS orientation, registration, and development of their degree plan for a successful program of study. Each student is also assigned a faculty advisor among the co-PI's to provide academic consultation throughout the program.

Campus Student Support Other campus sources of support available to cohort students include the Blagg-Huey Library, Pioneer Center for Student Excellence, The Write Site, Disability Services for Students, and the Career Connections Center.

Formal Mentoring Process By the end of the first semester, each TLCART cohort student will be matched with a mentor among SLIS alumni and practicing librarians in Texas. Recruitment of cohort mentors will be facilitated by Ms. Kelly Meyer, SLIS Practicum Coordinator and Liaison of Alumni Relations, in collaboration with staff of the project partner, the Texas Library Association (TLA). It will utilize the school's existing AlumniConnect program, a successful informal mentoring system already available to all SLIS students, and several TLA units, including the Public Libraries Division, the Small Community Libraries Round Table, and Retired Librarians Round Table. The mentors will provide additional guidance and support for the TLCART students and establish a lasting relationship that will extend to professional practice following degree completion.

Virtual Communication and Collaboration A special online forum will be set up in the learning management system for students of the TLCART cohort, mentors, and project staff. The forum will include access to specialized resources as well as discussion forums providing the opportunity for TLCART students to exchange ideas, socialize, and build community. Additionally, other virtual venues will be explored to facilitate intra-group communication. The online forum will enable project personnel to survey participants about their experience throughout their education, community-based activities, and dissemination activities.

TLA Conferences Students in the *TLCART* cohort will participate in the annual conferences of the Texas Library Association in April of 2019 (Austin) and 2020 (Houston). In addition to dedicated time for project activities and program showcase, the cohort will be expected to attend conference program sessions focused on community engagement. A required cohort time slot is designed to allow students to confer with the co-PIs, other TWU SLIS faculty with whom they are engaged, their mentors, and each other.

Project Design – Personnel and Management

During the first seven months of the project in 2018, co-PIs and key personnel will be engaged in publicity, recruitment, and admission review. They will also finalize curriculum updates for courses in the MLS/CI area. Students in the TLCART cohort are expected to begin taking courses in Spring 2019 and complete the degree at the end of Fall 2020. The project staff will begin post-graduation placement tracking and evaluation during the last five months of the project.

Dr. Ling Hwey Jeng, the SLIS Director and Principal Investigator, serves as the overall project manager to oversee the project budget and all activities throughout the duration. She also teaches and supervises the project reporting. She serves as the key contact for publicity, recruitment, and liaison with the project partner.

Drs. Carol Perryman and William Senn are the Co-PIs with expertise in community informatics, who will collaborate on program design, teach courses, advise cohort students, supervise practicum capstone, and interact with stakeholders and students. They also contribute to project reporting, recruitment, and publicity.

Dr. Kathryn Masten, the fourth faculty member in the community informatics area will teach MLS/CI courses, advise cohort students, supervise practicum capstone, as well as contribute to recruitment, publicity, and curriculum development in the MLS/CI area.

Ms. Sarah Merrill, the SLIS Assessment Officer, will advise, design, and implement aspects of project evaluation, including cohort student learning outcome assessment, and ongoing data collection of direct and indirect measures of project evaluation. She will also assist with project reporting.

The above five persons, as well as the key staff coordinator of the project partner organization, together serve as the project key personnel. In addition, the project will be assisted by the following personnel:

Ms. Blanca Hull is the SLIS Academic Advisor, who will be actively engaged in recruitment and publicity events. She will also be the contact point for students through initial admission and registration, and development of the degree plan.

Ms. Kelly Meyer is the SLIS Practicum Coordinator and Liaison for Alumni Relations, who will facilitate recruitment of cohort mentors in her role as the liaison for SLIS alumni and practicing librarians. She will be the logistics coordinator for the practicum capstone site survey and selection.

Project Design – Advisory Board and Partnership

Advisory Board A four-to-six member TLCART Advisory Board will meet once each year at the TLA annual conference to (a) advise on curriculum development, (b) strategize cohort recruitment and selection, and (c) provide evaluation and feedback throughout the project. Potential members include Bharat Mehra, University of Tennessee; Gary Henderson, President and CEO of the United Way of Denton County; Mark Smith, Director of Texas State Library and Archive Commission; John Windhausen, Executive Director of the Schools, Health, and Libraries Broadband; Dana Braccia, Executive Director of Texas Library Association; and Angela Siefer, Executive Director of National Digital Inclusion Alliance.

Partnership As the 2017-2018 President of the Texas Library Association, the project director, Dr. Jeng, has led her conference program planning committee to design the 2018 TLA Annual Conference around the central theme of community engagement. The 2018 annual conference will feature high profile speakers, including T. Scott Gross on Positively Outrageous Service, Paul Schmidt on collective impact, and R. David Lankes on the community-based mission of the new librarianship. A Task Force on Community Engagement was established in October 2016 with charges to initiate benchmark surveys on community engagement activities among TLA librarians and to develop training activities to address librarian competencies in community engagement. Her conference and initiatives help to position TLA as a strong partner for the TLCART project. In addition to the potential role of TLA Executive Director Dana Braccia on the TLCART Advisory Board, TLA will (a) act as a conduit for TWU to connect with TLA units for collaborations, especially the staff and officers of Public Library Division, and Small Community Libraries Roundtable, (b) facilitate publicity and recruitment events with TLA districts, especially Districts 4, 6, and 10, (c) assist in identifying mentors via TLA membership, and (d) assist in conference programming design and logistics throughout the project duration. Mr. Ted Wanner, the Continuing Education Coordinator, will serve as the key TLA staff coordinator for the TLCART project.

Project Design – Assumptions and Risk Management

We believe that supporting communities is a needed and desired goal for librarians, and that doing so in an ethical and intentional manner will be valued by the communities engaged. We assume that people in small rural communities will welcome the involvement of our cohort members in expanding the role of libraries in their towns. Given adequate funding, we believe that TLCART will engage willing participants as students, mentors, and invested community stakeholders to facilitate community success.

We also assume that the cohort model, proven effective in previous projects, will continue to be an effective educational strategy for peer support among students and will enrich interactions between faculty and students, and between students and their local communities.

Upon admission into the TLCART cohort, each member will be asked to sign a study contract requiring their continuous enrollment at the rate of two courses per semester, and to emphasize the necessity for continuous constructive communications and peer support. We recognize the risk that, however careful and thorough

efforts on recruitment and retention, a few students may perform below expectations, drop out or “stop out” for various reasons. With the help of the staff Academic Advisor, the co-PIs will use available academic resources, including *Smarter Measure* and the early alert system, among other tools to identify potential obstacles to student success and to initiate proactive prevention and intervention.

We anticipate that many rural communities with a long history of funding scarcity and a stagnant economy may be hesitant to host students for activities or for the capstone, and we recognize that it is the burden of the TLCART project personnel to be actively engaged with the communities touched by the project. In addition, since many rural libraries do not employ an MLS-prepared librarian, the Capstone will provide some flexibility to enlist the local supervisory or mentoring support of community nonprofit leadership.

Diversity Plan

Students in SLIS already represent diversity in ethnicity, race, age, and geographic location. Due to our distance education program, individuals who would not otherwise be able to pursue a master's degree are able to do so, including those living in remote areas of Texas, in states without library schools, and even internationally. In Fall 2016, 21% of TWU SLIS students were Hispanic, and 9.5% African Americans. The focus on community informatics in the TLCART project takes recruitment beyond race and ethnic diversity, with special attention to inclusion of rural communities to further geographical, social, and economical diversity. To do so, a separate application instrument will be used to review admission applicants in terms of their membership in an underrepresented population group, residency in a small or rural area (population under 25,000), aptitude and interest in community informatics, technological proficiency, and demonstrated services to an underrepresented population or a rural area.

Mehra and others discuss the need for cultural sensitivity, recognizing that frequently, Latinx patrons encounter non-Latinx librarians, and that this disparity is unlikely to be completely redressed (2017). The TLCART project will incorporate necessary training activities in coursework and other workshops to ensure the quality of cohort cultural competencies.

Special Recruitment Consideration

The Texas Legislature appropriated \$1 million in its 2018 state budget to support broadband Internet in rural libraries. With these funds, a consultant hired by the Texas State Library and Archives Commission (TSLAC) will help up to 100 rural public libraries apply for E-rate funds to bring low-cost high-speed internet connections to their communities.

We intend to enlist the help of TSLAC to identify potential students from these rural public libraries and communities, and to use the libraries as potential capstone sites. Other recruitment efforts will target communities in the border regions, encompassed by TLA Districts 4, 6, and 10, or West Central Texas, South Texas and the Rio Grande Valley – most with substantial Hispanic populations.

Members of the cohort will be expected to continue/pursue employment in a rural library or other community anchor institution upon graduation and remain there for at least two years.

Project Evaluation

Student Learning Outcomes The primary evaluation focus of the project is the regular student learning outcome assessment through the degree program. SLIS utilizes both direct and indirect measures in student learning outcome assessment at the course level and program level. Assessment is done as part of Institutional Improvement reporting for the MLS program by both the SLIS Assessment Officer and the staff of the TWU Office of Academic Assessment. Data are regularly and systematically gathered from constituents and other sources, analyzed, and used by the faculty to assess and revise the programs and the curriculum goals and to

support the school's activities. At the start of students' program of study, a self-administered survey for new students, *Smarter Measure*, will be administered to evaluate students' readiness to participate in online learning. The ultimate assessment of each student's performance will, of course, be successful completion of the degree program.

Evidence gathered during the project will include both student project documentation, and community impact based on feedback from appropriate personnel including TWU faculty, host library site supervisors for the Capstone, and relevant stakeholders. Following the funded period, reports of grant applications, publications, and presentations, and data gathered from TWU SLIS alumni surveys that includes graduate placement, career advancement, and professional engagement will inform long-term improvement for the MLS/CI program at TWU SLIS.

Feedback Assessment will also be conducted throughout the program using surveys and assignments specifically designed for the purpose. TLCART cohort members will be required to participate in ongoing reporting and response to periodic surveys pushed through a TLCART web-based site designed for the purpose, which also will support communication between participants and from program staff. By building in the additional required elements in the TLCART program, including face-to-face orientation, mentoring, online networking, and required responses to surveys designed specifically for the TLCART cohort, we believe we can maximize the completion rate of TLCART students.

Broad Impact

The TLCART project extends the model provided by Mehra in the 13-state Appalachian region to demonstrate strengths and contribute to the research in this topical area, as well as training students whose projects will be shared beyond the university. Successful outcomes for the TLCART project, including lessons learned and products of student and faculty efforts, will inform future education and community involvement by TWU SLIS and other library programs.

In designing and implementing an education and training program in community informatics, we will put concepts to work in the real world, in order to connect theories to practice and strengthen the visibility and feasibility of the model as a natural component of community engagement in small rural communities in Texas and elsewhere. We believe the infusion of community informatics as an integral part of the LIS education will elevate the entire LIS profession and help place librarians whose work aligns with common core values of local communities. In addition, we will use the TLCART project as a launchpad for the professional development of librarians whose practice settings and involvement can extend far beyond bricks and mortar.

Dissemination: Sharing the Process and Products

TWU SLIS will use open access resources, including the TWU open access repository, the Repository@TWU, and globally accessible web pages to share project information and work products. Through these platforms, we will not only share IMLS required reports with all interested parties but also provide an open forum for cohort students to share their regular reflections, community-based work products, project and event reports, community descriptions, recordings of presentations, posters and papers. In so doing, we hope to stimulate further proposals from other LIS programs on community informatics. These resources, along with encouragement and mentorship from faculty, will serve to support formal student-authored publications in LIS and community focused journals.

Curriculum of the MLS/CI program, along with "lessons learned" will be shared through conferences, publications, and through open access resources named above, making such content broadly accessible and increasing the likelihood that these products can be adopted and adapted by other programs to work toward expansion of library education. Conference presentations at library associations (e.g., TLA, ALA, ALISE, and

the Association for Rural & Small Libraries) will serve to widely disseminate information to key stakeholders about the project progress and outcomes. We plan to initiate special program sessions at the 2020 TLA annual conference to showcase student learning accomplishments, and also at the 2021 TLA annual conference, to present the project evaluation and develop options for sustainable impacts on rural communities in Texas.

Dissemination will also be achieved with assistance of TWU Marketing for press releases and graphics. Postings to library listservs will share information about webinars and other showcase opportunities in a broader LIS community.

Sustainability and Generalizability

Cohort students are expected to connect their capstone projects with their local communities to demonstrate, for all stakeholders, possible options for community success. Through their service commitment, we fully expect TLCART cohort members to be in the position to make their libraries community anchors to facilitate positive changes for their communities.

With continuous course assessment and adjustment, TLCART co-PIs will formalize the specific curriculum designed for the cohort into a proposal for a Graduate Certificate in Community Informatics at the post-master's level. This graduate certificate will be available not only to all MLS students to obtain as part of their MLS degree but also to practicing librarians as a cohesive approach to professional development.

Librarians in rural communities throughout America face significant professional development challenges. There is no one single solution for all rural communities in Texas and across the country. In choosing the community informatics model for the TLCART project, we will not only demonstrate how librarians specialized in community informatics can transform their own libraries into community anchors when they are provided with the tools for effective technological diffusion, data analytics, and community coalition building using existing local human and other assets, but also how community informatics can be the key to re-anchor LIS curriculum into truly experiential-based and community-centered as envisioned by Lankes. When librarians are intimately engaged in connecting the best resources and partners locally, they are in the position to facilitate the sustainable self-growth in their own communities. Through sharing the process, strategies, and examples of work products, the TLCART project will empower other rural and small communities in America to do the same.

