Thank you for being here for our paper presentation. My name is Gloria Jacobs and I’m here on behalf of our team from Portland State University. I’m excited to share some of our findings about the role of a self-pace tutor facilitated online learning environment for digital literacy acquisition and language learning among adult Spanish speakers.
This research was supported by two grants from the Institute of Museum and Library Services and The Broadband Opportunities Technology Program.
We are a research group housed within the applied linguistics department, and we share a broad commitment to building literacy and language pathways to social and economic justice for underserved and vulnerable populations. We partner with community based organizations nationally to help individuals acquire digital literacy skills. We provide educational materials through Learner Web, a digital learning platform designed for adult learners.
One of the problems that we address in our work is the fact that despite the growing prevalence of digital technology in everyday life, there remain a significant number of adults who are unable to take advantage of online resources and participation (Pew and American Life Project, 2013).

In this study we are focusing on English Language Learners and especially those who are Spanish dominant speakers. In 2010, an FCC survey reported that of the 35% of U.S. adults who have not adopted broadband at home, 22% cite digital literacy as the primary barrier. This inequality requires an investment in training and support, in addition to existing access-focused programs. Those least likely to have adopted home broadband Internet include: lower income folks; minority groups; older adults; adults with less education; and persons with disabilities.
We come at this research from the perspective that adult digital literacy is fundamental to society. Without digital skills and digital access, adults are unable to engage in our participatory democracy, and have limited abilities to seek education, engage in health care, find and use online information, find and keep a job, and engage with family, friends and the community. We argue that improving adult digital literacy confronts adults’ issues of exclusion and marginalization that accompany the increasing importance of digitally mediated activities in modern social life. And finally, we come at this work from the belief that being able to hear all voices enriches society at large.
As we think about how our focus population interacts with the learning materials and tutors, we have found it useful to turn to the language socialization model of second language acquisition as a way to understand their experiences. We approach our data from the theoretical stance that language and knowledge are learned in and through interactions and that sociolinguistic routines become part of language learners' communicative repertoires. We also view learning as a social phenomenon; thus our unit of analysis is the group and community rather than individual cognition.
Our work is grounded in the literature on digital inequality, digital literacy and language learning, and language socialization and online affinity groups.
need to add citations

Gloria Jacobs,
The research I’m describing today is part of a larger multi-year, multi-state service project and research project. The service project involved a multi-state support system for broadband Adoption by Vulnerable Adults. The project lead was the Learner Web team at Portland State and the program was implemented by six partners in geographically dispersed locations across the United States. The Learner Web, a self-paced adult learning support system was used in tutor-facilitated community based computer labs. Labs were staffed by volunteer and paid tutors who all were English speakers, and in many cases were bi or multilingual. Tutors received training in using the Learner Web. The basic content was developed by the Minnesota Literacy Council and Proliteracy and was customizable by partners in order to be locally relevant while globally connecting the learners and tutors. The labs within each geographic area included adult literacy programs, adult basic education program, employment and training programs, colleges and community colleges, K-12 schools, public libraries, social service agencies, public housing agencies, and faith-based organizations. The project included tutors who logged nearly 50,000 hours and there were over 12,000 learners of whom over 2,000 identified Spanish as their preferred language.

The research project focused on the implementation of the service project and specifically examined the digital literacy acquisition process. Within the research project, we’ve been documenting and describing the tutor and learner interactions, learning environments, implementation variations, motivations, and impacts on learners. Our goal is to be able to make recommendations for implementation of similar projects. We are not seeking to identify best practices but instead to provide a description of what this learning looked like.
in these various settings so that others can transfer what we've learned to the needs of their settings.

Although the entire project was much bigger, today we're focusing just on the role of language in the digital literacy acquisition process. So the findings we're reporting out are based on a subset of our larger data corpus.
Now that you have the background of who we are and how we approach our work, I’m going to share more specifics about the project that is the focus of our study. The project involved a multi-state support system for broadband adoption by vulnerable adults – those that the literature has identified as being on the margins of the digital world. The support was delivered through tutor facilitated community based learning systems and included bilingual and monolingual tutors and learners working together in public computer centers. Learning was self-paced and the materials were available in Spanish and English. Furthermore, each partner was able to customize the materials so that the content was locally relevant even as it connected the learners globally.
These were partners in implementation and development.

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National partners developed local networks to bring learners and tutors together in public computer labs. Over three years, the project operated in over 120 computer labs nation-wide.

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The project included tutors who logged nearly 50,000 hours and there were over 12,000 learners of whom over 2,000 identified Spanish as their preferred language.
The learning model used in this study provides adult learners with features designed to support their goal oriented learning.

Tutors and learners came together in open-access computer labs to engage, discuss, and explore computers and the Internet. The Learner Web, an online learning platform, provided access to instructional content that included video, reading, and interactive practice activities across the web. It scaffolded and organized resources towards specific learner-centered goals and provided a series of self-check quizzes to help learners reflect on the content they learned as they moved through the materials at their own pace.
Thus far I've provided you with the context within which this research and this particular analysis occurred. At this point, I'll be shifting into specifically discussing the findings salient to the role of language.
The IMLS research study took the data from the BTOP project and for the past two years we’ve been involved in data analysis in order to understand the digital literacy acquisition process. By the end of the project, we hope to be able to make recommendations for implementation of similar projects.
These are the research questions for this particular aspect of the study: how do Spanish and bilingual learners and tutor interact with the digital learning materials and what factors influence their choices.
Our data corpus includes interview transcripts from 28 learners, 29 tutors, and 5 case studies. We also interviewed 14 key stakeholders and conducted lab observations. The subset of data that informed the analysis I’m discussing today was that of the Spanish speaking and bilingual tutors and learners.
We conducted a grounded theory analysis in which we first created and refined our coding scheme and iteratively coded our transcripts. During this iterative process, we met regularly as a team to compare and discuss codes in order to ensure interrater reliability. After mapping the territory, we identified categories and themes and began building a grounded theory of self-paced tutor facilitated digital literacy acquisition.
Three main themes have emerged: How the learner moves through the digital literacy acquisition process, how programs are embedded and connected with the larger community, and the role language plays. In this presentation we’re focusing on the role of language. In this presentation, we’re focusing on the role of language.
I’m not going to spend much time on this, but we think it important to frame the language piece within the learning path the learners experience.

We have found that they move through three basic phases of Entry, Program Interaction, Skills Integration and Impact.

And as they are developing digital literacy skills, they experience three pivotal moments in learning:
- Overcoming fear (I can do it!)
- Gaining confidence (I’m not going to break it!)
- Seeing relevance (This is important to me!)
It’s also important to understand that these programs are embedded within the communities through an interconnected web of services and institutions.
At this point, I'm going to move into our findings on the role of language.
Our research questions asked, Given learning digital literacy content offered in two languages, how do Spanish and bilingual learners and tutors interact with digital literacy learning materials? What factors influence their language choices?

Although there are similarities in the experiences of English dominant learners and the Spanish or bilingual learners, examining the experiences of individuals who identified Spanish as their primary language allowed us to see qualitative differences in their experiences.

Analysis indicated that the learners interacted with tutors and the online learning system based on these six factors:

- Tutor bias/preference
- Need for computer specific English vocabulary development
- Dialect
- L1/L2 proficiency
- Learner flexibility
- Learner desire to develop English skills
Looking at the data through the lens of the Spanish dominant speakers also allowed us to identify tensions between what the tutors saw as the needs of learners and how the learners understood their needs and positioned themselves as learners.

In the next few slides, I’m going to unpack the six factors by sharing interview excerpts with you. Then I’ll move in to implications and conclusions.
I'll also be talking about the impact of the program
We found that the tutors had clear biases and preferences for how they wanted learners to interact with the materials. Some tutors indicated that the primary purpose of the program was digital literacy, so the cognitive load of language learning shouldn’t be added to the task. Others wanted learners to stay within their L1 in order to provide clarity of meaning. However, other tutors were more flexible and used the language switching function of the program to allow the learners to access the materials they needed in the language the tutor thought was most useful.
Tutors, however, also acknowledge that exposure to English, and especially the English of the Internet was important because of the predominance of English online. As tutors pointed out, there are certain words on the Internet that individuals need to know, and another suggested that people have to learn that lingo in both languages.
Another finding that emerged was that Even though Spanish may have been their first language, a number of learners opted to use the program in English because of dialect differences.

As one learner told us, "when it's in another language, I get lost to some words because they don't mean the same to me, like they mean to other people. In English it's easier for me to understand what they say."

--Learner
We also found that the learner’s L1/L2 proficiency was important, but levels of proficiency were complex. For instance, this learner had been in the United States for 40 years, but never attended school here. She was highly aware of her language skills and held a deficit view of her abilities. In essence, she communicated in three languages and language choice changed depending on context of use. So when it came to using the learning material, she shifted to English because she was more comfortable with English for learning. This is also related to register. This learner knew Spanish, but not academic Spanish, so she felt less able to use the Spanish material.
A tutor provided us with some insights into this phenomenon and how she responded. This particular site was linked to an ESL program and used testing to determine student placement. The tutors adjusted what materials they used based on what they knew of the learner’s language skills, but they also adjusted depending on the quality of the learning materials.
Despite tutor preferences and biases, the learners pushed back based on what they wanted. For example, this learner told us about how she used the language switching function to support her learning. She moved through the lessons twice, once in each language. This process supported her learning of the material, but also her language skills.
The learner’s flexibility in moving between languages was related to their desire to learn English, and again the learners would assert themselves.
Now I want to move to sharing a bit of the impact of the study. One that we think is really important is that both the learners and tutors came to see that language is a resource.
Secondly, although we’ve been focusing on the Spanish speaking participants, we’ve found that these impacts are not unique to English language learners. Many have not had positive learning experiences, and through this program, they’ve experienced success.

Impact: Sense of Accomplishment

It’s like they completed Mt Everest. ...Some people come with a lot of issues and their bad past, ...we’re here to help them out.
As one tutor noted, the learners gained a sense of confidence and were able to move past seeing computers as “an evil box.” They’ve learned how to take control of certain aspect of their lives and have become part of the digital world.
Finally, we've found that for many of the learners, gaining digital literacy and language skills has allowed them to overcome isolation and build social connections.
As we considered these six factors that our analysis identified regarding how tutors and learners interacted with the online digital literacy learning materials within a tutor-facilitated learning environment, we came to understand that a concept that connects all of these is the idea that language variation can be a resource rather than a problem to be solved.

Tutors, in their enthusiasm to provide a highly supportive learning environment, did not always provide opportunities for the learners to act autonomously. Thus the andragogical trait of self-determination as potentially undermined. However, we also saw that learners, whether they came in with an intrinsic sense of who they were as a learner or developed it through positive learning experiences, would act autonomous.

This perspective thus creates a context for learning environments that allow and promote language flexibility.
As one of the tutors said, it’s just differences, you gotta find out what makes them comfortable.

So, rather than seeing language variation as the problem we have come to understand that it is the lack of resources that is the problem.
Based on this analysis, as well as our larger study and previous research, we argue that programs are needed that support learner autonomy and self-determination and increase accessibility to needed resources.

A direct outcome of the research was that the Learner Web team has worked to increase accessibility by continuing to offer learning material in multiple modes, adding text to speech capability to support hearing language spoken fluently, and by adding ESL or simplified English versions of these plans.
We also suggest there are implications for research:
We ask to what extent is this generalizable to other language groups
Those from cultures with few language resources online
   Availability
   Accessibility
Consideration of language variation in online learning
   Dialect and register
   Culture
Examination of how learners and tutors navigate the tensions between learner need to be self-determined and tutor intentions.

And we need to further consideration of the role of dialect, register, and culture in people’s use of online learning material.
We also need to consider the some times tensioned relationship between tutors and learners as they negotiate what the learner need to be self-determined and autonomous and what the tutor believes to be good teaching and a supportive environment.
There are also implications for the field.

As mentioned, there is a need to customize learning approaches that meet the needs of Spanish dominant and bilingual learners through the learning material, how individuals are tutored, and how the lab environment is constructed. These supports need to recognize nuances in language and literacy skills. Furthermore, program managers need to make decisions on how to coach tutors in working with language variety.

This is consistent with our stance that program
administrators and policy makers should work toward concept of digital equity by resisting the deficit model of the learner and rather than trying to change the learner, take them from where they to where they need to be using language as a resource
I thank you for your time and interest in this study. Please contact us if you have questions. Also, by the end of the summer, we will have our material available through the PSU library.