

DIGITAL LITERACY RESOURCES FOR ADVANCING INSTRUCTIONAL PRACTICES, LEARNER ENGAGEMENT, AND STUDENT OUTCOMES

Jamie Harris
World Education, Inc.

Bayo Adetunji
Maryland Department of Labor

ABSTRACT

Digital literacy is vital to the success of adults everywhere, whether in life, academia, or employment. Despite its importance, guidance for the implementation of digital literacy within adult education is limited. For this reason, innovative resources need to be created to define and guide adult learners in their understanding of digital literacy and facilitate their growth in skills related to digital literacy. In this article, readers will explore two innovative resources that have informed and supported learner engagement in instructional settings and examine the impact of these resources.

Keywords: digital literacy, elements, digital competence, technology, adult education, instruction, adult learners, frameworks, guides

Digital literacy is vital to the success of adults everywhere, whether in life, academia, or employment. Despite its importance, guidance for the implementation of digital literacy within adult education is limited. For this reason, innovative resources need to be created to define and guide adult learners in their understanding of digital literacy and facilitate their growth in skills related to digital literacy. In this article, readers will explore two innovative resources that have informed and supported learner engagement in instructional settings and examine the impact of these resources.

The Workforce Innovation and Opportunity Act (WIOA) states that digital literacy is an allowable workforce preparation activity (OCTAE, 2015). The term *digital literacy*, while commonly used, varies in definition and application for adult learners. This variance has created gaps in understanding, identification, and development of skills. Maryland Department of Labor's Office of Adult Education & Literacy Services recognized this gap as well as the discomfort of some adult education practitioners and students with technology and digital literacy. In response, the Maryland Department of Labor's Office of Adult Education & Literacy Services led the charge to collaboratively create two resources by adult education stakeholders to address digital literacy needs. These two resources highlight seven interconnected elements of a digitally literate adult learner: technical, civic, communicative, collaborative, computational thinking, investigative, and productive.

FILLING THE GAP

The *Digital Literacy Framework for Adult Learners (DLF)* of 2019 and the *Digital Literacy Framework: Instructor Implementation Guide* (Instructor Guide) of 2020 fill the identified gaps and provide digital literacy guidance to advance a deeper understanding of digital literacy for the present while considering the future. The Framework, shared in Figure 1, provides seven interconnected elements. A definition, guiding questions, a description, and situational examples are provided for each element in Figure 2. The Instructor Guide, which is organized by content-based lesson activities (i.e., language learning, math, reading, etc.), demonstrates how digital literacy elements are a part of instruction. The Instructor Guide also includes a section with curated resources to support learning and provides tools for adult learners.

METHODOLOGY FOR MEASURING IMPACT

One purpose of this article is to examine the impact of the DLF and Instructor Guide. The impact was measured by a survey and professional development feedback. The two-part online survey (see Appendix 1) was designed and administered to a group of adult education stakeholders who have used the DLF and the Instructor Guide. The survey was created to solicit their input about the impact of these digital literacy resources on instructional activities and student engagement. The survey was divided into two sections. The first section consisted of five questions focusing on the DLF, and the second section featured five questions focusing on the Instructor Guide. The survey questions were informed by the objectives of this article and included a variety of question types: Likert scale, open-ended, and checkboxes. Survey responses were collated, summarized, and analyzed to determine the impact of the two resources on instructional practices. The open-ended questions provided an opportunity for respondents to elaborate on their responses. The impact was further measured by feedback obtained during presentations and discussions that highlighted the DLF and Instructor Guide.

DEFINING DIGITAL LITERACY

Digital literacy skills are defined by the International Museum and Library Services Act of 2018 (2018) as “the skills associated with using technology to enable users to find, evaluate, organize, create, and communicate information and to develop digital citizenship and the responsible use of technology” (STAT. 132, p. 5412). This article adopts the Museum and Library Services’ definition as well as the seven elements outlined in the DLF. Each element is further examined below.

The Elements Defined

Technical Element

An individual’s ability to use, operate, or navigate digital tools and devices is part of the technical element. It is inclusive of typing, navigating, and troubleshooting. This element is defined as “physical navigation and operation of digital tools, structures, and conventions” (Digital Literacy Framework Work Group, 2019, p. 8). Transferability of skills in different situations is also vital to the technical element.

Civic Element

A digital footprint, a vital part of one's online identity, is listed in the civic element along with online safety, building identity, managing online reputation, and etiquette. It is defined as “using digital tools safely, effectively, and appropriately” (Digital Literacy Framework Work Group, 2019, p. 12). Social media postings, citing sources, and appropriate behavior in an online meeting are all examples of the civic element at work.

Communicative Element

Sharing digital content effectively requires understanding the needs of the intended audience, the expected outcomes, and the ability to select the most appropriate format and platform (Meyers et al., 2013). The communicative element is defined as the ability to share “ideas clearly, effectively, and creatively with different audiences following digital communication protocol” (Digital Literacy Framework Work Group, 2019, p. 9). Writing a blog, composing a professional email, developing presentation slides, and posting a comment on social media are examples of this.

Collaborative Element

The ability to connect and work with others, at the same time or at different times, to achieve common goals is important. This can foster engagement, innovation, and creativity. The collaborative element is defined as “connecting and working with others while using appropriate digital platforms and tools” (Digital Literacy Framework Work Group, 2019, p. 11). Working on shared documents or participating in video conference calls are examples of this element.

Computational-Thinking Element

Computational thinking is an approach to problem-solving that includes leveraging digital media and technology to arrive at the most efficient solution. It is defined as “using critical thinking and problem-solving skills in conjunction with technology to gather data, analyze information, and find a solution” (Digital Literacy Framework Work Group, 2019, p. 12). Using a spreadsheet to create budgets, developing a meeting agenda, and aligning lesson activities to lesson objectives are examples of this element.

Investigative Element

The ability to find and identify credible and reliable information is important for problem-solving (Leu et al., 2014). This element is defined as “searching, identifying, and validating reliable and authentic digital resources” (Digital Literacy Framework Work Group, 2019, p. 12). Situational examples of this element include researching for a point of view, finding alternate routes to a location, and identifying the best credit card company.

Productive Element

Finding, identifying, analyzing, evaluating, and appropriately using available resources are at play in the process of creating digital content and curating resources. The productive element is defined as “creating content and/or products through the use of digital tools” (Digital Literacy Framework Work Group, 2019, p. 13). Creating an invitation, presentation slides, a professional résumé, or an instructional video are situational examples of this element.

IMPACT OF THE DLF

The creation of the DLF was innovative in many respects. It deviated from the traditional curriculum standards, checklists, and other guidelines that historically informed the implementation of digital learning. The purpose of the DLF was to provide a definition, structure, and guidance for all adult learners to successfully navigate the digital environment and build digital literacy. The DLF allows for flexibility, adaptability, and experimentation. The impact of the DLF has been measured by a survey and feedback from professional development offerings. Some of the feedback is listed below (see Appendix 1 for the survey results):

- “Students taking ownership of the learning process by being leaders while working in breakout rooms. Students feeling comfortable using different websites to interact with their classmates.”
- “New ways of delivering instruction that allows for collaboration and higher order thinking as well as greater depth of knowledge.”
- “Students feel more confident using technological devices now; they know how to navigate different platforms and get the most of it. Students have seen the benefit of online learning [throughout] this past year.”
- “Through the use of digital literacy, students are more engaged and appreciate how they can transfer the skills they’re learning in class to their real life. For ESL students, it gives them more confidence and collaboration activities help build strong bonds between students.”
- “I observed that many of the students were pleased at having gone over issues such as protecting identity online (civic component) or learning how to make posts on Padlet along with some writing. Their initial hesitancy disappeared after they realized that these types of topics and exercises were going to be intertwined with conventional ESL topics such as grammar and vocabulary.”
- “Instructors have a stronger awareness of how to integrate digital literacy elements into their lessons and how to strengthen collaborative learning. The staff and teachers were very excited to have the framework and guide to help them create lessons that were more relevant and engaging for their students. They felt better supported and prepared to address digital literacy by using the [Framework] and guide. The students were more engaged and enjoyed the lessons. It was more applicable to their learning and everyday life skills.”
- “I’m happy to go on record as saying that the framework was critical to us as an organization that trains and supports AE practitioners. It gave us a solid, clear starting point from which we could introduce instructors to the concept of digital literacy and train them on effective implementation in their classrooms.”
- “It has been positive most of the time, however, we are still struggling to convince some of the students and instructors about the importance of promoting digital literacy through online learning.”
- Innovative practices with the implementation of the DLF: “We added over 25 new

vetted digital literacy activities to our online library. These include using cell phone applications (maps, calendar, speech to text, etc.), exploring cyber/security and protection of personal data, students creating videos and PowerPoints to present to their classmates, internet research (comparing/authenticating sources, career exploration/job search, etc.), planning (agendas, itineraries, budgets, etc.), and more.”

- Innovative practices with the implementation of the DLF: “Project-based activities that include the DL skills; instructor-learning community to share successes and challenges in implementing the DLF; instructors using tech tools and apps in the delivery of lessons and for assessments.”

A GUIDE FOR INSTRUCTOR AND LEARNER ENGAGEMENT

The DLF provides a clear definition of digital literacy for all adult learners. Its flexibility for various contexts was intentional during development, so it can be utilized for many types of adult learners. To provide an instructional focus using the DLF, the Instructor Guide compiled the work of adult educators who incorporated digital literacy into instruction. It also has a curated list of existing tools and resources on the web that provide support for technology integration.

Instructional Praxis

In the Instructor Guide, 33 lesson activities, created and implemented by adult education practitioners, are organized by content areas: general, college and career, reading, math, social studies, writing, and language learning. These lesson activities demonstrate and emphasize the integration of digital literacy skills into existing instruction. The interconnectivity of elements in each lesson activity is shown as well as standards and competencies that align to each lesson activity and key observations. Figure 3 shows Page 1 of a lesson activity provided in the Instructor Guide.

This activity, “Digital Footprint with Social Media” (Harris & Adetunji, 2020, p. 33), shines a spotlight on the creation, management, and implications of a digital footprint, which is an important component of digital literacy (Micheli et al., 2018). This lesson activity involves searching online, collaborating, creating an online persona, and developing a professional online presence; all of these are important aspects of digital literacy (Surmelioglu & Seferoglu, 2019). All lesson activities provide ideas for lesson extension activities that could promote a better understanding; in this lesson activity, the lesson extension on the creation of a LinkedIn profile is provided. This activity reinforces the notion that the information or data that one creates on various digital platforms matter, and responsible online behavior is contingent on awareness of how one’s actions may impact self and others.

Curation of Resources

The internet has extensive resources to support the learning of technology tools. The second section of the Instructor Guide provides a list of these resources in alignment with the elements of the DLF. The resources include tutorials, videos, courses, etc. that lend to the professional development of instructors as well as provide content for student engagement.

Impacts of the Instructor Guide

The Instructor Guide documented adult education practitioners' expertise in integrating elements of digital literacy into instruction and was designed to create a model that can be replicated in various instructional contexts. While some instructors use the resource as is, others, in Maryland and other states, have created their own lesson activities that follow the model presented in the Instructor Guide. The collaboration to create this resource was innovative, but the ability of others to model this integration into their own classroom, as well as create their own lesson activities, was an extension of the innovation. Some practitioners who used the resource have shared its impact via feedback from professional development offerings and a survey.

PROFESSIONAL DEVELOPMENT

The delivery of professional development to adult education practitioners is an important factor in measuring the impact of the DLF and Instructor Guide. The attendees of professional development expand their knowledge and understanding of digital literacy and its part of their lives, employment, and learning. The DLF and Instructor Guide were featured in professional development delivered nationally and internationally to adult learners. One of those professional development offerings was the Maryland Virtual Training Institute (VTI) in which presenters share their ideas and get feedback. The presentations of the VTI over the past 2 years included eight presentations from Instructor Guide contributors or other adult education practitioners who referenced the DLF or Instructor Guide (MD Labor, 2021) in their work.

Local adult education programs also documented increased professional development to their instructors based on the DLF and Instructor Guide. During one of these professional development sessions, instructors created additional lessons to support instruction influenced by the civic and collaborative elements. In another local program professional development session, instructors adapted existing lesson activities to other content-area lessons.

SURVEY AND PROFESSIONAL DEVELOPMENT FEEDBACK

Surveys and feedback are another way to measure the impact of the DLF and Instructor Guide. In a survey, a respondent documented that instructors used the Instructor Guide to integrate new tools to support instruction, which resulted in a variety of visuals to engage learners. Another respondent noted that instruction became less about turning pages and fill-in-the-blanks. Rather, instructors have become creative with student engagement. Feedback was provided during professional development sessions and a survey states impacts of the Instructor Guide for participants:

- “Instructors used the lesson examples as a guide to help them identify ways to strengthen the integration of digital literacy into lesson structures in the classroom.”
- “The staff and teachers feel more confident having the [Instructor Guide] as a resource. They have solid examples of what each element can look like in practice and because the lessons can easily be modified, it gives them a structure to build on.”

- “Students with laptops felt increasingly comfortable in using the word processor programs, write their answers on Google doc and do edits, etc. They often shared their screens with their group mates (those who did not have access to laptops), this way they participated in class as active learners. Some of the students who originally used cell phones stated their intention to get a notebook or laptop for future classes after seeing the relative ease of doing some class activities on a laptop.”
- “This is a strong, comprehensive resource for both ABE and ESL.”
- “Both documents are great resources. They include good recommendations and present them in a very clear way.”
- “I can integrate digital literacy with my content.”
- “It was also exciting to hear that instructors in other states are using the Digital Literacy Framework and the Instructor Implementation Guide to inform professional development and create resource hubs with additional lesson activities.”
- “What a great exercise! I’d definitely love to replicate this activity for our program instructors.”
- “Less teacher talk and more student interaction, critical thinking—allowing students the time to practice skills and learn new technology, not so rushed more reflective.”
- “Expansion of DL skills in one lesson to other lessons; instructors adapt curated resources for lesson planning.”
- Guidelines make sense, IIG provides concrete help, totally digital learning was a leap for most; these tools made it more understandable-doable by expanding knowledge and understanding purpose.”

DISCUSSION

This article presents the result of a quantitative and qualitative evaluation of the impact of two innovative resources—the DLF and the Instructor Guide—created by the Maryland Department of Labor’s Office of Adult Education & Literacy Services to meet the digital literacy needs of adult learners. Survey data showed that the two resources have positively impacted adult education programming in different jurisdictions. The positive impact is not only limited to the adult basic education English as a second language (ESL) student population but also to program staff and instructors. Evaluation data were collected through various methods, including a survey and professional development feedback. More than half of the survey respondents were adult education practitioners in suburban local program areas. Elements identified in the DLF were integrated both individually and in groups to all adult learner groups, including administrators, staff, instructors, and students. Ninety-one percent of survey respondents reported that the technical, civic, and investigative elements have been integrated into instructional activities.

All respondents indicated that they implemented the lesson examples, and 76.9% stated that they also implemented the curated resources contained in the Instructor Guide. The DLF is shown to have a 86.6% positive impact and a 15.4% very positive impact. The feedback obtained from various adult basic education stakeholders also point to the positive impact of

student outcomes. The respondents reported a number of innovative practices which have been put in place with the implementation of the DLF, including the creation of project-based activities and the addition of several digital literacy activities into existing online libraries. Some instructors have used the lesson activities provided as is, while others have used them as a starting point to build their own lesson activities. The lesson activities were not aligned with specific elements or delineated by educational functional levels (EFL), while this information was included, because the elements are interconnected. In addition, digital literacy proficiency is not necessarily based on students' EFLs.

One of the limitations of the methodology is related to the survey. The survey was administered to a limited number of stakeholders who would be able to respond to the survey within a limited time. Data collection is ongoing; the results will be updated as additional information becomes available. A few respondents reported that some adult learners were hesitant about adopting digital technology. There was also concern from one of the respondents indicating the need for additional time on the part of some adult basic education and English language instructors to become familiar with the use of digital technology instruction. Concerted efforts are in place to continue to nudge practitioners who may feel overwhelmed by the process to begin to take the necessary baby steps in the right direction. Additionally, the lack of internet and device access was presented as a challenge that interfered with some efforts to implement digital literacy.

In addition, Maryland will continue to identify the digital literacy needs of the different adult learner groups and provide appropriate solutions to meet those needs.

CONCLUSION

A scan of digital literacy research suggests that further research on the digital literacy needs of adults with low literacy skills is needed. Much of the literature on digital literacy focuses on the K–12 system or higher education, not on adult learners with low literacy skills. The DLF and Instructor Guide were developed to address that gap, as well as provide guidance for all adult learners in identifying and developing digital literacy. A survey and feedback from professional development sessions have shown the two resources to have a positive impact on adult education practitioners and student outcomes. Digital literacy is vital for adult education practitioners and students; therefore, efforts to support adult education practitioners in their pursuit of digital literacy growth should be fostered, and best practices should be replicated. ⌘

Jamie Harris, an adult education professional for 14 years, has worked in English for speakers of other languages, English as a foreign language, adult basic education, marketing, and teacher trainer programs, nationally and internationally. Working with adult learners has been an extension of Ms. Harris' desire to support the success of adult learners with significant barriers. She works as Digital Skills Senior Technical Advisor at World Education, Inc. Ms. Harris has a BS in Communication Studies, an MEd in Adult Education, TESOL, and has completed programs at the Harvard Kennedy School of Executive Education. She can be reached at jamie_harris@worlded.org.

Bayo Adetunji is an Adult Education Program Specialist in the office of Adult Instructional Services at the Maryland Department of Labor. She has also served as a Client Services Manager at the Center for Workforce Solutions, Anne Arundel Community College, and Manager of Customized Training in the Business and Continuing Education Center, Baltimore City Community College, where she managed the implementation of contracts for noncredit and credit courses. She has a BS in Political Science and an MEd in Career and Technology Education. Ms. Adetunji can be contacted at bayo.adetunji@maryland.gov.

REFERENCES

- Digital Literacy Framework Work Group. (2019). *Digital Literacy Framework for Adult Learners*. Maryland Department of Labor. <http://labor.maryland.gov/gedmd/digitalliteracyframework.pdf>
- Harris, J., & Adetunji, B. (Eds.). (2020). *Digital Literacy Framework: Instructor Implementation Guide*. Maryland Department of Labor. <http://labor.maryland.gov/gedmd/dlfinstructorguide.pdf>
- International Museum and Library Services Act of 2018. (2018). Pub. L. 115-410, 132 Stat. 5412 (2018). <https://www.congress.gov/115/plaws/publ410/PLAW-115publ410.pdf>
- Leu, D. J., Zawilinski, L., Forzani, E., & Timbrell, N. (2014). Best practices in new literacies and the new literacies of online research and comprehension. In L. M. Morrow & L. B. Gambrell (Eds.), *Best practices in literacy instruction* (5th ed.).
- Maryland Department of Labor (MD Labor). (2021, May 14). Maryland Department of Labor's Office of Adult Education & Literacy Services Virtual Training Institute. <https://www.mdadulthoodvti.org/archive>
- Meyers, E. M., Erickson, I., & Small, R. V. (2013). Digital literacy and informal learning environments: An introduction. *Learning, Media and Technology*, 38(4), 355–367. <https://doi.org/10.1080/17439884.2013.783597>
- Micheli, M., Lutz, C., & Büchi, M. (2018). Digital footprints: An emerging dimension of digital inequality. *Journal of Information, Communication & Ethics in Society*, 16(3), 242–251. <https://doi.org/10.1108/JICES-02-2018-0014>
- Office of Career, Technical, and Adult Education (OCTAE). (2015). *Adult Education and Family Literacy Act: Integrating Technology*. U.S. Department of Education. <https://www2.ed.gov/about/offices/list/ovae/pi/AdultEd/integrating-technology.pdf>
- Surmelioglu, Y., & Seferoglu, S. S. (2019). An examination of digital footprint awareness and digital experiences of higher education students. *World Journal on Educational Technology: Current Issues* 11(1), 048–064. <https://eric.ed.gov/?id=EJ1205431>

Figure 1

The Digital Literacy Framework for Adult Learners Wheel (Digital Literacy Framework Work Group, 2019, p. 12)



Figure 2

A Page from the Digital Literacy Framework for Adult Learners (Digital Literacy Framework Work Group, 2019, p. 7)



COMPUTATIONAL THINKING

Using critical thinking and problem-solving skills in conjunction with technology to gather data, analyze information, and find a solution

GUIDING QUESTIONS

- Do I understand how ideas work together to create a solution?
- Do I see possible outcomes from decisions made when solving a problem?
- How do I give clear guidelines for others to follow?
- What steps can I take to solve the problem?
- What information distracts me from solving the problem?

DESCRIPTION

The computational thinking element allows an individual to leverage digital media and technology to solve a problem. Alternatively, a user can utilize technology to simulate complex situations to determine potential outcomes. Research identifies the following components of computational thinking (Cansu & Cansu, 2019, pp. 4-5):

- *Decomposition*: breaking down tasks into smaller more manageable components;
- *Gathering & Analyzing Data*: acquiring and making sense of data, finding patterns, and drawing conclusions;
- *Abstraction*: reducing complexity and focusing on the main idea. Abstraction may also involve a new representation of a system or a problem, by hiding details irrelevant to the question to focus on the solution; and
- *Algorithm Design*: designing step by step, precise instructions to create a solution, which should apply to multiple problems.

Problem Solving + The Power of Technology = Computational Thinking

SITUATIONAL EXAMPLES

LIFE	ACADEMIA	EMPLOYMENT
Make a personal budget on a spreadsheet	Analyze a poem for tone, rhythm, and structure	Schedule an agenda for a planning meeting

12

Figure 3

Page 1 of the *Digital Footprint With Social Media Lesson Activity* (Harris & Adetunji, 2020, p. 33)

Digital Footprint with Social Media

College and Career
ABE 4-6

OBJECTIVES

Learners will be able to:

- explore what a digital footprint is
- identify why it matters to employers
- develop a digital footprint they want to represent themselves



COMPETENCIES/STANDARDS

CASAS Competencies

- 4.5 Effectively use common workplace tools and technology
- 7.7 Demonstrate the ability to use information and communication technology

College and Career Readiness Standards for Adults

- Reading
 - Anchor 4 - Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
- Reading
 - Anchor 6 - Assess how point of view or purpose shapes the content and style of a text.

MATERIALS/RESOURCES

- Computers, smartphone, or tablets
- Internet access
- Website: www.linkedin.com



DIGITAL FOOTPRINT 33

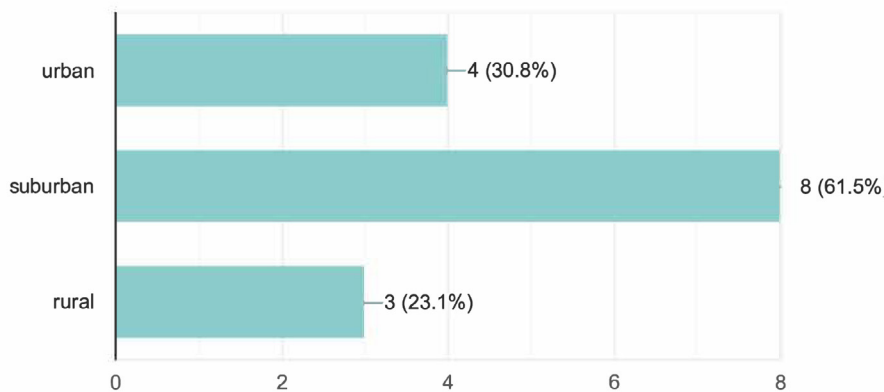
Appendix I

Responses From the Survey of Digital Literacy Framework (DLF) and Instructor Implementation Guide (IIG) Impacts

Survey of Digital Literacy Framework (DLF) and Instructor Implementation Guide (IIG) impacts

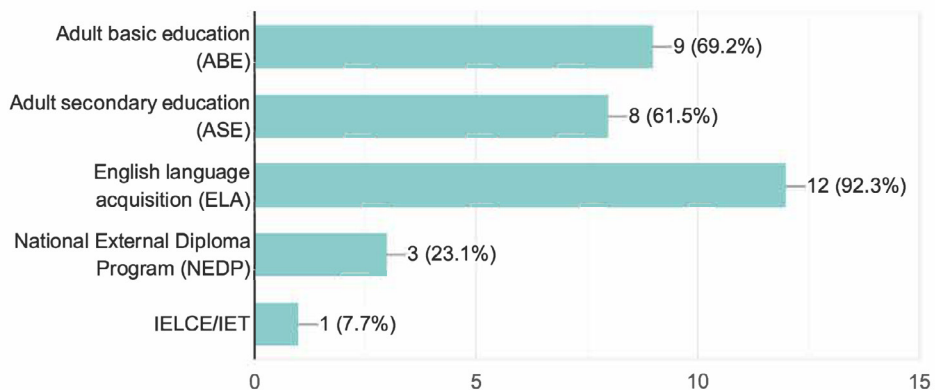
Where is your program located?

13 responses



In which type(s) of program was the DLF and/or IIG implemented?

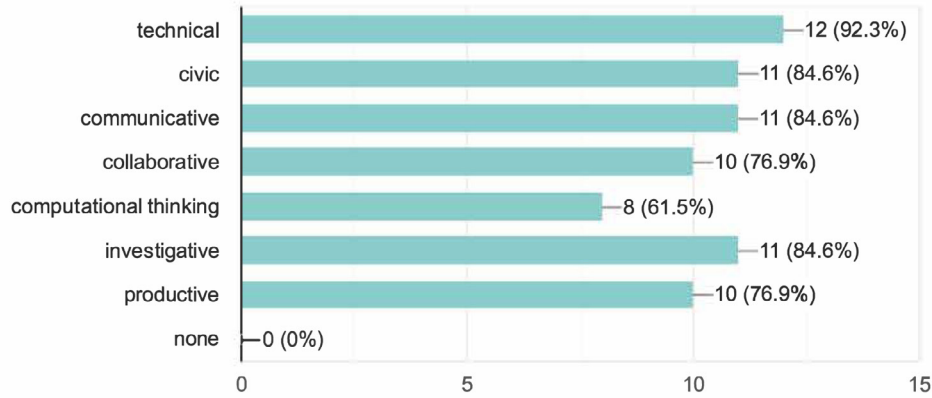
13 responses



Digital Literacy Framework

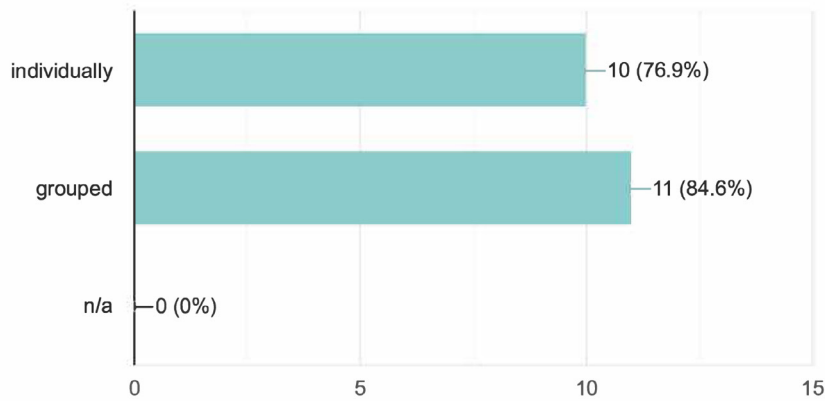
Which elements were implemented?

13 responses



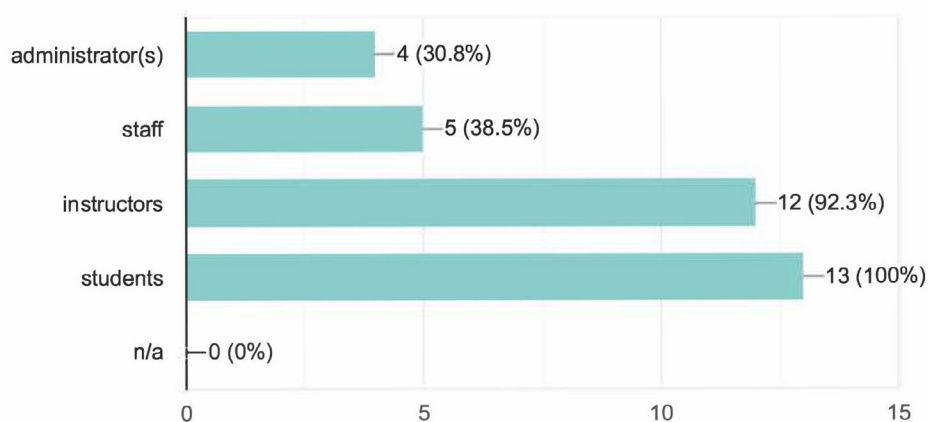
Were the elements implemented individually or in groups?

13 responses



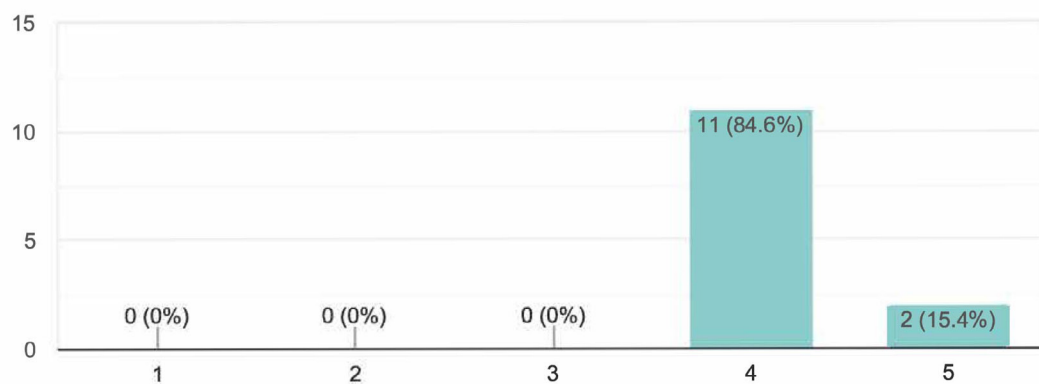
Which adult learner group(s) have you seen impacted?

13 responses



On a scale of 1-5 (1 being very negative and 5 being very positive), has the impact been positive or negative?

13 responses



Provide evidence of your rating.

13 responses

Instructors use the DLF and IG and refer to it in discussion and planning.

NEDP staff were uncomfortable using Zoom, but learning with their students made it more likely that they would continue communication virtually

Adult students expressed content, in general, at having learned about or reviewed information related to the technical and civic components. Most of the adult students participated in activities involving investigative and productive elements, the initial resistance observed in some of them disappeared after a short period of hesitancy.

Instructors have a stronger awareness of how to integrate digital literacy elements into their lessons and how to strengthen collaborative learning.

Overall it was positive. A challenge was planning for and managing students accessing via different devices with different platforms and/or operating systems. (Android vs Apple and also how new/old the device was plus phone, laptop, iPad, etc.)

Staff has been including some aspect of digital literacy in every class taught. This has been done at the teacher's discretion, so it can use any aspect of the framework. Teachers have mixed opinions, but all are willing to try.

The staff and teachers were very excited to have the framework and guide to help them create lessons that were more relevant and engaging for their students. They felt better supported and prepared to address digital literacy by using the frame work and guide. The students were more engaged and enjoyed the lessons. It was more applicable to their learning and everyday life skills.

It has been positive most of the time, however we are still struggling to convince some of the students and instructors about the importance of promoting digital literacy through online learning.

The framework has given us something to design curriculum around and to organize our thoughts around solutions for digital inclusion. It has guided our PD choices, as well.

The pandemic has brought awareness to the necessity of digital functioning. Being able to communicate from remote areas with instructor, connect and remotely assess, search and implement solutions and be responsible for passwords and loaner laptops.

In class observations, I've noted a greater degree of student independence in navigating to outside websites and using technology to demonstrate understanding. In addition, several lessons have been taught that allow students to feel more autonomy in real-world skills. For example, one lesson involved researching the features of different banking accounts to determine which account would be the most suitable for their needs.

Enthusiastically received but there is a learning curve for ALL involved, so until people are more comfortable in using, the reaction may not be totally positive.

Instructors have been integrating digital literacy into instructions. The DLF and IIG have helped instructors to be more aware of digital literacy elements and expanding digital literacy activities in lesson planning and instructions; having the resources from the IIG have helped instructors use the lesson activities and curated resources in lesson planning.

What are some innovative practices you've seen with implementation of the DLF?

12 responses

More collaborative efforts, use of interactive lessons from IG, creating content, incorporation of OER

Students are more comfortable working virtually as the instructors become more adapt at incorporating technology

I see voice recording as an important DLF activity and will try it with my next class. Having students do research about fun activities in Maryland or find additional ESL resources in Montgomery County were two good ideas I picked up from professional documents inspired by the Maryland Dept of Labor DLF booklet.

Instructors are using more digital literacy tools (Jam Board, Google Docs, Padlet) within their instruction and asking for IS support to learn new ways to engage students in class.

We added over 25 new vetted digital literacy activities to our online library. These include using cell phones applications (maps, calendar, speech to text, etc.), exploring cyber/security and protection of personal data, students creating videos and PowerPoints to present to their classmates, internet research (comparing/ authenticating sources, career exploration/job search, etc.), planning (agendas, itineraries, budgets, etc.), and more.

Lessons that include digital collaboration, research and reports on the research, new websites and platforms being used and experimented with regularly

New ways of delivering instruction that allows for collaboration and higher order thinking as well as greater depth of knowledge.

Students taking ownership of the learning process by being leaders while working in breakout rooms. Students feeling comfortable using different websites to interact with their classmates (paddlet, kahoots, etc).

The most natural practice was the instructors closing the tabs and working with the students to use the technology during the lesson. Discussion of search engine preference, pop-ups, add-ons, sacrificing privacy, ads, locating useful information and knowing the difference replaced the instructors just having everything open to be clicked on.

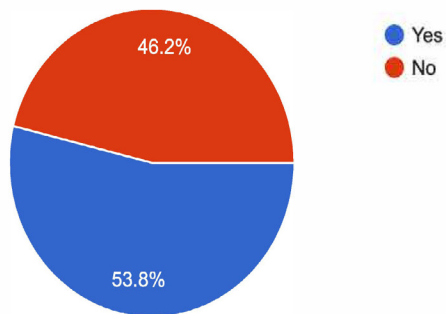
One teacher implements daily "Tech Time" which is a quick 10 minute warm-up activity in which students practice an essential technology skill. In the beginning of each session, she starts with the icons on Microsoft Teams (muting, turning your camera on and off, etc...). As the session progresses, the students move onto navigating to outside websites and typing a sentence on a Padlet. This class is a lower level ESOL class, so it is very exciting to see the students demonstrate independence with these technology skills.

Creation of recipe pages for a class cookbook complete with illustrations.

Project-based activities that include the DL skills; using YouTube videos to support instructions; a collection of Edpuzzle videos for the AELG Program created by instructors; instructor-learning community to share successes and challenges in implementing the DLF; instructors using tech tools and apps in the delivery of lessons and for assessments.

Are you able to speak to the impact of the DLF on student outcomes?

13 responses



Please share information regarding student outcomes (if applicable)?

9 responses

Students-time on task, commitment are noticable, TABE scores rising, better understanding of purpose for assignments, trying out new resources

I observed that many of the students were pleased at having gone over issues such as protecting identity online (civic component) or learning how to make posts on Padlet along with some writing. Their initial hesitancy disappeared after they realized that this type of topics and exercises were going to be intertwined with conventional ESL topics such as grammar and vocabulary.

I would like to get past COVID-19 to get a broader picture of outcomes in both F2F and online remote synchronous classes.

Through the use of digital literacy, students are more engaged and appreciate how they can transfer the skills they're learning in class to their real-life. For ESL students it gives them more confidence and collaboration activities help build strong bonds between students.

Students feel more confident using technological devices now, they know how to navigate different platforms and get the most of it. Students have seen the benefit of online learning through this past year.

We still need to evaluate the details here, but just the fact that so many students were able to continue learning through technology really gives credit to the adaptability and digital literacy skills of our students to reach their goals.

Please share information regarding student outcomes (if applicable)?

9 responses (continued)

I don't have numerical data on student outcomes directly correlated to the Digital Literacy Framework, but I would be happy to share anecdotal observations from my classroom visits and teacher feedback.

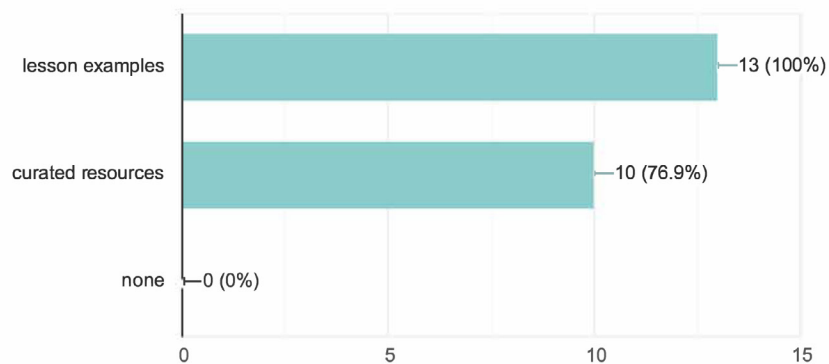
Students were very receptive to the idea of creating the cookbook.

Students taking and passing tests online; student engagement and participation using various platforms; completion of online learner enrolment form

Instructor Implementation Guide

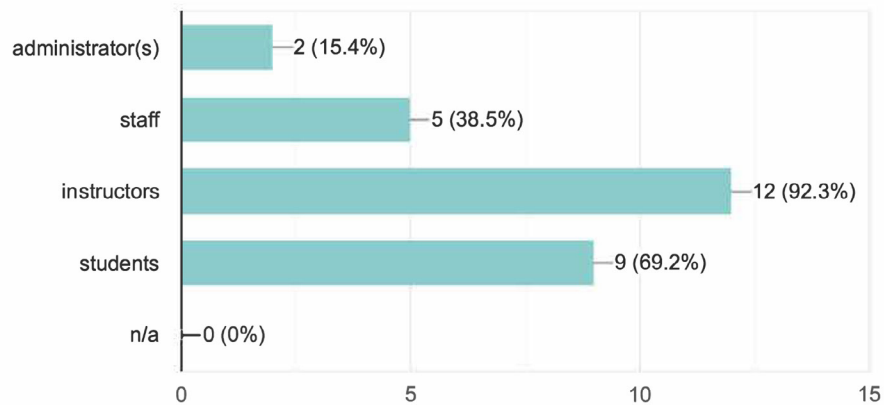
Which parts of the IIG were implemented?

13 responses



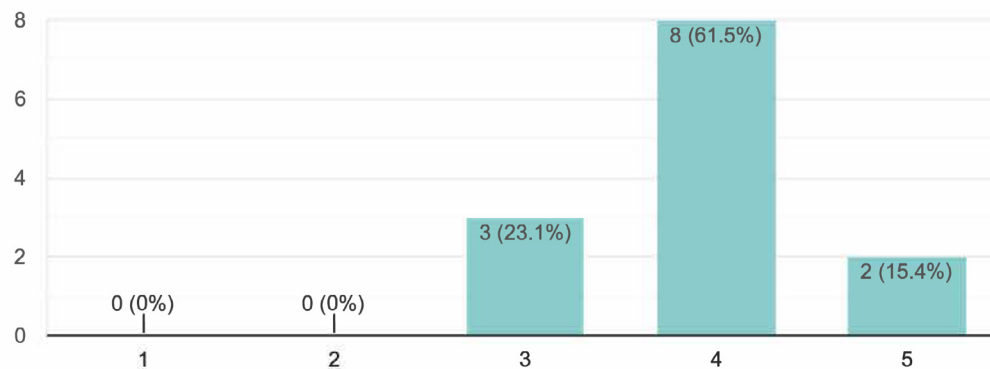
Which adult learner group(s) have you seen impacted?

13 responses



On a scale of 1-5 (1 being very negative and 5 being very positive), has the impact been positive or negative?

13 responses



Provide evidence of your rating.

13 responses

That the IG is being referenced and used is evidence. Instructors sharing with colleagues, more creative use of the IG and resources

Instructors shared resources and approaches with those who were less skilled at implementation and all felt more comfortable incorporating lessons

I incorporated word processor and mobile calendar activities in my lessons. It turns out many of my adult students had already reached a point where they regularly used the mobile calendar apps. It took a bit more effort to have students to work as a group on word processor programs such as Google Doc. In time they learned how to open a link to a Google doc + edit + follow my comments and reedit.

Instructors used the lesson examples as a guide to help them identify ways to strengthen the integration of digital literacy into lesson structures in the classroom.

I haven't seen any evidence of instructors using or adapting the lesson ideas in the implementation guide. Instead, they seem very able to come up with their own. A few explored the curated resources.

Teachers report positive responses and interactions from students.

The staff and teachers feel more confident having the IIG as a resource. They have solid examples of what each element can look like in practice and because the lessons can easily be modified it gives them a structure to build on.

Classes are more interactive, fun.

The IIG really helped the instructors visualize what the integration of the skills looked like. We used it in a PD and after reviewing it, they created their own lessons. It went well!

All instructor were provided PD that included choosing an activity, implementing it and providing feedback. Although all the lessons do not appeal to everyone, it gave great modeling examples of what digital literacy in the classroom could look like.

The instructors were excited to receive a resource of ready-to-go lessons that they use in their classroom. Many of the lessons have been implemented in classes with great success (Before, During, After Reading Framework, Digital Footprint, etc...). These lessons have helped students to develop a greater understanding of both the benefits and the impact of technology.

Several of our instructors have really take to "trying out" activities that have been presented to them via the IIG but need more time and exposure devoted to its use.

The 137 pages IIG is a bit overwhelming for instructors; some links in the IIG not working; some activities irrelevant to levels/classes

What are some innovative practices you've seen with implementation of the IIG?

10 responses

Less teacher talk and more student interaction, critical thinking-allowing students the time to practice skills and learn new technology , not so rushed more reflective

Google lens and mapping

During one of our production-based PDs, instructors built additional lessons to support this year's focus areas of Civic and Collaborative.

I can't think of any.

Adaptations of the lesson using the mouse to allow students to travel on a map using directional vocabulary. The map can be adapted to any subject area such as the circulatory system in science, or human migration across the continents in social studies.

Teachers feel comfortable developing google slides to share their material, teachers use YouTube videos to support instruction. Students get a variety of visuals to make the learning process more interesting.

In the recent EdTech Maker Space, we used the IIG as a template to guide some of our group engagement activities, because the structure of the lesson activities was so well designed.

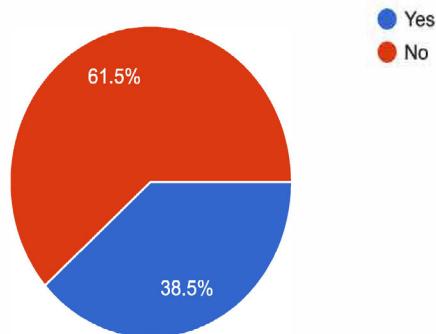
Stretching instructors to think beyond the computer and have students utilize apps to interact, provide feedback, post images and voice recordings. What's App has provided a great communicative resource for connecting and collaborating.

Teachers have adapted the lessons in the Instructor Implementation Guide to meet the needs of their students. One identified need is helping students download apps mentioned in the guide on different devices. Our program is working on creating recordings of cell-phone click sequences to demonstrate this process for our students.

Expansion of DL skills in one lesson to other lessons; instructors adapt curated resources for lesson planning

Are you able to speak to the impact of the IIG on student outcomes?

13 responses



Please share information about these student outcomes (if applicable)?

7 responses

Not yet

Students with laptops felt increasingly comfortable in using the word processor programs, write their answers on Google doc and do edits etc. They often shared their screens with their group mates (those who did not have access to laptops), this way they participated in class as active learners. Some of the students who originally used cell phones stated their intention to get a notebook or laptop for future classes after seeing the relative ease of doing some class activities on a laptop.

The students really enjoy the use of technology in their learning. It makes it more interesting and applicable to their real life.

Instruction stopped being just turning pages to fill in the blanks. Teachers and students are finding new ways to interact with each other through technology.

Leveraging the app that most ESL students already used became necessary for orientation help for new students, assessment appointments, loaner laptop borrowing and technical support for attending class. All these digital connections promoted student participation in the program.

I don't have numerical data on the impact of the IIG on student outcomes, but I am happy to share anecdotal observations and/or teacher feedback.

Students supporting others (peers and even instructors) in the application and use of DL skills; completion of online learner enrolment form

Are there any additional comments regarding the impact of the DLF or IIG (both positive and negative) and innovative implementation/use of these resources?

11 responses

Guidelines make sense, IIG provides concrete help, totally digital learning was a leap for most, these tools made it more understandable-doable by expanding knowledge and understanding purpose

Due to drastic changes in our program since December wherein there was a massive overhaul of the entire Adult Education staff, it is difficult to accurately collect data beyond anecdotal about the efficacy of the DLF and IIG. However, this situation is being rectified and we should have more information within the next few months to speak to how the DLF and IIG have positively impacted our student performances.

Both documents are great resources. They include good recommendations and present them in a very clear way. The important point to keep in mind is that it usually takes time to implement these ideas in class. The degree to which an instructor can implement these ideas also depends on the class make-up, e.g. high digital literacy level classes vs low digital literacy level classes or the ratio of laptops vs cell phones. Most activities are easier to do in class using a laptop since this allows the student to both do the activity and follow the teacher and other students on the screen at the same time.

This is a strong, comprehensive resource for both ABE and ESL. We also appreciate the professional development sessions provided by the state that we were able to share with our instructors to learn how to make the most of it.

Some instructors (more analytical) struggle a bit with the format of the DLF and perceived lack of clarity since it is more global/open-ended than the former Technology Standards. A lot of activities fall into more than one element, etc.

Since all instruction has been conducted online for the past year, it has been easier and necessary to try new things relating to DL. Overall, these implementations have been positive from the teacher and student points of view.

It has been a challenge but it was necessary. We were pushed to do it and we have seen positive results that will benefit everyone.

I think the DLF needs a link to the IIG. I'd like to see them in more of a "live" format, too, where they could be adapted and people could add other resources. Overall, they're very useful!

The release of the DLF/IIG were such a timely blessing for practitioners faced with a year of digital challenges. As we maneuvered, we had great examples of how each element in the DLF is an essential component of true digital literacy. Thank you for wonderful resources.

Are there any additional comments regarding the impact of the DLF or IIG (both positive and negative) and innovative implementation/use of these resources?

11 responses (continued)

Both the Digital Literacy Framework and the Instructor Implementation Guide have helped us to develop technology skills in our staff, teachers, and students. Many lessons were easy to implement and engaging for students. Some of the lessons encouraged teachers to move out of their comfort zones and try new techniques. Even the lessons that did not go exactly as planned, allowed us to identify skills in need of instruction and barriers to technology independence.

Maybe divide lesson activities in IIG to levels (lower-level, higher-level); split IIG into two volumes; the IIG lesson activities should be aligned better with the DLF; lesson activities in the IIG are more suitable for higher-level students; lessons should not include the download of software/app that may limit student participation