Introduction: Literacy in the Modern World

In our contemporary society and global economy, what it means to be literate is constantly changing. Literate adults still need to know how to use printed and written information to perform tasks in their daily lives, such as read notes that come home from a child’s school, use written communication at work, synthesize and summarize information for an educational assignment, read instructions on how to put together a toy, or write a letter to an editor to express an opinion. However, the way literate adults complete these tasks has changed dramatically, as most of these tasks are now done using technology. For example, a child’s teacher may send information by e-mail or as a text message, or post it to the class web page; written communication in work settings is usually done through e-mail; completing educational assignments involves accessing information online, evaluating and synthesizing the information, and then submitting the written summary through an online course management system; instructions for toy assembly can be found online in written or video format; letters to the editor are submitted online, and opinions are often expressed online via social media and blogs. For these and other purposes, what it means to be literate has expanded to include the ability...
to use digital technology for literacy tasks. In the future, as technology, learning environments, and expectations for students continue to change, what it means to be literate will also evolve.

This issue brief is a part of the LINCS ESL Pro suite of resources on Integrating Digital Literacy into English Language Instruction. The purpose of this Issue Brief is to provide teachers and administrators with a broad overview of digital literacy as it relates to adult English language learners (ELLs) in English language acquisition programs. It is intended to serve as an introduction to the topic of digital literacy that teachers and administrators can use as a springboard to additional in-depth resources on this topic. Although this Issue Brief provides links to resources that help illustrate the current issues in developing digital literacy, it is not intended to be used as an instructional guide. For more comprehensive, targeted information about incorporating digital literacy into adult ELL programs, refer to the two related resources below, available from the ESL Pro landing page of LINCS:

- **Integrating Digital Literacy Into English Language Instruction: Professional Development Module**
  This online, self-access module on digital literacy includes four units on integrating digital literacy into adult English language instruction. The module provides in-depth information for teachers as well as administrators.

- **Integrating Digital Literacy Into English Language Instruction: Companion Learning Resource**
  This is a practical, comprehensive instructional resource written specifically for teachers.

This brief defines digital literacy and describes the ways in which digital literacy activities can be embedded in adult English language instruction to foster language learning and digital literacy acquisition. Specifically, this brief addresses four aspects of digital literacy: (1) using basic digital skills, (2) creating and communicating information, (3) finding and evaluating information, and (4) solving problems in technology-rich environments.

**Context: Adult English Language Learners and Digital Literacy**

Adult English language learners (ELLs) come from a variety of backgrounds and have different learning experiences and English language skills, as well as different levels of experience with print literacy and technology. Limited English language and literacy skills make it especially challenging for ELLs to acquire digital literacy skills. However, English language skills and digital literacy are essential for obtaining and keeping a family-sustaining job, supporting children in school, participating in community life, obtaining community services, and accessing further education and training.

ELLs and their teachers are part of a continuum of digital literacy experience and skills. Education, age, income, access to technology, social networks, and family members’ use of digital technologies are some of the many factors that influence the digital literacy of ELLs. Some ELLs have digital literacy skills in another language
and need to develop their English language skills to be able to use those digital literacy skills in English. Other ELLs have print literacy skills in another language and need to develop both their English language and digital literacy skills. Still other ELLs are developing skills in all three areas: print literacy, English language, and digital literacy. Different supports are required for these various types of ELLs as they develop digital literacy skills, including face-to-face support by teachers, tutors, or peers; online support, such as images or translations that pop up when mousing over words; and appropriate content support (National Institute for Literacy, 2008; Reder, Vanek, & Wrigley, 2012).

**Key Consideration: With Digital Literacy, Everyone Is a Learner**

There was a time when getting important information from a government office meant going to that office to pick up a packet of papers, calling to arrange a meeting with someone at that office, or submitting a written request to the office. Today, however, getting information frequently involves accessing a complex website, downloading a PDF, or completing an online form. In the future, as technologies evolve, getting information will require still different digital literacy skills. Thus, what is meant by digital literacy today will continue to change over time (Lotherington & Jenson, 2011). Further, in these rapidly changing digital environments, with new and updated devices coming out all the time, everyone is a learner. That is an important consideration when designing instruction and supports for learners and teachers.

No teacher can be expected to know everything about the constantly changing nature of technology and the related digital skills required for digital literacy. In adult ELL classrooms, some students may have expertise in different technologies or applications that they can share with other students in the classroom. In this situation, the role of the teacher shifts: They become orchestrators of learning rather than dispensers of skills, serving to facilitate learning and often learning alongside their students (Leu et al., 2013; Vanek, 2014).

**Using Basic Digital Literacy Skills: Integrating Basic Digital Skills Into Instruction**

Basic digital skills are those needed to operate digital devices, including turning them on and off; keyboarding; using a mouse; using a touchpad; right- and left-clicking; double-clicking; and long-pressing. These skills also include knowing how to create, save, locate, and edit computer files as well as how to open, use, and close a variety of computer applications. These applications may include browsers for searching the Internet, mapping applications that provide driving directions, and applications for finding information. Basic digital skills also include having the necessary language and literacy skills to do things in a digital environment, such as sending an e-mail to a child's teacher or filling out a job application online.

For adult ELLs, effective activities are ones that teach basic computer skills alongside language instruction and integrate basic digital skills into the overall topic or theme of an adult ELL course (Littlejohn, Beetham, & McGill, 2012). As research with gaming has demonstrated, digital skills can be learned through
hands-on discovery processes while in pursuit of a meaningful goal instead of in isolation (Gee, 2003). Student-centered instructional approaches seek to engage students actively in their learning in ways that are meaningful to their lives and their goals (Peyton, Moore, & Young, 2010). Thematic units, problem-based learning, project-based learning, and other student-centered approaches to adult English language acquisition provide content into which authentic digital tasks can be integrated. For example, a problem-based unit on issues with a landlord can include obtaining and reading important information about tenants’ rights. The unit would include the vocabulary, grammar, and reading strategies needed for all of the activities, including digital ones. Supporting information may be available in a variety of languages for ELLs. For example, the U.S. Department of Housing and Urban Development resource Filing Your Housing Discrimination Complaint Online offers guidance on filing a housing discrimination complaint online in seven languages. In completing this task, ELLs can complete learning activities that are specific to their needs, as determined by assessments like the Northstar Digital Literacy Assessment. Appropriate activities such as those in the Saint Paul Public Library Northstar Learning Guide can be assigned to individual students to build the skills needed for the unit (Vanek, 2014). In the example of filing a housing discrimination complaint, the digital literacy skills involved might include basic word processing, creating and retrieving a word-processed document, copying text from the document into an online form, including one’s e-mail address with other contact information, and submitting the online form.

Creating and Communicating Information—Using Technology to Extend Learning

As ELLs develop basic digital literacy skills, many opportunities will arise to extend English language acquisition beyond the walls of the classroom. A second aspect of digital literacy is the ability to create and communicate information online, which offers nearly unlimited English language acquisition activities. Any project, topic, theme, or problem-based approach can be extended on the Internet to (1) include speaking, listening, reading, and writing opportunities for additional English learning and (2) continue to develop digital literacy skills further along the digital literacy continuum.

Speaking. To extend opportunities for speaking English to people outside the classroom, students can create podcasts1 or screencasts2 as part of a class project or other instructional approach. Creating original multimedia products can be highly motivating to students as they learn the vocabulary and grammar needed to communicate their messages to an audience outside of their classroom, ideally to a real audience and for a real purpose. Students might make a mini-documentary about a visit to an art museum to show to students in another class; create a PowerPoint about diabetes for members of the community (Wrigley, 2004); or develop a presentation about the culture, food, language, or educational system of their country of origin for a local elementary school.

Listening. Many different podcasts are available to add listening opportunities to almost any topic or theme3 of study in the adult English language acquisition classroom. Not only can podcasts provide listening practice, they can also be used to teach a variety of specific listening or note-taking strategies to increase the rigor of instruction at nearly any level (e.g., listening for specific information, listening for the main idea, making inferences). (For more information about increasing rigor in adult English language acquisition instruction, see the related issue brief and in-depth online module, available from the LINCS ESL Pro home page of the LINCS Resource Collection) Assigning individual students to listen to podcasts, YouTube videos, and other Internet-based media allows educators to differentiate instruction and better meet the diverse needs, interests, and abilities of students.

Reading. When reading comprehension is the instructional goal, online texts can be helpful. Images, hyperlinks to word meanings (in English or the students’ first language), illustrative videos, and recordings of word pronunciations all provide support as ELLs match written form to meaning. ELLs learn vocabulary as they interact with

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1 A podcast is a recorded audio file that is put online for others to listen to or download. Audacity (http://audacity.sourceforge.net) is an example of free podcasting software that students and teachers will find easy to learn and use.

2 A screencast is a video that records what is on a computer screen; it can also be narrated by a person on the computer. On the Free Tech 4 Teachers website, Richard Byrne reviews three web-based screencasting sites: http://www.freetech4teachers.com/2010/07/3-web-based-tools-for-creating.html.

3 For example, elli (http://www.elli.org) offers more than 1,300 podcasts for ELLs on a variety of topics, with various levels of difficulty, utilizing different voices. Each short podcast has associated comprehension and vocabulary activities.
these various aspects of word meaning. Digital formats can be especially useful for learners who are acquiring a combination of print, English language, and digital literacy. Multimedia formats with clear images and sound can help to make reading accessible. After learning a story, ELLs can access the digital story on their own, and practice reading, listening, and digital skills outside the classroom.

**Writing.** An important part of learning to write in a new language is writing purposefully or for specific audiences, not just for the instructor. The Internet offers ELLs access to a broad spectrum of potential readers. For example, students might create a class newsletter for incoming students, create a PDF that explains how to use the local banking system for a lower-level class, or make a video demonstrating how to cook a special dish for a class web page. What is important about these examples is that students are using their emerging English skills by writing for authentic readers. Focusing writing on specific readers helps ELLs select the language, most appropriate format, and degree of accuracy needed for the intended audience. Such writing projects are typically collaborative in nature, and they also allow students to learn relevant vocabulary, grammar, and digital skills at the same time.

Writing-based technologies, especially those involving the Internet, provide many opportunities for ELLs to be authors and knowledge makers. Multimodal formats such as blogs, digital stories, and wikis are some of the many digital tools that ELLs can use to communicate in and outside of the classroom. Writing for audiences outside the classroom can help to reduce the social isolation that can characterize linguistic minority group members (Webb, 2006) and create ways in which adult ELLs can construct and maintain identities as well as build community (Thorne, 2009).

**Finding and Evaluating Information Online: Teaching Information and Media Literacy**

The volume of information available online is almost unfathomable. Information on the Internet may be posted by people intending to inform, persuade, sell, and demonstrate, as well as mislead. Information and media literacy involves several sets of skills, including the ability to (1) locate and interpret online information and (2) evaluate the accuracy, reliability, and point of view of information on the Internet (Coiro, 2014).

Locating and interpreting online information involves creating effective search terms, scanning text and images for specifics, selecting relevant hyperlinks, picking out information sources, and interpreting perspective. These skills are often required for work and training. (For more information on connecting adult ELLs to career pathways through contextualization, see the related issue brief and in-depth module available from the LINCS ESL Pro home page on the LINCS Resource Collection.) Because ELLs are still mastering English language skills, the

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4 GCF Learn Free (http://www.gcflearnfree.org/reading/learnenglish) is an example of an online interactive vocabulary learning activity.

5 The ESL literacy readers (https://esl-literacy.com/readers), produced by the Canadian ESL Literacy Network, are examples of online readers.

6 Can also be called information literacy, web literacy, or Internet literacy.
ability to find and evaluate information online can be difficult. It requires scanning to pick out what is important as well as a close reading of some elements while disregarding others. The typical busy web page is difficult for ELLs to read and interpret.7

In addition, the skills required for close online reading are not the same as the skills required for print reading (Wyatt-Smith & Elkins, 2009). Reading online is interactive and nonsequential in the sense that readers need skills to select the hyperlinks they want to follow and the embedded videos they want to watch. Online readers then need to determine whether or not to go back and continue reading from the original linked location. Because readers on the Internet select their own content, searching for information and reading on the Internet is a lot like authoring, as each online reader’s experience is unique. This language-intensive activity is especially challenging for ELLs who need to read all of the information on a page to be able to identify the information that they are looking for or to select an appropriate link to follow.

Reading strategies that are important for print reading are also important in digital environments, and include previewing, predicting, asking questions, monitoring comprehension, and making connections. For ELLs, reading a web page requires the ability to distinguish navigation features, advertisements, and sponsored content from the information on the page. In addition, in digital environments it is particularly important to be aware of one’s own thinking in using reading strategies to locate, critically evaluate, and synthesize information (Coiro, 2011).

In addition to finding and interpreting online information, ELLs need to develop the skills to evaluate information on the Internet. One approach is to ask a series of critical questions about the author’s purposes and goals in creating the message. Questions that critically examine online information can address topics such as relevance, accuracy, bias/perspective, and reliability (Coiro, 2014).

A stepping stone to developing English skills to evaluate information on the Internet is to develop those skills in a language in which adult ELLs are already proficient. Asking important critical questions does not depend on the language in which it is written; this can be done in any language. Adult ELLs with literacy skills in a non-English language can learn how to use critical questions to ask about online information and apply those questions to online information in any language. For example, an assignment can ask students to answer a set of critical questions about several websites on a current topic, and then students can be given the choice to use websites in English or in a language in which they are already proficient.

According to the Center for Media Literacy (2005), answers to five key questions help to critically evaluate information online:

1. Who created this message?
2. What creative techniques are used to attract my attention?
3. How might different people understand this message differently?
4. What lifestyles, values, and points of view are represented in, or omitted from, this message?
5. Why is this message being sent?


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7 Several sites provide information that is appropriate for English language learners and teachers about effective Internet searching. Digitallearn.org (http://digitallearn.org/learn/basic-search) and GCF Learn Free (http://www.gcflearnfree.org/internet101/s) are two examples.
Solving Problems in Technology-Rich Environments: Teaching Advanced Digital Literacy Skills

To fully benefit from the opportunities offered by technology, adult ELLs need to be able to solve problems in digital environments. Developing this skill is important in a wide variety of contexts, including education and training, career, family, and community. An example of such a context is when an English language learner realizes that he or she is expected to go to a parent-teacher conference but does not know when or where to go. Communications between schools and parents have moved to primarily online and mobile phone text messaging formats, making this a technology-rich environment. Schools use their websites, blogs, social media, and other technologies to post school information and communicate with parents. Parents who are ELLs may have difficulty because of their English language and digital literacy skills. ELLs need to learn problem-solving skills to deal with such scenarios in technology-rich environments.

Solving problems in technology-rich environments involves analyzing various requirements to find a solution, setting up appropriate goals and plans, monitoring one’s progress, adapting to barriers, and persisting until the purposes are achieved or until a resolution fails to be reached (Program for the International Assessment of Adult Competencies Expert Group in Problem Solving in Technology-Rich Environments, 2009). This is closely related to developing information and media literacy skills.

Collaborative problem solving in technology-rich environments is part of the next generation of skills required to be a digitally literate adult. Increasingly, collaboration for purposes of work, education, and community is being done in digital environments. This collaboration requires a new set of language and digital skills, such as conventions for getting the attention of participants, cues to confirm that one is listening, indications of agreement or disagreement, knowing how to initiate and terminate the software application used to communicate, and conventions for collaborative writing. There are a variety of ways to integrate these skills into English language instruction. For instance, in a unit on workplace communication, students can participate in a cross-class audio or video conference to collaborate on a project or problem-solving activity.

The interactive skills used in such an activity—such as taking turns, giving opinions, expressing agreement or disagreement, and active listening—provide opportunities for English language acquisition that mirrors real-world work situations.

Considerations for Administrators

As the role of the teacher shifts, so do the supports required (Means, 2010). Teachers need time to work together to define new ways of orchestrating learning, time for professional development relating to integrating technology into instruction, and support for policies that allow portable devices to be used effectively in the classroom. Instructors also need encouragement to continuously try new approaches with evolving technologies and the associated literacies. Administrative support is also needed so that teachers can plan and implement activities such as cross-class exchanges and expanding digital and face-to-face connections within the local community. Robust infrastructure and reliable, easily accessible technical support for students and teachers continue to be vitally important.

For more information about administrative supports for developing digital literacy in adult ELL instructional programs, see the in-depth module available from the ESL Pro landing page of the LINCS Resource Collection.

Conclusion

To benefit from the opportunities that technology presents for participating in modern life and for English language acquisition, adult ELLs need to develop digital literacy skills. This includes the use of basic digital skills, the ability to create and communicate digital information, the ability to find and evaluate information online, and the ability to solve problems in technology-rich environments. Ensuring that adult ELLs receive and are engaged in meaningful and relevant digital literacy instruction requires comprehensive thinking at the national, state, local, and classroom levels. Teachers and program directors need to integrate opportunities to develop digital literacies into lessons, curricula, and programs. State directors and professional leaders need to more deeply integrate digital literacy into national- and state-level thinking to expand concepts.
of teaching and learning digital literacy skills. They need to provide supports at every level, so that ELLs develop digital literacies along with English language and other skills required for the workforce, education, their communities, and family life. Knowledge of and beliefs about digital literacies must continue to evolve as digital literacies evolve. In the world of digital literacies, everyone is a learner.

Works Cited


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8 As defined in the Workforce Innovation and Opportunity Act, the term “workforce preparation activities” means: activities, programs, or services designed to help an individual acquire a combination of basic academic skills, critical thinking skills, digital literacy skills, and self-management skills, including competencies in utilizing resources, using information, working with others, understanding systems, and obtaining skills necessary for successful transition into and completion of postsecondary education or training, or employment (U.S. Department of Education, Office of Career, Technical and Adult Education, 2015).


Additional Resources

The Northstar Digital Literacy Assessment (http://www.digitalliteracyassessment.org) is a free online digital literacy assessment that examines the ability of adults to perform basic digital tasks through online, self-guided modules. Housed at the Minnesota Literacy Council, the assessment includes basic computer digital literacy standards and modules in eight main areas: Basic Computer Use, Internet, Windows Operating System, Mac Operating System, E-mail, Word Processing (Microsoft Word), Social Media, and Microsoft Excel.

The ESL Literacy Network (https://esl-literacy.com) is a large, resource-rich website for professionals who work with English learning adults with little education and limited literacy. The ESL Literacy Network was created at Bow Valley College in Calgary, Canada. Users may find the online ESL literacy readers (https://esl-literacy.com/readers) particularly useful. The literacy readers include sound, clear images, and simple language.

DigitalLearn.org has digital literacy learning resources that are appropriate for:

- Basic digital literacy (http://digitallearn.org/learn/getting-started-computer)
- Learning how to e-mail (http://digitallearn.org/learn/intro-email)
- Learning how to conduct a basic search (http://digitallearn.org/learn/basic-search)

Several of the learning activities are also available in Spanish.

GCF Learn Free (http://www.gcflearnfree.org) is a large, free website devoted to helping users learn a wide variety of essential skills through engaging, interactive multimedia activities that are appropriate for English language learners, including:

- Basic English (http://www.gcflearnfree.org/everydaylife/edall)
- Computer skills (http://www.gcflearnfree.org/computers)
- Internet searching (http://www.gcflearnfree.org/internet101/5)
- Reading (http://www.gcflearnfree.org/reading/learnenglish)

USA Learns (http://www.usalearns.org) is a free online English learning resource that includes a wide variety of activities that accompany video-based storylines. The Edutopia blog by Julie Coiro presents instructions for teaching critical information literacy. Although developed for middle school learners, the ideas are also appropriate for adult English language learners. See, for example, “Teaching adolescents how to evaluate the quality of online information” (http://www.edutopia.org/blog/evaluating-quality-of-online-info-julie-coiro).