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Digital Literacy in Academic Libraries: Frameworks, Case Studies, and Considerations

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LIS 9704: Librarianship and Evolving Technologies

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Introduction:

Digital Literacy as defined by the ALA is, the “ability to use information and communication technologies to find, understand, evaluate, create, and communicate information, requiring both cognitive and technical skills” (Digital Literacy Taskforce, 2011). The term digital literacy has recently been revitalized in reaction to the world of thriving misinformation, which was Dictionary.com’s word of the year in 2018 (Martzoukou, 2020; Why Misinformation, 2018). The climate of misinformation, disinformation, and fake news became even more dangerous during the COVID-19 pandemic (Snowdon, 2020). While there are competing definitions for what digital literacy is, a common baseline is that a digital literate individual utilizes critical thinking skills to contribute to a world of online information and technology. Digital literacy can be taught through various pathways including corporate education or public library programming, and most relevant to this conversation, through instruction by academic librarians to their university communities.

In response to a renewed mission for digital literacy in a “post” pandemic world of increasing technology, this report will examine how academic libraries are implementing digital literacy frameworks and associated instruction in their university environments (Martzoukou, 2020). Specifically, the intention of this report is to provide resources of successful case studies and associated recommendations for how academic librarians can integrate digital literacy instruction into their practice, meeting the needs of their campus communities. The Jisc Digital Capacities Framework will first be examined to define what exactly digital literacy is, and how prescribed frameworks can act as a baseline for institutional specific contexts of digital literacy. Following this exploration, this report will identify possible new technologies that could be integrated into digital literacy instruction in the near future. This report will then identify cases of

successful digital literacy instruction, to inform a final list of recommendations for digital literacy instruction at post-secondary institutions by academic librarians.

Digital Literacy Frameworks:

The definition of digital literacy is contested, ranging from deep learning skills identified in the ALA's definition, to the utilization of various digital platforms to contribute to online learning and collaborative work (Digital Literacy Taskforce, 2011; Carl & Worstold, 2021). It is also contested as to whether digital literacy or information literacy is the metaliteracy, or overarching concept. The ACRL Framework for Information Literacy in Higher Education was created to update the previous ACRL Standards, in part to expand the "definition of information literacy to include multiple literacies, for example, transliteracy, media literacy, [or] digital literacy" (2015, p. 29). In comparison, digital literacy is described as the metaliteracy in the Digital Literacy Framework for Virginia Polytechnic Institute and State University (Virginia Tech), as "a kind of umbrella or metaliteracy that includes information, data, media, and invention literacies" (Feerrar, 2019, Feerrar, 2018, para. 8). To provide a clearer understanding of what digital literacy is, Jisc, a "not for profit company in the UK that supports higher education teaching, learning, and research" has published various versions of their Digital Capability Framework (Feerrar, 2019, p. 95; Digital Capability, 2022; Developing Digital Literacies, 2014; Building Digital Capabilities, 2022).

The most recent Digital Capabilities Framework, published in 2022, for individuals identifies six facets of digital capabilities, including "digital proficiency and productivity... information, data and media literacies... digital creation, problem solving and innovation... digital communication, collaboration and participation... digital learning and development... [and] digital identity and wellbeing" (Building Digital Capabilities, 2022). This Digital

Capabilities Framework was brought forward by Jisc with the intention that it could be used in many contexts as a baseline for what digital capacities individuals need to contribute to a technological world (Building Digital Capabilities, 2022). Previous iterations of this Framework have been used by organizations to identify what digital literacy means to a specific institution, successful implementations of this framework can be observed by Virginia Tech in the USA, and Edith Cowan University in Australia (Feerrar, 2019; Johnston, 2020; Developing Digital Literacies, 2014; Building Digital Capabilities Framework, 2022).

In an article by Feerrar in 2019, the author detailed the process of implementing the Jisc Digital Capabilities Framework, in combination with the ACRL Framework for Information Literacy in Higher Education to create an institutional specific Digital Literacy Framework for Virginia Tech (Feerrar, 2019; Framework for Information Literacy, 2015). The author described use of focus group methodology and collaboration with campus stakeholders to implement the current version of the Digital Literacy Framework Toolkit, which includes learning outcomes such as, “identity and wellbeing... discovery... evaluation... ethics... creativity and scholarship... communication and collaboration... [and] curation” (Feerrar & Hammer, 2020). The Digital Literacy Framework Toolkit has since been published online as a successful implementation of a digital literacy framework at an academic institution in the US (Feerrar & Hammer, 2020).

The Council of Australian University Librarians published their Digital Dexterity Framework in 2019, which was created “based on the Jisc Digital Capabilities Framework,” with the intent that it would be adapted for specific institutional contexts (p. 1). Such an adaption was described in an article by Johnston in 2020, where the author outlined the process of implementing an institutional specific framework for digital literacy at Edith Cowan University

in Australia using the CAUL Digital Dexterity Framework as a baseline. Edith Cowan University used benchmark and environmental scan methodology of other Australian Libraries to implement their own version of a Digital Literacy Framework at their institution (Johnston, 2020). Edith Cowan University identifies five elements within its Digital Literacy Framework, including, “use of digital technologies, information, academic, media and data literacy, digital creation and communication, digital citizenship and identity, and digital learning” (Digital Literacy Framework, n.d.). This Digital Literacy Framework is published online and details an example of a framework which was first outlined by Jisc, then the Council of Australian University Librarians, and then published on an institutional specific level for the Edith Cowan University in Australia (Digital Literacy Framework, n.d.).

The Jisc Digital Capabilities Framework has been updated and re-published throughout the past decade, with the most recent version in 2022. This continuous update describes the current state of evolving technology and therefore what it means to be digitally literate. In the past year, ChatGPT has taken the world by storm, requiring adaption of evolved digital literacy skills across sectors, but specifically within academic librarianship (Cox & Tzoc, 2023). It is likely that in the next few years, digital literacy will continue to evolve to become the meta-literacy term which involves both the current capabilities, as well as AI literacy, algorithmic literacy, data literacy, and technological literacy (Long & Magerko, 2020; Ridley and Pawlick-Potts, 2021; Ghodoosi et al., 2023; Ingerman & Collier-Reed, 2010). The next section of this report identifies successful case studies of digital literacy instruction at academic institutions across the world.

Literature Review: Case Studies of Digital Literacy Programming

In the following section of this report, various digital literacy instruction methodologies will be discussed through three case studies. The first case study is of a stand-alone extracurricular digital literacy upskilling program by the University of Limerick (Breen et al., 2023). The following two cases outline digital literacy instruction as combination with ongoing IL programming in academic libraries, including the creation of a complete Digital Academy and of a six-part evidence-based co-curricular digital literacy program (Carl & Worsfold, 2021; Russell et al, 2018). After examination of these successful digital literacy programs, recommendations will be made which outline considerations for the implementation of digital literacy instruction in academic libraries.

The state of digital literacy instruction at the University of Limerick was evaluated in 2020, to identify how librarians can meet the need of online learners through digital literacy instruction (Breen et al., 2023). In 2020 and 2021, the University of Limerick Library along with other campus stakeholders created an extracurricular digital upskilling program, which included 30-minute digital workshops held online, on the session topics of, online posters, Microsoft Excel, Microsoft Word, Microsoft Teams, digital presentations, EndNote, digital notetaking, video software, graphic design, online safety, and fake news (Breen et al., 2023). Feedback to this program was positive from participants, identifying that 97% of evaluation respondents identified that the workshops were either “useful or extremely useful” for academic work (Breen et al., 2023, p. 20). Notably, the respondents also identified that it was important that the session facilitator was knowledgeable on the session topic, and able to answer questions from the attendees (Breen et al., 2023, p. 23). This case study at the University of Limerick provides

context for extracurricular digital upskilling, separate of the traditional IL instruction at the institution.

In response to the COVID-19 pandemic, the University of Law in the UK implemented the Digital Academy, which is described as a multimodal suite of online content that combines learning of digital and legal skills (Carl & Worsfold, 2021). These modules used technology to facilitate “collaborative work,” “digital participation,” and online learning through four levels of digital scholarship (Carl & Worsfold, 2021, p. 119). Throughout the creation of the Digital Academy, Carl and Worsfold utilized principles of active learning, pre-test assessments, and digital badges, facilitating an engaged learning experience (Carl & Worsfold, 2021). Carl and Worsfold identified that while the Digital Academy was successful in its initial goal to serve users throughout the pandemic, the program is now utilized to “embed digital skills into the wider curriculum at the university” (2021, p. 131).

Deakin University describes digital literacy as a multiliteracy where users apply “technologies to find, use, and disseminate information,” outlining digital literacy as one of the university’s eight graduate student learning outcomes (Russell et al., 2018, p. 951). In 2018, Russell et al., published an article detailing their experience creating an evidence-based evaluation for digital literacy modules within the Bachelor of Nursing program at Deakin University in Australia. The modules are co-curricular and combine digital literacy skills for information seeking and research processes with practical examples from the nursing profession (Russell et al., 2018). The evidence based and evaluation portion of these modules included using both qualitative and quantitative pathways to report on the successes of the digital literacy modules (Russell et al., 2018).

Throughout this section, three diverse and successful cases of digital literacy instruction have been described. These case studies were selected as they provide examples of both stand-alone and integrated digital literacy instruction. In the next section of this report, final recommendations will be made for implementing digital literacy instruction programs.

Final Recommendations for implementation of a Digital Literacy Program:

1. Begin with the Jisc Digital Capabilities Framework
 - a. Throughout the research for this toolkit, the Jisc Digital Capabilities Framework was referenced repeatedly. The Jisc Digital Capabilities Framework toolkit is a great start for defining what digital literacy is and complements the ACRL Framework for Information Literacy in Higher Education well (Feerrar, 2019).
2. Define Digital Literacy in the institutional context.
 - a. To begin digital literacy instruction, the institution will need to define what digital literacy means to the specific institution (Feerrar, 2019; Johnston, 2020).
3. Identify knowledgeable stakeholders on campus to assist with digital literacy.
 - a. Digital literacy requires a combination of traditional IL skills with technology forward thinking, collaboration with various campus stakeholders may be beneficial to meeting these needs (Breen, et al., 2023).
4. Identify what skills are already taught within IL instruction and how the current instruction can be altered or updated to include digital literacy.
 - a. Examples of integrated digital literacy programs have been provided in this report which combine traditional IL skills and digital literacy skills and technologies (Russell et al., 2018; Carl & Worsfold, 2021).

5. Teach digital literacy skills online with active learning activities to facilitate experiential learning.
 - a. The examples provided in this report have all included online learning for digital skills, and while online is not universally preferred, it does prepare students with experiential learning of digital technologies (Breen et al., 2023; Carl & Worsfold, 2021; Russell et al., 2018).
6. Do not avoid discussions of upcoming technologies and digital capabilities. Discuss and use emerging technologies where appropriate.
 - a. As is outlined in this report, the world of technology will continue to evolve, and it is critical that librarians are knowledgeable and willing to discuss these technologies in their digital literacy instruction.

Conclusions:

In this report, the current state of digital literacy instruction has been discussed to identify a list of recommendations and resources for best practices of digital literacy instruction. In a world of increasing technology, it is critical that digital literacy programs created by academic librarians continue to evolve to meet the needs of their campus communities. There is a need for digital literacy programs within academic institutions, and librarians have the knowledge, platform, and responsibility to meet this need. It is my hope that the discussed frameworks, successful case studies, recommendations, and included references provide tools and encourage academic librarians to teach their campus communities about digital literacy skills required in the world of online information and technology.

Reflection:

This project was chosen because throughout this course, we have learned about emerging technologies, and how these technologies continue to evolve and create digital inequality, those who understand how to use these technologies and those who do not. In my future career as an information professional, I think it is my responsibility to stay up to date with new technologies, not just for my own personal use but to educate those around me about the possible implications of such technologies. Specifically, when I became aware of ChatGPT, my first thought was that I was wondered how this new technology would affect the academic world and specifically how I would deal with such a technology as a future academic librarian. I think that continuing to educate myself about technology so that I can have thoughtful conversations with my future academic communities is important. While we have discussed emerging technologies in libraries throughout this course, I thought specifically looking at digital literacy instruction at academic institutions would provide me with tools to implement digital literacy programs at my own future academic institutions.

I think that this project can have an impact on librarianship as it is a preliminary guide and provides considerations for how to create digital literacy programs, either from scratch or through developing a traditional IL program. This project frames librarians as the premiere individuals to meet the need of digital literacy instruction within their institutions and I hope this project will give librarians the confidence and tools to develop their own digital literacy instruction which suits their institution.

The challenges that I experienced when writing this report included the format of the final product. I had initially proposed as a literature review followed by a toolkit, however, the final product ended up being closer to a report or a discussion of what digital literacy is and how

digital literacy is taught within academic libraries. The resources that I utilized to work towards this report are ultimately the toolkit. Use of the various references and successful case studies will be helpful for myself or other librarians looking to develop their own digital literacy programs in their current or future institutions.

I think barriers to adoption of digital literacy programs include that some librarians may feel that they are not knowledgeable or the experts in some areas of emerging technologies. Academic librarians are knowledgeable about many different technologies, and digital literacy is at its core about utilizing the similar ideas as IL but putting these ideas into an online environment. I think through continued education and development through research, collaboration, or conferences, librarians can continue to evolve to meet the need of their academic communities and remain information experts regardless of the medium.

If I had more time or space in this project, I would have looked closer into the Canadian context, to identify why none of the resources that I located were rooted in Canadian academic librarianship. I wonder if Canadian institutions are not teaching these concepts, not using the words 'digital literacy' to describe these concepts, or if Canadian academic libraires are teaching these concepts but not publishing about it, perhaps through LibGuides, institutional White Papers, or within the traditional IL sessions. Additionally, if I had more time to broaden my scope to beyond academic libraries, I would have liked to compare the BC Government's Digital Literacy Framework for school aged curriculum to the Jisc Digital Capabilities Framework to identify how the Canadian context changes this content.

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