Beyond barriers and borders: Digital literacy support for English language learners via communities of practice

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Abstract

Introduction: English remains the dominant language on the Internet, exacerbating the digital divide for non-English-speaking populations. It is imperative that these barriers to using the Internet be lessened through adequate and appropriate digital literacy (DL) support.

Objective: This study identifies common types of DL learners among English language learners (ELLs), whose first language is Spanish, while also exploring the constraints and opportunities for DL development within this group.

Method: We use data obtained through semi-structured interviews with residents of Maryland (US) who identify as Spanish-speaking ELLs.

Findings: We find that this group is likely to be *forced* to acquire DL because of societal pressures, rather than pursuing it as a genuine desire to become digitally competent. In seeking help to navigate difficulties with digital transactions, they often rely on knowledgeable family members but also recognise the value of participating in formal and accessible DL education programmes. However, language barriers to obtaining learning resources, coupled with financial and time constraints and a lack of trusted support systems, pose challenges to their DL acquisition.

Conclusion: We conclude with suggestions for strategies grounded in the principles of communities of practice (CoPs) to deliver more tailored DL interventions for ELLs.

Introduction

The ever-changing landscape of technology and its growing importance in everyday life are widely recognised as integral to academic, economic and civic advancement in society. However, disparities in digital competence persist among low-income individuals, ageing individuals, individuals with disabilities, individuals with language barriers (e.g., limited English proficiency or literacy), racial/ethnic minorities, rural residents, veterans and others (Ryan, 2018), collectively referred to as *covered populations* in the US (US Congress, n.d.). These populations fall behind in both digital connectivity and digital literacy (hereafter DL). The Office of Statewide Broadband's (OSB, 2024) digital equity plan for the state of Maryland in the US, where this study was conducted, reports that covered populations, comprising 83% of the state's population (U.S. Census Bureau, 2021a), lag behind non-covered populations in computer (84% versus 96.3%) and Internet (78.8% versus 90%) access. The largest disparity is observed between low- and high-income households in the adoption of broadband (62.6% versus 86%) and devices (65.7% versus 92.0%). Furthermore, covered populations tend to underperform in online activities necessary for daily life, including telecommuting, social networking and e-government services because of deficits in DL.

The OSB's (2024) report documents the DL divide across various categories of covered populations, including ageing versus younger individuals, people with disabilities versus those without, low- versus high-income groups, rural versus metropolitan residents, veterans versus non-veterans and racial/ethnic minorities versus white populations in Maryland. We found a gap in their report that there was a lack of focus on DL discrepancies among English language learners (hereafter ELLs), which are defined as '*any individual that reports an English language proficiency less than* very well' (OSB, 2024, p. 89). Although ELLs are counted as a subset of covered populations by OSB (2024), no DL-related data are included in their report for this specific group; instead, the available data pertain only to the broader population with language barriers, including those with limited English proficiency or literacy. According to the U.S. Census Bureau (2021a), language barriers appear among 19.4% of the population in Maryland, higher than the low-income (14.4%) or disabled (11.6%) groups, which are identified as a crossover issue for racial/ethnic minorities comprising 50.2%. The OSB's (2024) survey reports that these individuals with language barriers lag behind others in key digital skills (e.g., online classes and job training, cybersecurity), with an average score of 10.9 out of 14, compared to 11.6 for the state's total population. Again, while the data do not specifically address ELLs, evidence that 21% of non-English-speaking households lack computers and 81% lack tablets, relying instead on smartphones (11.3% for ELLs compared to 4.3% for fluent speakers), implies the possibility of their limited capacity to leverage the Internet.

We focus on this underexplored second-level digital divide (i.e., skill disparities) affecting this specific population, with two objectives: understanding the unique constraints for DL development among ELLs, and identifying transformative strategies to support this group. Our investigation was made possible through community outreach facilitated by Marylanders Online, a statewide digital equity initiative in Maryland (see Method section below). As part of a larger interview study conducted to inform the community needs for this initiative (Harding et al., 2024), our study analyses a subset of data from interviewees whose first language is Spanish. Spanish is the most common non-English language in Maryland, with 519,045 households using it as their primary language and 244,554 households classified as the Limited English Proficient population as of 2022 (Migration Policy Institute, n.d.). Such a large portion suggests Spanish-speaking ELLs (hereafter Spanish ELLs) represent those who can articulate challenges of English-dominant digital practices.

Focusing on this group as the empirical sample, we explored: (1) Which category of DL learners best characterises Spanish ELLs? and (2) What prompts Spanish ELLs to pursue DL learning, and what barriers prevent their involvement? We addressed these questions through interviews and provide recommendation on strategies that can be used to tailor DL programmes for Spanish ELLs.

In the subsequent section, we provide an overview of the literature that guided our investigation, including research on information needs of immigrants. While we recognise that ELLs and immigrants represent distinct populations, we infer a significant overlap between the two groups, as immigrants come from diverse linguistic backgrounds. The US Census Bureau's (2023) data says that 55.7% of *foreign-born* populations speak a language other than English at home, with 46.3% speaking Spanish. In Maryland, 24.7% of the population are foreign-born and nearly 80% speak a language other than English (Migration Policy Institute, n.d.). Still, given that our empirical scope is limited to Spanish ELLs, the findings may not be fully generalisable to all groups facing language barriers. These limitations notwithstanding, the current study will have translational implications beyond the US context, as the DL gap is a globally prevalent phenomenon among ELLs. Although there are more than 7,000 spoken languages worldwide, English is still the predominant language on the Internet, with over half of its content in the English language (Internet Society Foundation, 2023). Our recommendation for tailored DL support that leverages unique community engagement will likely be applicable in different countries addressing DL with ELLs.

Understanding DL development of ELLs

Characterising ELLs as DL learners

Given how technologies have reshaped social practices and the concept of DL, individuals are expected to continue acquiring digital skills but are motivated to do so with varying levels of commitment. Our larger study on DL learners in Harding et al. (2024) resulted in a typology consisting of three learner categories: *Desire to learn*, *Ambivalent about learning* and *Forced to learn* (Harding et al., 2024; see Figure 1). Those in the Desire to learn category associate positive feelings with the shift towards the digital world and express an interest in developing their DL. Relatively, those categorised as Ambivalent about learning have weaker feelings about this digital transformation and do not actively seek help to keep up with it. They remain independent, although they are likely aware of the need to improve their DL. Lastly, those identified as Forced to learn express negative emotions about the digital world and show reluctance to develop their DL. They may not necessarily be digitally inexperienced but may resist learning about technologies.

ELLs with varying attitudes towards DL may fall into any of these categories. For example, ELLs seeking to empower themselves may exhibit a strong Desire to learn to access greater online and offline opportunities through technologies. This may be evident for those with unstable social status (e.g., immigrants or refugees), as technologies allow them to maintain sociocultural networks from their home countries (Bacigalupe and Càmara, 2012) and adapt to a new society (Gilhooly and Lee, 2014). This type of ELL may also seek greater DL to explore support systems (Alam and Imran, 2015), retrieve health information (Selsky et al., 2013) and advance professional interests (Khvorostianov et al., 2012). Additionally, personal interests can motivate ELLs, such as adolescents seeking DL to participate in online fan communities that span national borders (Black, 2009).

However, ELLs who are not much influenced by such collective or personal motivations are likely to resonate with the Ambivalent about learning type, showing neither strong enthusiasm nor resistance to DL practices. These ELLs may acknowledge the significance of the Internet as a vital tool for accessing resources and networking, and consider themselves self-sufficient in benefiting from it when needed (Bletscher, 2020). However, they may be *'negatively influenced'* by English-dominant systems (Acharya, 2016, p. 48), which undermine their linguistic confidence or are perceived as less effective in meeting their information or communication needs.

Finally, the Forced to learn type likely represent ELLs who view technologies as sources of stress or difficulty rather than tools for empowerment. In these cases, DL development may become an additional pressure, compounding the challenges they face in learning English. Research indicates that some immigrants consciously choose not to use technologies because of fear or resistance,

the digital divide and concerns over privacy (Guberek et al., 2018; Subramaniam et al., 2019). This type of ELL may be further demotivated by frustration as they navigate DL resources whose content does not cater to their language preferences (Acharya, 2016).

Considering these varying possibilities around ELLs' DL engagement, our first research question explores whether ELLs residing in the state of Maryland, US align with the typology of learners identified in our previous research, and which type is most prevalent within our specific focus (i.e., Spanish ELLs).

RQ1. Which category of DL learners best characterises Spanish ELLs?

Identifying ELLs' needs and barriers to DL learning

Research on immigrants finds a range of information needs related to institutionalisation (integrating into the new country), acculturation (adopting the new norms and customs) and personal adjustment (coping with the challenges of relocation) (Wang et al., 2020). These processes require relevant DL to access information on daily essentials (e.g., education, housing, health) (Beretta et al., 2018), build networks and connect with the broader community (Gilhooly and Lee, 2014), navigate local citizen services (Safarov, 2023) and interact with formal institutions (Torralba, 2015).

Such information needs can be fulfilled through a variety of sources, including social networks providing '*warm support*' and '*funds of knowledge*' (e.g., family, friends, co-workers) (Hänninen et al., 2021; Subramaniam et al., 2019), public sector organisations (e.g., libraries, community centres, nonprofits), and the Internet (Wang et al., 2020). Nevertheless, immigrants tend to rely on informal support (especially from children) when encountering barriers to accessing mainstream services, language inefficiency, unfamiliarity with host country systems and psychological strains like mistrust and alienation (Aarnitaival, 2020; Caidi and Allard, 2005; Lloyd et al., 2013; Wong-Villacres et al., 2019; Yip et al., 2022). The inability to afford digital tools is another barrier, increasingly affecting ELLs' career development and participation in local social interactions (Alam and Imran, 2015).

Spanish-speaking immigrants in the US often face '*problems communicating orally*' when navigating English-dominant systems, leading them to frequently use English translation and learning apps on their mobile devices (Peile and Híjar, 2016). Those without DL related to using mobile devices are unable to benefit from language tools. Such challenges also arise in healthcare settings that lack non-English resources (Rodriguez et al., 2019). Latinos in the US often struggle with telehealth systems designed for English-proficient patients, which diminishes their medical care quality (Anaya et al., 2021). Similarly, non-English speakers in California (e.g., Spanish, Chinese, Vietnamese) show health disparities because of limited DL support in their preferred language (Rodriguez et al., 2021).

While the ubiquity of the digital world is undeniable in US society, we cannot assume that ELLs derive the same benefit from the Internet, even with equal access to it. This is particularly relevant for DL services if they lack linguistically appropriate resources for ELLs. Drawing on evidence from Spanish ELLs residing in the state of Maryland, US, our second research question investigates the needs for and barriers to DL learning for this specific group.

RQ2. (a) What prompts Spanish ELLs to pursue DL learning, and (b) what barriers hinder their involvement in meeting their needs?

Exploring institutional DL interventions for ELLs

Because of the influx of immigrants to the US, tensions between the public education system and emerging multilingual learners have highlighted the need for DL practices that embrace ELLs (Yuan et al., 2019). In this context, locally based institutions play a key role in helping immigrants to meet

their DL needs through formal sources (Wang et al., 2020). Libraries serve multiple functions in promoting digital equity, providing language-appropriate assistance with digital tools and connecting patrons with other public services (Strover, 2019). Community centres serve similar roles in supporting ELLs, as evidenced in the Nebraska State Digital Equity Plan (Schafer et al., 2023). Nonprofits like Centro Hispano (n.d.) provide language and technology support, along with social services, to Spanish-speaking immigrant families.

However, such institutional support may not be as effective as intended when ELLs fail to engage because of psychological barriers (Wang et al., 2020). Research shows that immigrants often mistrust local citizens' and government services, which hinders them from obtaining needed support (Caidi and Allard, 2005; Lloyd, 2014). Linguistically or culturally inappropriate DL programmes may exacerbate these challenges, diminishing the sense of empowerment among ELLs, who may already feel alienated in social or civic settings (Shoham and Strauss, 2007). The Migration Policy Institute suggests that English for Speakers of Other Languages (ESOL) classes may be insufficient when viewed through the lens of immigrant integration (McHugh and Doxsee, 2018).

Research further points out the limitation in DL education focused solely on technologies. Simply increasing digital tools for instruction may not be effective for ELLs (Yuan et al., 2019), who need to learn DL as a way to engage in life-centred learning, rather than just completing digital tasks (Thomas, 2016). ELLs may need curricula that build communication literacy, beyond technological skills, as today's digital landscape demands (Reddy et al., 2023) to engage effectively with English-speaking systems (Kennan et al., 2011).

The literature suggests that DL support for ELLs requires holistic approaches to capacity-building which encompass social inclusion considerations, going beyond simply providing translation or skills instruction. Given these complexities faced by ELLs, we conclude our paper with a discussion on which approaches should be adopted to better serve this group.

Method

The data presented in this paper were collected as a part of our larger interview study (Harding et al., 2024) conducted from May to August 2023 in Maryland, through the state-funded Marylanders Online initiative. This initiative aims to promote digital inclusion by offering quality education that enhances DL across the state through tech support helplines, DL curriculum development and resource repositories for digital navigators and educators. To inform the DL curriculum, we conducted semi-structured interviews with Maryland residents regarding their daily device use, Internet activities and DL proficiency. Interviews were conducted at eight sites across six regions of the state, representing the target areas of covered populations. The sites were selected from trusted local institutions in each region (e.g., libraries, community centres), prioritising the comfort of interviewees to speak to us. Among a total of 160 interviewees, seventeen Spanish speakers were recruited via two sites: fourteen participants participated in a group interview, while three took part in one-to-one interviews. All interviewees self-identified as Maryland residents, were at least eleven years old and were comfortable participating in interviews in either English or Spanish with an interpreter. Interviewees were offered a $25 gift card for participation. This study received IRB approval from our home institution.

The duration of the interviews ranged from fifteen to forty-five minutes. Each interviewee consented to audio recording for transcription. If they declined, handwritten notes were taken. The transcripts were analysed using the collaborative qualitative coding software Dedoose. The codebook developed in the larger study (Harding et al., 2024), served as a starter codebook for analysing the transcripts of the Spanish interviews in this study. We used the existing coding scheme in a deductive manner to classify interviewees into three DL learner types (RQ1) and identify common motivators related to DL development (RQ2a). Additionally, we adopted an

inductive strategy to allow new codes to emerge regarding the unique challenges potentially faced by this specific population (RQ2b). We then derived practical insights that build upon the findings from RQ1b and RQ2b, resulting in recommendation on strategies that can be used to tailor DL programmes for Spanish ELLs.

We chose not to collect demographic factors from interviewees, beyond what was required for the consent forms (age), to avoid them feeling uncomfortable disclosing their personal information., although in many cases, interviewees volunteered additional information in response to questions. It is through these insights into their lives that we learned that many, if not all, of our interviewees identified as non-proficient in English and as foreign-born residents.

Findings

The interview data were analysed to address RQ1-2, focusing on the types and realities of DL learners whose first language is Spanish. Note that interview quotes from the one-to-one interviews are labelled with the interviewee ID (e.g., PG1-13 referring to the thirteenth participant interviewed at site 1 at a county, with initials PG). Quotes labelled as M2 are from the transcripts of the group interview. This group interview consisted of fourteen participants, and those corresponding to the quotes cannot be individually identified in the transcripts.

Which DL learner category best characterises Spanish ELLs? (RQ1)

According to the typology established in our larger study (Harding et al., 2024), our interviewees from the Spanish-speaking residents in Maryland were identified as more likely to fall into the third category of DL learners, Forced to learn. Most interviewees noted that they had not felt a pressing need to learn advanced DL in their daily lives before the Covid-19 pandemic, as '[*technology*] *is not bringing any benefits*' (PG1-18). This perspective aligns with OSB's (2024) findings that '*don't need or not interested*' in home Internet use was the key reason reported by the Maryland households that do not subscribe to broadband (63%). There was some consensus among our interviewees that they '*wouldn't have learned if it [the pandemic] hadn't happened*' (M2) but had to obtain DL because '*when the pandemic ended, almost everyone communicated only through Zoom*' (M2).

Some interviewees expressed mixed feelings about the increasing importance of DL, acknowledging that '[*we*] *have to evolve with technology* … *as time moves forward*' (M2). However, even among those who fall into the second category of learners (Ambivalent about learning), the prevailing sentiment was one of social pressure '*to modernise*' (M2) and the struggle '*not to stay behind*' (M2) rather than by innate aspiration or a sense of autonomy. This was exemplified by one interviewee who shared:

> *I didn't want to learn to handle the computer because I thought that I didn't need it. [Now] I changed my mind because I saw my colleagues [at work] who were with their smartphones and everything* (M2).

To sum up, the overall tendency of digital engagement among interviewees was driven more by a sense of compulsion to keep up with the shifts in the surrounding environment. This aligns with, according to Peters et al.'s (2018) typology, extrinsic (rewards and punishments '*I have to use it*') or introjected motivations (self-worth or self-perception: '*I should use it because I don't want to feel bad about myself*') rather than intrinsic (interest and enjoyment: '*I enjoy using it because it's fun*') or identified motivations (goals and values: '*I use it because I believe it's worthwhile*') that could foster genuine technology adoption.

What prompts Spanish ELLs to pursue DL learning? (RQ2a)

Although not particularly eager to become digitally competent, this Spanish-speaking group recognised the need to develop DL to adapt to emerging technologies required for work and education, for everyday life transactions such as accessing healthcare and government services,

and for a better lifestyle. They saw DL as necessary to navigate the challenges tied to their immigrant or status-related circumstances. Interviewees sought learning opportunities to better manage the difficulties they faced in operating their devices (e.g., computers, tablets, mobiles) and to connect online safely. Our older interviewees, who had received little education in computer skills during their schooling, expressed a heightened need to improve their basic abilities to operate devices and navigate the Internet. One stated, '*I have a very tough time using technology because there are things that I don't understand on the machine. It's just enough to go into YouTube, go to look at something on Facebook*' (M2). Another younger interviewee recounted their experience assisting elderly patrons, highlighting the issue behind their DL learning:

> *I have run into people that have just arrived* [immigrants] *... and it's hard for them to even open an email. They don't know anything about computers ... They want to apply for a job, but the first step they need to create an account. They don't have any idea how to do any of that* (M2).

Even among those with a moderate level of DL, some interviewees noted that there is '*very much to learn*' (M2) to keep up with novel and ever-evolving technologies to execute everyday and professional tasks, such as accessing cloud apps and document software (e.g., Google Drive, Google Documents). In addition to personal necessity, parental responsibility motivated their pursuit of DL learning. Because of concern about online risks for children and needing to access school grades via learning management systems, one interviewee expressed a desire to further educate herself in order to effectively monitor '*what the kids are seeing and doing*' (PG1-13) on the Internet and to stay updated on her child's academic progress.

What barriers hinder Spanish ELLs from meeting DL learning needs? (RQ2b)

Notably, many interviewees noted that they often sought assistance with digital tasks from family members, primarily from their children. One adolescent interviewee said that they had responded to a request from their mother by '*typing a Gmail when she can't put the different letters*' (PG1-19). However, some parent interviewees expressed frustration and disappointment when their children responded, '*It is very easy*' (M2). One interviewee described:

> *I explained to my son my situation and the situation of many people. It's very easy for them because they were born with technology in hand, with a phone in hand, but I didn't use the phone when I was little and this is new to me* (M2).

Some '*desperate*' (M2) attempts to find immediate help prompted the need for self-directed tutorials as alternative solutions. Interviewees indicated a willingness to participate in DL training, such as '*formal classes with an instructor*,' either in-person or virtually. However, some noted that '[*we*] *don't know what type of services are available*' (PG1-18) at local libraries and schools. More importantly, our interviews revealed significant challenges that prevent access to available DL services. The most major barrier identified was language. Interviewees recalled their DL learning experience, noting that '[*trainers*] *said everything in English*' (M2) and '[*trainees*] *always ask for help to put it in Spanish*' (M2). One interviewee added, '*If one can understand a little bit of English, I think that it makes* [DL learning] *a little bit easier*' (M2), emphasising the need for more supportive translation services and video tutorials in Spanish. Those facing similar struggles shared:

> *I already have many years here* [i.e., the library]. *I am saddened by it, but I didn't have such an ease of learning. I couldn't understand very much because I would get on the computer to learn and then they* [i.e., trainers] *taught everything in English and I didn't understand them* (M2).

Beyond language barriers, interviewees highlighted a lack of services tailored to their life circumstances, particularly those related to their immigrant or working-class status. Even when some were aware of available resources, they noted the limited affordability of those services.

Interviewees stressed the need for free classes, pointing to a significant financial barrier, e.g., '*We don't have the money to pay for it*' (M2). In addition, interviewees reported struggling with the limited availability of free digital navigator services. This concern was evident in one interviewee's remark about the issues with kiosk machines in hospitals and government offices, stating, '*Sometimes there is no one at the desk to help you*' (M2).

Finally, time constraints because of family responsibilities and work obligations that make time and place-bound courses difficult to attend was another barrier preventing them from seeking DL learning opportunities. Some explained the reason for not seeking DL training as, '*There are places that give [classes] but there's not enough time for us*' (M2). One interviewee using a housing centre suggested the value of more flexible instruction services, stating, '*Some would come here at different times and to teach us directly*' (M2). They further emphasised that DL instructors should be more mindful of learners' life contexts that impact learning.

Discussion: From translation to transformation

In this section, we discuss which approaches should be adopted to better serve DL development among ELLs, including the use of the communities of practice (CoPs) framework (Wenger, 1998). Guided by its insights and our findings from RQ1 and RQ2, we explore which strategies can be employed to build CoPs for tailored, contextually appropriate DL programmes for Spanish ELLs, reflecting their cultural backgrounds and leveraging social learning processes in a way that empowers the community as a whole, beyond individual learners (Wenger-Trayner and Wenger-Trayner, 2014).

What strategies can be used for tailored DL programmes for Spanish ELLs?

Drawing on our findings, we now explore practical strategies for enhancing ELLs' DL development. Most Spanish ELLs in our study fell into the Forced to learn category. They reported acquiring digital skills out of societal necessity and family- or work-related requirements, rather than intrinsic motivation, despite linguistic, financial and time constraints. Language emerged as a critical obstacle for this population, consistent with the literature (Anaya et al., 2021; Peile and Híjar, 2016; Rodriguez et al., 2019, 2021), underscoring the need for tailored programmes distinct from those designed for other covered populations. However, we found that DL support for ELLs should go beyond translating materials to shift their mindset from *forced* to *willing* to learn. This calls for DL interventions that are paired with efforts to improve English proficiency, while also expanding support systems that foster learner agency. Such an approach shifts DL learning from a deficit lens of educators attempting to solve problems to an asset-based perspective that promotes transformative experiences by leveraging the individual and community strengths of ELLs.

One promising approach is to adopt the framework of CoPs, which offers insights for designing more engaged and contextually relevant DL programmes. CoPs posit that learning is a community-driven process rooted in a particular cultural and historical context, emphasising shared goals and collaborative problem-solving (Wenger, 1998). For ELLs, many of whom feel isolated from mainstream society, CoPs can foster supportive learning environments that enhance individual abilities through collective community growth. This approach, guided by the social theory of learning framework (Wenger-Trayner and Wenger-Trayner, 2014), involves three processes: helping ELLs to envision a future where DL empowers them (imagination), linking their learning to personal and community needs (alignment) and building competence through active participation (engagement). We propose strategies for nurturing these processes in DL interventions for ELLs. At its core, co-creating DL programmes with ELLs is essential (National Equity Project, n.d.), particularly in developing learning activities, defining language preferences and crafting culturally relevant curricula suited to their needs. This participatory approach fosters a sense of learning ownership and transforms DL programmes from a top-down directive into a collaborative effort.

From solitary to collaborative learning

To create transformative learning experiences for ELLs, we can adopt multiple means of representation (presenting information in various ways), engagement (diversifying learning activities) and expression (showcasing learning outcomes where appropriate) (Thomas, 2016). For example, collaborative DL working sessions can experiment with these approaches, emphasising social learning and collective goal setting, including group discussions on everyday DL applications and brainstorming sessions for problem-solving. Such opportunities enable DL initiatives to be co-designed with learner participation. To foster imagination and alignment (Wenger-Trayner and Wenger-Trayner, 2014), working session content can be centred on hands-on tasks that tackle real-life challenges common to ELLs. Examples include navigating and troubleshooting issues on public service systems (e.g., employment, healthcare, housing) together that lack language support or contain misleading information. Additionally, ELLs' family members, as their funds of knowledge, can be incorporated into joint learning activities. As evidenced in our interviews, parental work sessions can motivate ELLs who prioritise children's education, providing them with DL necessary for helping with homework and connecting with the school community. Good examples include Tech Goes Home (n.d.) in Massachusetts and the Latino Family Literacy Project (n.d.) in California, offering Hispanic ELL parents and their children family-based group work that emphasises family bonds and shared cultural values, with each of them focused on acquisition of DL and English language, respectively. DL educators and navigators can serve as facilitators in such programmes, rather than assuming the role of experts or teachers. This also allows active peer teaching and learning, similar to the success of high-end online learning platforms such as Stack Overflow for programmers helping other programmers and Scratch for a community of children learning programming languages.

From teacher-learner to trusted ally

Equally critical is determining who leads the programmes. The impacts of DL training for ELLs can be optimised through bilingual educators who can integrate scaffolding that develops both linguistic and digital proficiency simultaneously, while utilising community-relevant interventions. Libraries and housing centres with deep community ties are well-suited to hosting DL programmes, moving beyond the traditional teacher-learner dynamic. Based on their strong community outreach and partnerships with local advocates, these institutions can effectively design services tailored to ELLs' needs. To further enhance trust and rapport, increasing the representation of DL practitioners recruited from ELL communities can be an impactful approach. As part of our initiative, the Enoch Pratt Free Library's train-the-trainer programme exemplifies this effort (Sim et al., 2024). This programme trains digital navigators, tech educators and public service staff working in different settings (e.g., libraries, community centres, apartment complexes), leveraging the trusted relationship between trainers and learners. Our Marylanders Online initiative partners, such as Court Appointed Special Advocates (CASA) and the Gilchrist Immigrant Resource Center, also deliver community-focused DL programmes. One of our native Spanish-speaking educators from Venezuela teaches Google Digital Skills within a linguistically appropriate curriculum for Latino immigrants at CASA. The Digital Navigator Call Center that is part of the Marylanders Online initiative also offers tech assistance in Spanish and French to reduce the frustration of ELLs navigating English-based digital services.

From instructional to inclusive practices

Finally, CoP-based DL interventions should align with an identity-centred approach (Farnsworth et al., 2016), as learning is a social process situated within a particular historical and cultural context surrounding learners (Wenger, 1998). This should be more attuned for ELLs, who are often negotiating multiple identities in relation to their own communities and the host society they adapt to. Culturally relevant practices and social inclusion principles should be integrated into DL education for ELLs to ensure it is both accessible and practically applicable (Aarnitaival, 2010). For example, local religious hubs (such as Latino Catholic churches) and community learning centres

(such as Latino and English language exchange groups) can serve as culturally safe spaces to discuss the DL challenges within the context of Latino identity and culture. This allows the discovery of inclusive practices, similar to innovative STEM programmes that embrace the identities of underrepresented learners, such as Latinitas (n.d.), which offers tech education empowering young Latino girls through digital storytelling that reflects cultural values of this group, and Black Girls Code (n.d.), which develops coding skills for girls of colour to foster a diverse STEM workforce. Such settings can help cultivate more inclusive DL support systems, enabling ELLs to not only develop technical skills but also collectively nurture technology dispositions that match with their identity and culture.

Limitations

This study focused solely on Spanish-speaking participants from our larger study. As a result, the sample size was limited, and findings may not be generalisable to all ELL groups. However, given the large proportion of Spanish ELLs in Maryland, this group may still offer insights into language barriers in English-dominant digital environments. We believe that our recommendations above can also be adapted by other countries that have high populations of ELLs.

Next, the self-reported findings, without additional observational data on the actual DL experiences of interviewees, may have been influenced by social desirability biases (Fisher, 1993). Additionally, the researcher's lack of Spanish proficiency, relying on an interpreter, may have limited the ability to interpret nonverbal cues and ask follow-up questions during the interview.

Finally, most Spanish-speaking interviewees participated in a group interview setting, which may have hindered them from fully sharing their individual experiences. However, this format encouraged them to elaborate on their responses through interaction with one another, rather than feeling pressured to answer directly to the interviewers.

Conclusion

This work provided initial insights into the digital skills divide among ELLs. We highlighted the category that best characterises how Spanish ELLs approach DL acquisition, the motivations driving their learning and the barriers they face. Then, we shared the implications of our findings, which suggest a more communal approach (CoPs) that leverages allies and culturally responsive practices within ELL communities, moving away from a deficit lens towards an asset-based approach to DL development. We recommended the use of participatory approaches that epitomise co-creation of DL programmes and empowers ELLs to take ownership of their learning. Our initiative plans to expand on the approaches suggested in this paper by: (a) piloting collaborative learning through co-created sessions in healthcare (e.g., applying for state health insurance), benefits (e.g., requesting housing assistance) and education (e.g., engaging in learning management systems utilised by schools); (b) recruiting community allies by partnering with organisations serving Spanish speakers and mobilising local university students as digital navigators in ELL communities; and (c) embedding inclusive practices in our DL curricula that focus on identity and cultural challenges. While these are small steps, we hope to move forward with these interventions, refining strategies and assessing impact, with the goal of eventually expanding to other ELLs in the state.

Note: The data from OSB (2024) were sourced from the Current Population Survey Public Use Microdata and the American Community Survey Public Use Microdata (U.S. Census Bureau, 2021b, 2021c).
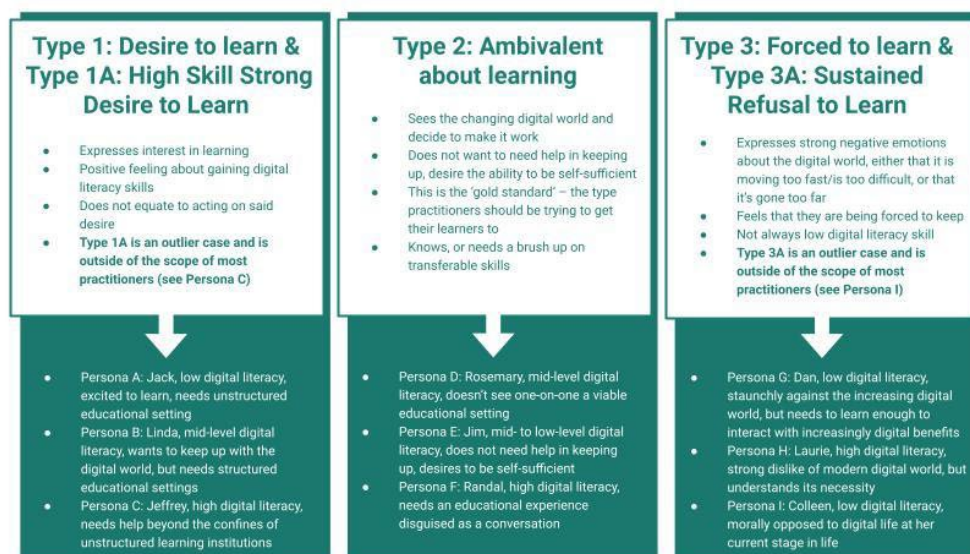
Figure 1. Typology of digital literacy learners (Harding et al., 2024)

Acknowledgements

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