Tutor-Facilitated Digital Literacy Acquisition in Hard-to-Serve Populations: A Research Project

Three years of support from the National Leadership Grant (NLG) Program, Institute of Museum and Library Services (IMLS), will allow Portland State University (PSU) and its partners in five states across the country to conduct a crucial basic research study. This study will examine the Learner Web online learning technology as a tool that libraries and other community-based organizations can use to help diverse under-served adult populations bridge the digital divide, utilize broadband Internet services, and acquire the knowledge, skills, and attitudes needed for personal, social, and economic success in the wired world of the 21st century. The Learner Web platform has been developed by Portland State University and piloted in several regions nationally with the support of a three-year IMLS Demonstration project awarded in 2007.

The Learner Web partnership is expanding as a result of a $3.3 million, 30-month grant awarded to PSU in October 2010 by the U.S. Department of Commerce National Telecommunications and Information Administration (NTIA) Broadband Technology Opportunities Program (BTOP). Libraries, adult literacy and adult basic education programs, social service agencies, workforce development centers, and other community-based organizations in California, Louisiana, Minnesota, New York, and Texas are partners in the NTIA BTOP project, which will provide tutor-facilitated training in English and Spanish using Learner Web for over 23,000 vulnerable adults. The proposed IMLS NLG grant will capitalize on the rich and extensive data on adult learners and tutors collected through the Learner Web system and the BTOP partnership. This BTOP-generated dataset will be used to develop and implement a research project designed to improve the capacity of libraries and other appropriate community groups to tailor digital literacy services more effectively to the varied individual needs of adults facing barriers associated with poverty, low levels of educational attainment, limited English language proficiency, and other factors and circumstances.

1. Assessment of Need

Target Audiences: Portland State University's Learner Web (LW) technology platform and expanding national partnerships address the primary barriers to broadband access and use among the third of the U.S. adult population on the "wrong side" of the digital divide, including low-income adults who lack a high school education and basic literacy skills, older adults, and growing and increasingly diverse immigrant and English Speakers of Other Languages (ESOL) populations. Recent national studies and reports confirm the essential role of the nation's more than 16,000 public libraries and other community-based public computer centers in reaching vulnerable, hard-to-reach, and traditionally under-served populations. These technology resources are particularly important during an economic downturn to help people address their educational, employment, health, and other needs, and access appropriate services and opportunities.

Connecting America: The National Broadband Plan published by the Federal Communications Commission (FCC) in March 2010, notes that while digital literacy is an evolving concept that has different implications at different stages of a person's life, it is a critical skill in the 21st century skill, as essential as the ability to read and write. While household use of broadband Internet service has risen dramatically over the past decade, becoming an integral part of life for many Americans, significant gaps in adoption persist, particularly related to income and education levels (*Exploring the Digital Nation: Home Broadband Internet Adoption in the United States*, NTIA, 2010). For example, controlling for various non-income household attributes, there is a gap of 34 percentage points between households with incomes greater than $100,000 and those with incomes of less than $25,000. The controlled gap for those with at least a college degree versus those lacking a high school diploma is 29 percentage points. *Broadband Adoption and Use in America*, the 2009 report on the National Broadband Plan Consumer Survey conducted by the FCC in 1990, found that among the third of U.S. adults who do not use broadband technology, 22% cited digital literacy as their main barrier. More than half of non-adopters surveyed listed cost, lack of digital literacy skills, and lack of relevant content (or lack of awareness of relevant content) as their reasons for not using broadband. The FCC report organizes the respondents into four categories of attitudes and characteristics: near converts, digital hopefuls, digitally uncomfortable, and digitally distant. This research project is designed to provide information that will help libraries and other community service

providers assist the most digitally distant and uncomfortable groups. Demographics summarized by the Pew Internet and American Life Project (Jansen, 2010; Horrigan, 2010; Zickuhr, 2010) show that the populations who are not accessing broadband Internet resources are proportionately older, especially age 65 or older (with only 38% having access); have low levels of education attainment (only 39% of those with less than a high school education have broadband access); and are economically disadvantaged (60% of households earning $30,000 or less annually have access). *Digital Nation: 21st Century Progress toward Universal Broadband Internet Access* (NTIA, 2010) also describes the main dividing lines for broadband adoption along socioeconomic dimensions such as income and education, with persons with low incomes, who are less educated/literate, and unemployed lagging behind in broadband access/use, along with ethnic/language minorities, and seniors, particularly in rural areas.

The National Broadband Plan includes several recommendations for expanding the involvement of libraries and other community-based organizations in digital literacy programs. The value of library technology is underscored in *Opportunity for All: How the American Public Benefits from Internet Access at U.S. Libraries* (May 2010), the first-ever large-scale national study of library computer use, conducted by the University of Washington and funded by the IMLS and the Bill & Melinda Gates Foundation. The survey confirms that Americans recognize that public libraries are critically important resources to meet educational, career, health, and other needs, and to connect with government and other civic resources: Seventy-four percent (74%) of survey respondents said that the library is an important asset for personal computer and Internet use, and 84% said that the library is an important community asset. Nearly one-third of Americans aged 14 or older in 2009 used a public library computer or wireless network to access the Internet. Low-income adults are more likely to rely on the library as their sole access to computers and the Internet.

PSU's Learner Web Partnership supported by the recent BTOP grant comprises six coalitions working statewide (Minnesota and New York), regionally (Central and South Texas), and in cities (New Orleans, Louisiana and Richmond, California). Each of the partner organizations (adult education and literacy organizations, social service agencies, community and four-year colleges, public libraries) coordinating these six broad coalitions will recruit underserved and high-need adults to complete Learner Web self-paced digital literacy Learning Plans tailored to individual needs. PSU's BTOP-supported Learner Web Partnership is serving areas of the country with varying and significant populations of adults likely to have low levels of broadband access and use, as indicated in the table below.

Table 1: Percentage of Internet Use and Rank within 50 U.S. States and D.C. (PSU BTOP States)

	Statewide		Urban		Rural		Principal City	
	%	rank	%	rank	%	rank	%	rank
CA	67.1	35	67.9	36	61.6	37	67.6	32
LA	60.5	48	62.5	50	55.3	49	62.9	43
MN	76.1	5	78.0	5	71.2	18	74.0	13
NY	66.1	38	65.0	44	73.7	13	56.9	50
TX	60.4	49	59.9	51	62.9	35	57.6	49

Source: Current Population Survey (CPS) Internet Use 2009 (http://www.ntia.doc.gov/data/CPS2009_Tables.html)

Data from the U.S. Census American Community Survey data from 2008, the 2003 National Assessment of Adult Literacy (U.S. Department of Education, National Center on Education Statistics), and other sources of information on the states, counties, and communities served by the LW Partnership show significant numbers of adults from varied ethnic/cultural backgrounds who lack basic literacy skills, a high school diploma, and/or who are living in poverty, unemployed, or have poor English language skills. For example, 65% of residents ages 16 and older in Starr County and 50% in Hidalgo County in South Texas lack basic literacy skills. Richmond, California has a significant population of adults who do not speak English well; as do several of the Texas counties involved in the BTOP partnership. While Minnesota ranks near the top overall among U.S. states in

terms of Internet use, there is a significant rural-urban gap, as well as significant populations of English language learners who face numerous barriers. In New York, the two most populous counties, King (with 1.9 million adults ages 18 and older) and Queens (1.8 million ages 18 and older) also have the highest percentages of adults (aged 16 and older) who lack basic literacy skills: 46% in Queens County and 37% in King County, as well as large populations of residents with low English language skills (nearly 29% in Queens County and nearly 25% in King County). Despite the exodus of low-income African-American residents during and following the 2005 Katrina disaster, New Orleans is still a "minority-majority" city, with African-Americans comprising about 58% of the population. About 18% of residents in Orleans Parish and 13% in Jefferson Parish lack basic literacy skills.

Learner Web is a self-access online software program that offers customized Learning Plans that will be delivered to vulnerable adult populations in the five BTOP partnership states, at computer labs operated by an array of "community anchor institutions" (e.g., public libraries, K-12 schools, community colleges, four-year colleges, public housing agencies, workforce centers, community adult education and literacy programs, other government facilities). The goal of BTOP is to enable vulnerable adults to move from being "new-to-broadband" users to "broadband-ready" users. In addition to participating in self-paced and individualized learning, all of the high-need Learner Web users will receive one-to-one and face-to-face individualized assistance by either volunteer or paid tutors and computer lab assistants, toward the goal of becoming able and motivated to use computers and broadband Internet resources independently and on a sustained basis. While it is estimated that participants will require an average of 15 hours of support to complete Learning Plans (which will be available in English and Spanish), the actual hours and need for facilitated assistance will vary widely, depending on familiarity with or anxiety about the technology, personal circumstances, scheduling constraints, etc. Learning Plans will be also developed as part of the BTOP project to familiarize volunteer and paid tutors and computer lab assistants with the LW software system and prepare them to support new broadband users.

An important hallmark of the Learner Web model is its combination of self-paced computer-based learning with the face-to-face support of a tutor or lab instructor/assistant. Learner Web is an outgrowth of a ten-year Longitudinal Study of Adult Learning (LSAL) carried out by Drs. Stephen Reder and Clare Strawn, which followed a random sample of about 1,000 Portland-area high school dropouts. Among the findings was the importance of "blended" learning environments to support an individual plan and structure leading to identified goals. The LW system also generates an extensive amount of user data that can be disaggregated and analyzed by multiple factors, such as income, race/ethnicity, ESOL, location, etc. However, the BTOP grant is focused on outcomes for increased broadband utilization and adoption, not on the teaching and learning processes underlying successful acquisition of the digital literacy skills that participants will be taught as a necessary step toward broadband adoption. The timing of BTOP implementation and data collection and this proposed IMLS research grant is thus ideal in terms of synergy. There is a recognized need for additional research on effective digital literacy strategies for traditionally hard-to-reach adult populations. PSU proposes to capitalize on the large and varied dataset that the BTOP grant will start producing in spring 2011 in order to expand the existing knowledge base on effective teaching and learning approaches for high-need adults with low literacy skills and thus produce evidence-based information and practices useful to libraries and other community providers of adult education and support services.

2. National Impact and Intended Results

The Need for Research on Tutor-Facilitated Digital Literacy Acquisition: Silver-Pacuilla (2008) found a high degree of interrelatedness between task characteristics, learner skills, and the design of online learning environments in her review of research on low-skilled adults' online learning. There are no simple skill thresholds for assuring independent online learning – successful online learning depends on an interaction among the learning tasks, the learner's skills, and the design of the online technology. She found clear evidence that self-directed learning is nurtured, especially at low skill levels, by socially facilitated access (whether by tutors, friends, or family members of the learner) to online learning environments. Early field tests of the Learner Web confirmed this – individuals who lacked the literacy, language, or technology skills to use the LW

independently could often utilize it effectively if tutors or computer lab assistants were available to help them at points in their learning process where they encountered difficulties.

If online learning among low-skilled adults can be effectively expanded by blending the support of technology and face-to-face tutors, access to adult literacy, adult education, and a variety of educational and career opportunities will greatly expand (Askov, Johnston, Petty & Young, 2003; Reder, 2007). Public computer centers – whether based in libraries, social service agencies or community-based organizations – can greatly expand digital literacy and 21st century skills and lifelong learning in underserved, low-skilled and economically disadvantaged populations if they are able to blend tutor-support effectively with technology access. To do this successfully, however, research is needed on both the digital literacy learning and tutoring processes involved for low-skilled learners.

There are some starting points for such research. A number of researchers have looked at various blends of online and face-to-face learning supports. Means, Toyama, Murphy, Bakai, and Jones (2010) conducted a meta-analysis of research on blends of teacher-led and online instruction in a range of populations and classrooms. None of the studied blends, however, included low-skilled adults and one-to-one tutors. Elbaum (2000) also conducted a meta-analysis of research studies on the effectiveness of tutoring programs for low-skilled learners, but few involved the use of technology and all involved elementary school children as learners. Smaller-scale case studies of the tutoring of low-skilled adult learners have been carried out by Belzer (2006) and Sandman-Hurley (2008), but neither looked at online learning in detail. Although there have been recent studies of how low-skilled or low-income learners *use* the internet (e.g., Kontos, Bennett & Viswanath, 2007), such studies do not focus on how adults *acquire* basic digital literacy skills. The proposed research thus will fill an important gap in the research literature and its findings will be very helpful to libraries, their community partners, and other community organizations wishing to increase digital literacy in underserved populations.

Congruence with National Initiatives: This project furthers the goals outlined in the National Broadband Plan and will provide research evidence on effective online learning and tutoring strategies that will help IMLS address the goals outlined in its *Museums, Libraries, and 21st Century Skills* 2010 report, which notes the growing interest among researchers, practitioners, and the public in learning experiences that are self-directed and designed to support multiple goals, motivations, interests, skills, and knowledge levels. The project will also help IMLS and other stakeholders address the national digital literacy mandates outlined in the National Broadband Plan (such as development of a digital literacy corps). Targeted to high-need adult populations in varied urban and rural regions and parts of the country, it will produce research data to guide policies and plans for reducing the digital divide in terms of access/use and increasing individual digital literacy skills and motivation. Learner Web has been developed as a dynamic and flexible tool that libraries and other organizations can tailor to the diverse and specific needs of their local communities and patrons. The digital literacy Learning Plans being developed for the BTOP grant are designed to meet the key needs of traditionally hard-to-reach and highly vulnerable adult populations, and also to provide resources for training volunteer and paid tutors and staff – an important potential resource for libraries and other providers facing perennial budget constraints. As previously described, LW is distinctive in its emphasis on linking self-paced web-based learning with face-to-face support by trained volunteers or lab instructors and assistants. These combined resources will enhance the likelihood of establishing a model that is effective, sustainable, and replicable by varied provider organizations.

Learning Plans walk users through the process of identifying a goal; doing background research, if needed, to understand the steps involved in reaching the goal; identifying (though self-assessment tools and/or help from a tutor, lab assistant, or instructor) what skill development is needed; and matching community resources to the goals, steps, and profile of the individual user (e.g., Spanish-speaking, age, zip code area). Learners self-manage their pace of study, have confidential profiles and passwords, and can grant permission to others to see their work (e.g., instructors and tutors). A portfolio function allows them to upload and store information documenting progress.

In addition to the data provided through PSU's BTOP lead agencies and their coalition partners in California, Louisiana, Minnesota, New York, and Texas, the proposed research project will also share information, as appropriate, with other NTIA-funded BTOP and Public Computer Center (PCC) grants involving state libraries or library consortia. The intended result of the research carried out over three years is improved knowledge about how to support adults from highly varied backgrounds, with diverse and specific individual needs and aspirations, in acquiring the digital literacy skills required to function successfully in today's technology-intensive and increasingly wired world. This research is expected to inform library practices nationally (and internationally), and strengthen the connections among various community providers and resources targeted to adult learners.

3. Project Design and Evaluation Plan

Project Scope and Research Questions: The proposed research is designed to be conducted over three years, involving data collected from adult learners and tutors/lab assistants in Richmond, California; New Orleans, Louisiana; Minnesota; New York; Central Texas; South Texas (e.g., PSU's BTOP grant partner sites). The primary research questions for the study are:

1. How do low-skilled learners interact with structured online training materials in the digital literacy acquisition process?
2. How do learner characteristics (e.g., linguistic status, educational attainment, economic and employment status, age, gender) influence their interaction with structured online training materials in the digital literacy acquisition process?
3. How do low-skilled learners interact with on-demand, face-to-face tutors in an online digital literacy acquisition process?
4. How do learner characteristics (e.g., linguistic status, educational attainment, economic and employment status, age, gender) and tutor characteristics (e.g., linguistic status, educational attainment, age, gender, previous volunteer and tutoring experience) influence their interactions in the digital literacy acquisition process?
5. How do learners' personal goals and interests influence their digital literacy acquisition process?
6. How does the availability/selectability of specific native-language online learning materials influence the structured online digital literacy learning process?
7. What differences in digital literacy learning processes and outcomes are associated with the use of paid staff versus volunteer tutors in the public computer centers?
8. What builds and sustains learner engagement in a tutor-facilitated digital literacy acquisition process?
9. What builds and sustains volunteer tutor engagement in tutor-facilitated digital literacy training?

Methodology: The proposed research study will utilize a mixed-methods design. The primary method will be quantitative description and analysis of the large dataset of learner and tutor data routinely collected by the Learner Web and related information systems in the BTOP project. This dataset will contain detailed information about an estimated 23,000 learners and 2,000 tutors: their individual background characteristics and comprehensive data about their self-directed progress through Learning Plans in Learner Web (tutors follow a set of self-access Learning Plans to become trained tutors; learners utilize self-access digital literacy Learning Plans to reach their goals). Information about the learning process includes time spent in the various steps of the Learning Plans, external (online) Resources visited in the various steps, problems encountered and assistance requested at each step, and assessment results collected as part of particular steps in the Learning Plans. This dataset also provides detailed information about the nature of the assistance learners request from tutors as they progress through their digital literacy Learning Plans. Statistical profiles and statistical models of these learning processes will be constructed to address Research Questions 1-7 listed above. The attached Supplementary Documents includes a description of the contents of BTOP-collected database.

These quantitative analyses of learning and tutoring processes will be complemented by in-depth qualitative data collected in interviews with selected learners and tutors participating in the BTOP digital literacy project. A total of 150 learners will be interviewed in depth by staff of BTOP partners who serve as subgrantees in the proposed NLG research project (approximately 25 per region). A total of 60 tutors will be interviewed in depth (approximately 10 per region) and 12 focus groups of tutors will be conducted (two per region). The data from these interviews and focus groups will complement and provide additional insights into Research Questions 1-7 and will serve as the primary data for Questions 8 and 9. The attached Supplementary Documentation section outlines the content that will be addressed in these interviews and focus groups.

The BTOP learning and tutoring activities will take place steadily between April 2011 and March 2013. When the proposed NLG research project begins on October 1, 2011, these BTOP activities will have been operating for six months and thus be approximately 25% completed. A National Advisory Committee (NAC) recruited to support this study will be able to review these initial data in relation to the project's research questions and make suggestions about additional types of data that should be collected from learners and tutors subsequently going through the BTOP project. These additional types of data could be collected by the Learner Web system itself (e.g., additional background characteristics about learners and/or tutors as they enter the BTOP project; contextually triggered surveys that occur immediately after specific target learning or tutoring activities), or as part of the qualitative interviews or focus groups to be conducted in person. The NAC comprises nationally prominent researchers in the fields of digital literacy, adult education, as well as library and information science.

Project staff will also conduct interviews with key BTOP project administrators in the various regions. These semi-structured interviews will be conducted with individuals responsible for tutor recruitment and supervision, learner outreach and recruitment, management of the computer centers in libraries, community-based organizations (CBOs), and other locations, as well as other key administrative staff responsible for local BTOP project operations. These interviews will help to understand the factors on the key operational considerations for successful implementation of tutor-facilitated digital literacy programs in public computer centers. These interviews will be designed in consultation with the project's Research Applications Committee (RAC). The RAC, comprising lead staff from each of the BTOP regions as well as nationally prominent experts in library and information science, adult education, and volunteer tutoring, will assist the project to translate and disseminate its research findings into program and policy recommendations for expanding digital literacy efforts in marginalized and vulnerable populations and communities. Both the NAC and the RAC will meet periodically face-to-face as well as through conference calls and online meetings. Project staff will also participate actively in the activities and meetings of these advisory groups. The key activities in the research project are shown in the attached Schedule of Completion.

Evaluation Plan: A robust external evaluation component will help gauge the progress and results of the proposed research project. Linda W. Braun, an Educational Technology Consultant with LEO: Librarians & Educators Online, will manage the evaluation process and work closely with project staff and advisory committees. Ms. Braun served as a co-evaluator of the original IMLS Learner Web project and has wide-ranging knowledge of the Learner Web and its goals. As a librarian who has worked extensively with a variety of types of libraries and academic institutions, she is well versed in the role technology plays in teaching and learning in libraries, in community based organizations, and in institutions of higher education.

During the project's first year the evaluator will set up a series of interview protocols in order to collect data from those project team members who were a part of the BTOP evaluation process. These data will provide qualitative and quantitative information that will aid the evaluator and the National Advisory Committee in developing a comprehensive plan for analyzing the data previously collected. The year-one evaluation process will use data gathered in the BTOP project and the stated research questions as a focal point. The evaluator will work with the committee to analyze the data collected in light of the research questions. Prior to the first committee meeting, the evaluator will go over the questions and data available with project staff to pinpoint any key data points likely to be of particular interest as part of the committee's deliberations.

Any data that are not available from previous evaluation efforts will be collected via interviews, focus groups, and surveys involving the BTOP partner sites, and the findings will be submitted to the evaluator and the advisory committees. A literature search initiated during the first year of the project will determine what research is available in order to form a baseline of information about how the work of the project team and advisory committees expands on existing data products. A literature search will be carried out again at the start of the second year of the project and again at the beginning of the third year of the project in order to continue to evaluate the evolving body of research available and how the outcomes of this project expand and enhance what is currently accessible. The evaluator will also interview each of the members of the NAC at the end of the first year, to seek to determine the efficacy of the data analysis and research agenda process to date. The data from these interviews will be integrated into a first-year report focusing on the data analysis outputs of the project to date and will also include recommendations for further data analysis. In the project's second year the evaluator will continue to evaluate the work of the NAC while beginning to work more closely with the RAC, which will be convened to analyze findings within the context of library services to adult basic education students and low-level literacy learners. Protocols will be developed for evaluating the success of the two groups and ways in which their work connects, as well the ability for each group to produce tangible outcomes during the project year. In the second year the evaluator will again interview each of the committee members to determine the effectiveness of the project methods and process. At the end of year two an evaluation report will provide a formative analysis of the research process and outcomes completed during the project year and will include a series of recommendations for further data analysis, product development, and dissemination of findings. In year three the evaluator will continue to work with the RAC to evaluate the impact of the project on the library and adult education fields. Along with the annual literature review, protocols will be developed for interviews and surveys of a random sampling of professionals in the library and adult basic education fields. Those who take part in the evaluation at this stage in the project will provide feedback on the impact and use of the products developed and on their knowledge of and access to these products. A summative report prepared at the end of year three will provide analysis of the final project outputs and usability of the products developed over the IMLS grant period.

4. Project Resources: Budget, Personnel, and Management

As a large teaching and research institution, Portland State University has the infrastructure required to ensure effective, efficient, and fiscally responsible management of large research projects funded by federal and other sources, and extensive technology and a wide range of resources that will ensure the project's success and potential contributions to the field, nationally and internationally. PSU is Oregon's largest and only urban public institution of higher education, enrolling more than 27,900 undergraduate and graduate students from increasingly diverse and nontraditional backgrounds. Research expenditures in fiscal year 2008-09 totaled $52 million, consistent with PSU's mission, vision, and commitment to advancing knowledge and scholarship, developing useful inventions and interventions for the community, and supporting innovative sponsored projects that include recognized training and community service programs. PSU has dedicated space and facilities for Learner Web, has continued to expand its internal use of the system, and plans to use the Millar Library to serve as the permanent repository of the dataset on adult learners and tutors/lab assistants resulting from this project.

Project Director Dr. Stephen Reder has extensive experience in developing and leading complex and successful demonstration and research projects that often involve multiple partners from varied organizations and geographic regions. Dr. Reder is also a frequent presenter nationally and internationally on Learner Web. As previously described, two expert advisory committees will be convened to support the proposed research project, comprising representatives from across the country with the requisite expertise and experience related to adult learning, digital literacy and inclusion, library services and adult education, technology-facilitated learning, tutoring, and other learning strategies appropriate for ESOL and other audiences.

The National Advisory Committee will be convened following funding notification to review the research questions and the disaggregated data on adult learners served to date at the participating the BTOP Learner Web

Partnership sites, and to then refine and revise the research plan and timeline, as necessary to collect any additional data from the LW sites (e.g., by developing focus group questionnaires and surveys/interviews protocols to be conducted among adult learners, tutors, and/or paid staff at various sites). Four formal meetings over three years are budgeted. Résumés and letters are attached from the following members:

- Michael Crandall, Chair and Senior Lecturer, The Information School, University of Washington;
- David Rosen, President, Newsome Associates;
- Petrice Sams-Abiodun, Executive Director, Lindy Boggs National Center for Community Literacy, Loyola University New Orleans;
- Heidi Silver-Pacuilla, Senior Research Analyst, American Institutes for Research (AIR) and President, National Coalition for Literacy;
- Heide Wrigley, Senior Researcher, Literacywork International.

The Research Applications Committee will be responsible for reviewing the project's research findings and implications in light of the National Broadband Plan, *Opportunities for All* survey results, and other relevant literature regarding the needs of the country's libraries, other community-based literacy and adult education providers, etc. This group will meet at least once formally, in year two and twice in year three, and will include representatives from BTOP partner sites, and other experts. Résumés and letters are attached from the following members:

- Juan Carlos Aguirre, Director of Continuing, Professional and Workforce Education, South Texas College;
- Jacqueline Brinkley, Library Development Services, California State Library;
- Sherry Drobner, LEAP Director, City of Richmond (CA) Public Library;
- Jon Engel, Adult Education Director, Community Action Inc., San Marcos, Texas;
- Karen Martin, Workforce Development Director, Goodwill Industries of Southeastern Louisiana, Inc.;
- Kevin Smith, Associate Commissioner, New York State Department of Education;
- Jenifer Vanek, St. Paul Community Literacy Consortium, Learner Web Regional Administrator for Minnesota.

Personnel Qualifications and Commitment (also see the attached list of key personnel and résumés):

Stephen Reder, Ph.D., professor of Applied Linguistics at Portland State University, will serve as the project director. Dr. Reder is the founder of Learner Web and internationally recognized as a researcher and scholar in adult literacy and for his contributions in examining the role of language, literacy, and technology in everyday life. He directed the 2007 IMLS National Leadership Grant Program Demonstration project that set the stage for both the BTOP Learner Web Partnership grant awarded in 2010, and for this proposed NLG Research grant. He directed the ground-breaking Longitudinal Study of Adult Learning, sponsored by the National Center for the Study of Adult Learning and Literacy (NCSALL) from 1998 to 2006, which followed the progress of 1,000 Portland-area high school drop outs, a population whose skills and motivations traditionally have been misinterpreted. He has also disseminated findings resulting from basic research and innovative professional development conducted through the English for Speakers of Other Languages (ESOL) Lab School, a collaboration between PSU and Portland Community College. Dr. Reder will supervise design and implementation of the research grant, convene the two national advisory committees, and ensure effective communications and sustainability planning.

Other key PSU faculty and staff: *Robert Fountain,* Ph.D., professor in the PSU Maseeh Department of Mathematics and Statistics, will help will statistical analyses of project data. *Kimberly Pendell*, social sciences librarian and assistant professor, at PSU's Millar Library, will provide guidance and technical assistance related to documentation and maintenance of the project dataset; support dissemination of project research and findings to academic libraries and other appropriate audiences; and report regularly to the library's interim director and administrative team. *Michaelangelo Anastasiou* is a research assistant familiar with LW, who will help trouble-

shoot any system-related issues, and provide training for national partner sites on how to collect supplementary learner/tutor data through interviews and focus groups. *Sinnamon Tierney*, a research administrator in the PSU Office of Academic Affairs, will provide budgetary and reporting assistance. A *Graduate Research Assistant* will be recruited and selected to support the research project, by helping to compile quantitative and qualitative data, coordinate with partner sites, prepare information for advisory committee meetings, and other duties as requested by the project director.

Linda Braun will serve as the project's external evaluator. As described, she is a manager and coordinator with LEO, a national consulting firm, and teaches in the Graduate School of Library and Information Science at Simmons College. She received the WISE Excellence in Online Teaching Award in 2008, 2009, and 2010, and is the author of several books and numerous publications on library and Internet services targeted to youth.

5. Communication Plan

Information on the project's research goals, progress, and results will be disseminated on an ongoing basis to various national audiences, including professionals at academic and community libraries; federal, state, and regional policymakers, as appropriate; adult education and adult literacy providers; and others identified by advisory committee members, BTOP partners, and/or other libraries involved in NTIA-supported broadband grants. Project updates will be posted on the Learner Web website (http://www.learnerweb.org) maintained by PSU. Advisory committee members will also play an important role in supporting effective communications, as will various partners involved in the BTOP project, such as ProLiteracy Worldwide and Literacy New York. For example, ProLiteracy is affiliated with literacy coalitions and volunteer organizations in all 50 states, the District of Columbia, and 52 developing countries. (ProLiteracy is developing Learning Plans for tutors and computer lab assistants as part of the BTOP Learner Web Partnership project which will also be shared with its members and other interested organizations.) The project director and other advisory committee representatives are also frequently invited speakers at various professional conferences that will provide the opportunity for networking and information dissemination. PSU's Communications and Information Technology offices will help craft project announcements appropriate for release to various media outlets and websites; information will also be shared via a Ning social networking site established as part of the BTOP grant. (PSU has also been asked by NTIA to take a lead role in developing social networking strategies involving other broadband grantees around the country.)

6. Sustainability

As a model and system of support for vulnerable adults, the LW is relatively cost-effective and easily sustainable. It has already been developed and field-tested; is available as open-source software to interested parties; and will include Learning Plans (in English and Spanish) developed for both vulnerable adults and for tutors and computer lab assistants. PSU has dedicated space and facilities for Learner Web and will provide a permanent library repository for the dataset associated with this research project. Research findings will be documented and disseminated broadly, through reports, presentations, web postings, and other appropriate channels. As mentioned, Project Director Dr. Stephen Reder is a frequent presenter nationally and internationally on Learner Web and its potential benefits for various populations; many of the distinguished advisory committee members are well-positioned to share project research findings and advocate for continued and expanded use of LW nationally and internationally. Evidence of PSU's commitment includes its expansion of its own internal uses of Learner Web to support non-traditional college students through innovative orientation and placement processes, as part of training for adult ESL teachers and students, and to support writing development, as well as in other ways.

References

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