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Digital Citizenship Library Programming in Award-Winning Libraries of the Future: A case review of public libraries in the United States*

공공도서관의 디지털 시민성 프로그래밍: 미국의 미래 도서관 수상 도서관을 중심으로

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ABSTRACT : Digital citizenship includes an evolving set of knowledge and skills related to effectively and ethically using technology, especially when interacting with other people, information, and media in the online context. As public libraries have long provided access to and training with a variety of technologies, this study explores how digital citizenship has been covered in public library programming to identify potential trends and best practices. A purposive sampling of public library recipients of the American Library Association (ALA) and Information Today Inc.'s Library of the Future Award over the past 11 years (2013-2023) identified 7 case libraries to review. The titles and descriptions of 337 relevant library programs for audiences of school-aged children (5 years old and up) to seniors were collected for a 2-month period from each library's website and analyzed using Ribble & Parks (2019) 9 elements of digital citizenship. The findings suggest that programming related to digital citizenship most often addresses themes connected to digital access and digital fluency through coverage of topics related to computer and technology use. Based on themes and examples from the findings, public libraries are encouraged to expand upon existing programs to integrate all elements of digital citizenship, strive for inclusive and accessible digital citizenship education for all ages, and leverage resources and expertise from relevant stakeholders and community partnerships.

KEYWORDS : Digital Citizenship, Digital Citizenship Education, Public Library Programs, Case Review, Content Analysis

요 약 : 디지털 시민성은 온라인의 타인과 정보 및 미디어와 상호작용함에 있어 변화하는 기술을 효과적이고 윤리적으로 사용하는 데 관련된 지식과 기술의 집합체를 포함한다. 이 연구는 다양한 기술에 대한 접근과 활용교육을 제공해 온 공공도서관의 프로그램을 디지털 시민성 관점에서 분석하여 잠재적인 트렌드와 모범실무를 확인하고자 하였다. 지난 11년동안 미국 ALA가 수여한 미래의 도서관 상을 수상한 공공도서관 7곳을 유의 추출하여 각 도서관 웹사이트에 공개된 2개월 동안의 프로그램을 분석하였다. Ribble과 Park(2019)의 디지털시민성 9개 요소를 기준으로 5세 이상부터 노인층까지의 이용자를 대상으로 한 337개 프로그램 제목과 설명을 분석한 결과, 디지털 시민성 요소 중 컴퓨터와 기술 이용 관련 디지털 접근과 디지털 유창성 프로그램이 가장 많은 것으로 조사되었다. 분석 결과와 사례 제시를 통해 공공도서관이 디지털 시민성의 나머지 7가지 요소들을 현행 프로그램에 결합시킬 수 있도록 범위를 확대하고, 모든 연령층 이용자를 위한 포용적이고 접근성 높은 디지털 시민성 교육을 제공하며, 다양한 이해당사자와 공동체 협력을 통해 자원과 전문성을 확대할 것을 제안하였다.

주제어 : 디지털 시민성, 디지털 시민교육, 공공도서관 프로그램, 사례 검토, 내용분석

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Ⅰ. Introduction

As the internet, personal computers, and mobile devices have globally diffused, technology use has become a standard means for any citizen to engage in a full spectrum of everyday life activities from searching for information, communicating with others, learning, working, purchasing and selling goods and services, to participating in social and political actions (Suryanarayana & Lingaiah, 2022). As the exponential development of information and communication technologies (ICTs) has enhanced, along with issues of digital access and division, serious concerns such as piracy, plagiarism, fake news, hate speech, cyberbullying, identity theft, phishing, excessive screen time and more rapidly increased (Buchholz, DeHart, & Moorman, 2020; Hollandsworth, Dowdy, & Donovan, 2011; UNESCO Bangkok, 2015; 2017). Throughout the COVID-19 pandemic, those concerns about how we fully enjoy extended opportunities and mitigate the associated risks become even more serious. As a response to globally challenging issues regarding the safe and responsible use of technology, many international initiatives on establishing policies, standards, and curricula to foster digital citizenship education are in progress (Frau-Meigs et al., 2017; UNESCO Bangkok, 2015; 2016; 2017). For a democratic citizen to fully participate in a digitally interconnected world, UNESCO (2011; 2013) advocates a strong partnership with public libraries, which have provided all types of users with information, media, and digital literacy education.

Even though the importance of libraries and librarians for digital citizenship education gradually increased, research and practice from Library and Information Science (LIS) researchers and practitioners has just begun. Considering that 18 states in the U.S. highlighted digital citizenship education along with systematic media literacy education (Media Literacy Now, 2023), LIS practitioners and educators should review and re-evaluate the various types of literacy programs, services, and resources that libraries have provided so far and proactively prepare for the emerging roles as digital citizenship educators (Buchholz, DeHart, & Moorman, 2020; Hollandsworth, Dowdy, & Donovan, 2011; Phillips & Lee, 2019; Preddy, 2015). In Korea, the agenda such as digital access, digital literacy, internet safety and ethics, core parts of digital citizenship, have been separately reflected in many legislative activities. Park et al. (2022b) identified multiple acts regarding providing equitable digital access and literacy education opportunities (Libraries act, No.18547; Science, mathematics, and information education promotion act, No. 14903; Framework act on the promotion of digital-based distance education, No. 18459) and one regarding protection of personal information and privacy as well technology over dependence (Framework act on

intelligent information, No, 17344). Recently, the President Yoon declared the Digital Bill of Rights at Digital Vision Forum in September 2023 to emphasize increasing importance of promoting digitally enabled opportunities and benefits and establishing a safe and trustworthy digital society (Ministry of Science and ICT, 2023). As the importance of digital citizenship has been increasing for the last two decades, K-12 Education, Media, and Communication disciplines have been leading research on digital citizenship in Korea. As a traditional mediator between users and ICTs, more LIS research and practice regarding digital citizenship education should continue to increase.

The purpose of this research is to explore how current public libraries' programs in the U.S. may cover core elements of digital citizenship and to help prepare public libraries in Korea and around the world with recommendations to better educate their communities about digital citizenship. Considering that the scholarly discussion of LIS research and practice on digital citizenship has been in the beginning stage (Anderson & Phillips, 2019; Phillips & Anderson, 2020), this research attempts to review technology related library programs including information, digital, and media literacy programs using Ribble & Park's (2019) S3 framework and nine elements of digital citizenship. The authors hope to identify trends and recommendations that libraries and LIS practitioners and educators can act upon. As such, the guiding research question for this project is:

RQ1: How do public library programs in the USA address elements of digital citizenship?

Ⅱ. Literature Review

2.1 Digital Citizenship

Since its inception, the concept of digital citizenship has varied. Ribble, Baily, and Ross (2004, 7) first defined digital citizenship as "the norms of behavior with regard to technology use." Mossberger (2008) mentioned the term digital citizenship to investigate how digital transformation and digital divide impact citizenship in an information society. Since then, researchers have elaborated and added multiple aspects of digital citizenship. However, the discussion of the digital transformation of citizenship is still an ongoing process, and defining the term digital citizenship has not reached a consensus (Choi & Park, 2015; Frau-Meigs et al., 2017; UNESCO Bangkok, 2015; United Nations, 2020; Vial, 2019; Yoon, 2017). While some research written in the 1990s and early 2000s treated digital citizenship with a focus on digital technologies separate from

the traditional concept of citizenship, most research interprets digital exposures and experiences rather inherent in the life of a modern citizen, as an enabling factor (Choi, Glassman, & Cristol, 2017; Choi & Park, 2015; Lee & Rubin, 2021; Mossberger, 2008). The concept of a digital citizen in a digital era has been moving from a conventional dutiful citizen to a self-actualizing citizen through engaging with a variety of digital technologies in everyday life (Bennet, Wells, & Rank, 2009; Kim & Yang, 2013). Therefore, a major foundation and condition of digital citizenship come from digital literacy, knowing how to access and use various digital technologies, but discussions include many related aspects, such as civic participation, social engagement, democracy, digital ethics, and critical resistance, among others (Choi, Glassman, & Cristol, 2017; Choi & Park, 2015; Yoon, 2017).

UNESCO sees information, media, and digital literacies as core competencies needed for citizens to enjoy the full benefits of fundamental human rights to freedom of information, opinion, speech, and expression in a digital world (UNESCO, 2011). Particularly, UNESCO defines media and information literacy (MIL) as “a set of competencies that empowers citizens to access, retrieve, understand, evaluate and use, to create as well as share information and media content in all formats, using various tools, in a critical, ethical and effective way, in order to participate and engage in personal, professional and societal activities” (UNESCO, 2013, 29). Positioning MIL as a basic human right, UNESCO defines digital citizenships as “being able to find, access, use and create information effectively; engage with other users and with content in an active, critical, sensitive and ethical manner; and navigate the online and ICT environment safely and responsibility, while being aware of one’s own rights” (UNESCO Bangkok, 2016, 15).

The steering committee for educational policy and practice of the Council of Europe (Frau-Meigs et al., 2017, 11-12) launched a digital citizenship education project in 2016 and defined digital citizenship as “the ability to engage competently and positively with digital technologies (creating, working, sharing, socialising, investigating, playing, communicating, and learning), participating actively and responsibly (values, attitudes, skills knowledge and critical understanding) in communities (local, national, global) at all levels (political, economic, social, cultural and intercultural), being involved in a double process of lifelong learning (in formal, informal and non-formal setting), and seamlessly defending human rights and dignity.” The International Society for Technology Education (ISTE) provided standards for students to be a digital citizen, which argue that “students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical”

(ISTE, 2019, 3). The standards also ask for students to be equipped with the competencies to engage ethically and safely when using technologies, manage responsibly one's digital identity, reputation, behaviors in the digital world, and respect rights and obligations when using digital information such as intellectual property (ISTE, 2019, 3).

From the perspective of school leadership, digital citizenship was defined as the continuously developing norms of the responsible, safe, ethical, and empowered use of technology, particularly addressed in an online environment (Ribble, 2023; Ribble & Park, 2019). To cover relevant concepts of the definition, Ribble and Park (2019, 42) used the S3 framework: "Safe (protecting digital citizens), Savvy (creating educated digital citizens), and Social (respecting yourself as a digital citizen)." Under this S3 framework, Ribble and Park (2019) provide nine elements of digital citizenship: the Safe frame includes digital rights and responsibility, digital security and privacy, digital health and welfare; the Savvy frame includes digital communication and collaboration, digital fluency, and digital commerce; and the Social frame includes digital etiquette, digital access, and digital law. Ribble & Park's (2019) definitions of the nine elements can be found in Table 1.

Ribble, in particular, is considered a leading scholar and practitioner of digital citizenship since he and his collaborators first introduced it in 2004 (Cortesi et al., 2020; Ribble et al., 2004). While the S3 Framework and nine elements are designed and used for educational and curricular purposes, they provide a clear and comprehensive framework that addresses and includes the multiple aspects of digital citizenship. As such, the authors decided to adapt and operationalize the S3 framework and the nine elements to be used as an analytical framework to guide content analysis, as described in Section 3.2.

〈Table 1〉 Definitions of Nine Elements of Digital Citizenship

Nine Elements	Definitions
Safe - Protecting Digital Citizens	
Digital health and welfare	"Digital health and welfare refers to the physical and psychological well-being in a digital world. Technology provides many opportunities and enjoyment, but knowing how to segment use with our needs and the needs of others is key to a healthy, balanced life" (Ribble & Park, 2019, 40).
Digital rights and responsibilities	"Digital rights and responsibilities are those requirements and freedoms extended to everyone in a digital world. This area of digital citizenship is about helping students understand that when they are provided opportunities, such as access to the internet and use of online products, they need to be diligent in helping others as well" (Ribble & Park, 2019, 41)
Digital security and privacy	"Digital security and privacy are the electronic precautions to guarantee safety… When using devices in school or at home, understanding and being aware of attacks and how to prevent them are important skills for today and into the future" (Ribble & Park, 2019, 41)

Nine Elements	Definitions
Savvy - Creating Educated Digital Citizens	
Digital commerce	"Digital commerce is the electronic buying and selling of goods and services (including digital goods and services) and focuses on the tools and safeguards in place to assist those buying, selling, banking, or using money in any way in the digital space." (Ribble & Park, 2019, 39).
Digital communication and collaboration	"Digital communication and collaboration is the electronic exchange and shared creation of information. All users need to define how they will share their thoughts so that others understand the message. For students struggling to understand their place in the world, technology can help them find their own voices and express themselves" (Ribble & Park, 2019, 40).
Digital fluency	"Digital fluency is the process of understanding technology and its use… Digital fluency includes the discussion of media literacy and the ability to discern good information from poor, such as "fake news" from real news and then applying the learned skills" (Ribble & Park, 2019, 40).
Social - Respecting Yourself as a Digital Citizen	
Digital access	"Digital access is about the equitable distribution of technology and online resources" (Ribble & Park, 2019, 39)
Digital etiquette	"Digital etiquette refers to electronic standards of conduct or procedures and has to do with the process of thinking about others when using digital devices… Whether in the classroom or online, being aware of others is an important idea for everyone" (Ribble & Park, 2019, 40).
Digital law	"Digital law refers to the electronic responsibility for actions and deeds and has to do with the creation of rules and policy that address issues related to the online world. Just as in the real world, the online world has had to create a structure to protect those using digital devices from harm" (Ribble & Park, 2019, 40).

Research on digital citizenship in Korea has been conducted for the last two decades. Through systematically reviewing the literature of forty-seven articles from 2000 to 2022 in Korea, Choi, Lee, and Jung (2022) found that Korean researchers have focused on conducting empirical research such as building and applying pedagogical models, educational programs, and scales (77%) rather than theoretical or conceptual examination (23%). They also reported that among the four aspects of digital citizenship (knowledge, skills, values and attitudes, and actions), the most research examined values and attitudes (i.e., digital rights and responsibilities, digital etiquette), skills (i.e., digital communication, digital fluency, digital security), and actions (i.e., civic engagement and participation), while the least research was conducted regarding knowledge (i.e., digital citizenship laws and policies, knowledge of digital space and society).

With the importance of establishing and providing digital citizenship policy and education in Korea, K-12 Education (particularly in subjects of Social Studies, Korean Literature, and Ethics) and Social Science (including media and communication) have been the leading disciplines.[1)]

1) The search results of research with digital citizenship in their titles from 2000 to 2023 at the Korea Citation Index website (https://www.kci.go.kr) showed 149 research. Most research was conducted from the

While most research in LIS within Korea[2] has particularly focused on critical elements of digital literacy to diminish the digital divide since 2000, research particularly focusing on digital citizenship or digital citizenship education in LIS has not been conducted yet.

2.2 Digital Citizenship in Libraries and Classrooms

By providing users with free and unlimited access to information, technology, knowledge, and culture, public libraries have been the local center of information seeking, knowledge construction and sharing, lifelong learning, and promotion of civic engagement to support sustainable development of democratic individuals and societies (ILFA 2005; IFLA-UNESCO 1994, 2022). Particularly, access to information sources and information literacy that helps citizens to seek, evaluate, use, and create from both print and digital media has empowered citizens and reinforced the democratic roles of libraries (IFLA 2011; UNESCO 2011; 2013; Eckerdal, 2017). To promote global digital citizenship, international initiatives, such as legislation, policies, and education programs, have been established in many countries throughout Europe, North America, and Asia-Pacific (Frau-Meigs et al., 2017; ISTE, 2019; UNESCO Bangkok, 2015; 2017).

In the United States, 18 states have taken steps to provide systematic media literacy education with a focus on digital citizenship through legislative processes at various levels, including Delaware passing Senate Bill 195 - Digital Citizenship Education Act in 2022, Connecticut requiring the state Department of Education to develop a model curriculum for grades K-8 on digital citizenship and media literacy in 2021, Utah establishing a Digital Wellness, Citizenship, and Safe Technology Commission in 2020, Texas passing a law that requires each school district to incorporate instruction in digital citizenship in 2019 (Media Literacy Now, 2023). More and more states in the U.S. have incorporated digital citizenship education along with media literacy education. Even though stakeholders for digital citizenship education include formal, non-formal,

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domains of education, media, and communication. Since the first article was published in 2005, the number of publications was slowly growing, and more than a hundred research were published for the last four years (2020 to 2023).

2) When searching research with digital and literacy in titles and/or keywords from the four major Library and Information Science journals (Journal of the Korean Society for Library and Information Science, Journal of Korean Library and Information Science Society, Journal of the Korean Biblia Society for Library and Information Science, Journal of the Korean Society for Information Management) from 2000 to 2023 at the Korea Citation Index website (https://www.kci.go.kr), the total number of the research was 58. Among these, 5 research also included democratic citizenship or citizenship/civic education in their keywords.

and informal education agencies such as schools, libraries, NGOs, and industries, currently the main focus is on school-based formal education contexts (Frau-Meigs et al, 2017; UNESCO Bangkok, 2015; 2017).

However, research shows that systematic efforts to create common policies, standards, and curricula of digital citizenship education are still needed and there is much variance in the perceived awareness, roles, and responsibilities for digital citizenship education by various stakeholders (e.g., teachers, administrators, and media specialists/school librarians) are observed (Hollandsworth, Dowdy, & Donovan, 2011; Phillips & Lee, 2019). Phillips and Lee (2019) emphasized the evolving roles of school librarians dealing with multi and expanded literacies instruction, collaboration between school librarians and teachers for successfully delivering both in-class or in-library digital citizenship instruction, and constant support for updating information, resources, and curriculum for digital citizenship education. Effective digital citizenship education needs to include all stakeholder groups of students, parents, caregivers, teachers, administrators, librarians, technology coordinators, and community leaders, as a multi-stakeholder approach (Hollandsworth, Donovan, & Welch, 2017; Phillips & Lee, 2019; UNESCO Bangkok, 2015; 2017)

Public libraries have long provided various literacy programs including information, computer, web 2.0, internet, media, digital, ICT literacies and more. While a majority of research focused on information and digital literacy education, only a few research have been conducted from the perspective of digital citizenship education. In 2017, the Florida Chapter of the Association and Research Librarians (FACRL) hosted an annual conference highlighting the academic library's role in shaping college students' digital citizenship with a focus on fake news and digital literacy (Copenhaver, 2018). Anderson and Phillips (2019) and Phillips and Anderson (2020) explored public libraries' opportunities to provide youth with autism spectrum disorder (ASD) with digital citizenship education, particularly in cyberbullying and online harassment, found that strong parental involvement, inclusive programming using peer mentorship, collaboration between librarians and teachers were critical. Suryanarayana and Lingaiah (2022) maintain that library and information professionals (L&IPs) should redefine digital literacy into digital citizenship in the digital era where users' entire information behavior spectrums from communicating, learning, teaching, buying, selling, to participating happen through technology use.

Along with the non-consensus of definitions, policies, and standards for digital citizenship, researchers have reported on the complexity of digital citizenship and difficulties in effectively implementing digital citizenship content into practical modules (Armfield & Bolcher, 2019;

Buchholz, DeHart, & Moorman, 2020; Hollandsworth, Dowdy, & Donovan, 2011; Preddy, 2015). Armfield and Bolcher (2019) found that even standard teacher candidates struggled with understanding the notions of digital citizenship and suggested that they should embed four sub-topics (equitable access, global awareness, cultural understanding, and safe, healthy, legal, ethical, and responsible use of ICT) and integrate technologies into a curriculum such as collaborative jigsaw activity, classroom scenario, and reflection blog posting. Stressing that democracy itself is a complex social phenomenon, Buchholz, DeHart, and Moorman (2020) argue that digital citizenship education should be moving from simply learning about rules and norms to participating and engaging with digital technologies through all types of communication modes in everyday lives. Lastly, while the main target of digital citizenship education is centered in the group of K-12 students, younger children should be included as well as adults, seniors, and all types of underrepresented user groups because digital citizenship affects all citizens at all ages (Frau-Meigs et al., 2017; UNESCO Bangkok, 2015; 2017).

The subject of digital citizenship seems to be emergent to Korean LIS researchers and practitioners. While most research has focused on building and evaluating various types of literacy education programs so far, some researchers (Park, 2020; Park & Kang, 2020; Park, Kang, & Lee, 2021; Park et al., 2022a; Park et al., 2022b) recently started looking at library literacy programs from the perspective of democratic citizenship education. Park (2020) introduced UNESCO's MIL curriculum and suggested incorporating twelve subject areas into the school library literacy curriculum (Library and Information Life) in Korea and Park and Kang (2020) developed school library-focused MIL educational content covering the knowledge, values, skills and attitudes of democratic citizenship. Park, Kang, and Lee (2021) evaluated a newly developed library literacy curriculum (Media and Information Life) to embrace more knowledge and skills of media literacy as a core competency needed for democratic citizens. Park et al. (2022b) reported that media literacy education-related laws and policies in Korea currently leave out libraries and lack policies for educating adults and argued that public libraries and librarians should take leadership roles in building media literacy education platforms and providing education for adults. Park et al. (2022a) argue that public libraries are the local institutions best fit to engage with citizens of all ages and developed a media literacy educational model for public libraries to build core media literacy competencies in their communities.

It should be noted that all five research articles above attempted to redefine the role and importance of media and information literacy education in both school and public libraries from

the broader perspective of empowering democratic citizens in an interconnected world. However, more empirical research to fully examine the concept of digital citizenship and integrate core elements into libraries' curricula, procedures, and services is needed.

Ⅲ. Method

3.1 Case Review

The purpose of this study is to explore the coverage of themes related to digital citizenship in live interactive public library programs in the United States. A purposive sampling of public libraries that have recently been recognized for information technology programs was derived from the recipients of the American Library Association (ALA) and Information Today, Inc.'s Library of the Future Award (ALA, 2023a). Winners and recipients of this award are selected for "innovative planning for, applications of, or development of patron training programs about information technology in a library setting" (ALA, 2023a, para. 1). As the authors sought to explore how digital citizenship themes and topics are addressed in public library programs related to information technology and because digital citizenship education aims to teach people how to aptly and appropriately use digital technology (Ribble, 2023; Ribble & Park, 2019), the Library of the Future award list provided a relevant selection criteria to create a purposive sample of libraries awarded for high quality information technology programming in which the authors assume may embed or cover elements of digital citizenship in their library programming.

The public library award winners over the last eleven years (2013 to 2023) were selected to reflect a modern[3] information technology context. The 2015 winner, the school library at Landis Intermediate School[4] in New Jersey, and the 2018 recipient, North Carolina State University Libraries, were excluded due to library type (school and academic, respectively). Of note, The Las Vegas-Clark County Library District won two years in a row within the study time scope. This yielded a final sample of 7 libraries to serve as cases for review in this study.

As noted in Table 2, the sample consists of the Las Vegas-Clark County Library District (Las

3) The Library of the Future Award has been presented annually since 1993 except for 2019 (ALA, 2023a).
4) The Landis Intermediate School (New Jersey) won the award in 2015, but closed permanently in 2017. (https://www.thedailyjournal.com/story/news/2017/06/14/class-2017-last/392680001/)

Vegas, Nevada; won in 2023 and 2022), the Plano Public Library (Plano, Texas; 2021 winner), the Broward County Library (Ft. Lauderdale, Florida; 2020 recipient), the Muncie Public Library (Muncie, Indiana; 2017 recipient), the Indianapolis Public Library (Indianapolis, Indiana, 2016 recipient), the Queens Public Library (Queens, New York; 2014 recipient), and the Community Collaboration for Enhanced Technology Services at the Princeton Public Library (Princeton, New Jersey; 2013 recipient). The type of winners within the sample includes 6 public library institutional winners and 1 program or project winner, which was included because its program was affiliated with a public library, the Princeton Public Library. Italicized winner names indicate multiple-time recipients. In addition to the Las Vegas-Clark County Library District, the Indianapolis Public Library and the Queens Public Library were previously awarded in 2009 and 1999, respectively (ALA, 2023a).

〈Table 2〉 Case Review Sample

ALA/Information Today, Inc. Library of the Future Award Recipient or Winner	Year Awarded, Winner Type	Library Type
Las Vegas-Clark County Library District (NV)	2023, Institutional Winner 2022, Institutional Winner	Public
Plano Public Library (TX)	2021, Institutional Winner	Public
Broward County Library (FL)	2020, Institutional Recipient	Public
Muncie Public Library (IN)	2017, Institutional Recipient	Public
Indianapolis Public Library (IN)	2016, Institutional Recipient (2009)	Public
Queens Public Library (NY)	2014, Institutional Winner (1999)	Public
Community Collaboration for Enhanced Technology Services, Princeton Public Library (NJ)	2013, Program/Project Winner	Public

Note: Italicized winner names indicate repeat winners, with previous winning years in parentheses.

3.2 Content Analysis

To guide data collection and analysis of potentially relevant library programs, the authors derived a new analytical framework using operationalized definitions based on the nine elements of digital citizenship as specified by Ribble & Park's (2019, 39-41). The authors conducted a directed content analysis (Hsieh & Shannon, 2005) by thematically coding and categorizing the content of the sampled library program titles and descriptions using the derived framework. Given the use of a new analytical framework, directed content analysis is appropriate given its objectives to evaluate or extend theories or frameworks (Hsieh & Shannon, 2005). The operationalized

definitions of nine elements are listed by categories of safe, savvy, and social below. They were operationalized based on their nominal definitions, as listed in Table 1, and the descriptions of each element as discussed in Ribble and Park (2019) and Ribble (2023).

- *Digital health and welfare* library programs provide users with knowledge and skills related to promoting health (both bodily and mental) and balanced technology use. These programs may cover topics such as health or fitness-related websites and apps, desk ergonomics, screen-time limitations, etc.
- *Digital rights and responsibilities* library programs provide users with knowledge and skills related to understanding, expressing, and protecting their rights and the rights of other people online. The library programs may cover topics such as internet access rights, consumer rights, freedom of speech or expression, online censorship, intellectual freedom, freedom of information, etc.
- *Digital security and privacy* library programs provide users with knowledge and skills related to strategies and tools for safely using the internet and digital devices. These library programs may cover topics such as internet safety, online viruses, malware, spam, online privacy, online tracking, etc.
- *Digital commerce* library programs provide users with knowledge and skills related to conducting business and making transactions online. These programs may cover topics such as online banking, career planning, and safely buying and selling goods or services online.
- *Digital communication and collaboration* library programs provide users with knowledge and skills related to creating and sharing information with others online. These programs provide users with knowledge and skills related to expressing themselves online and effectively communicating messages and ideas as well as teamwork in the online context.
- *Digital fluency* library programs provide users with knowledge and skills related to comprehending and using technology as well as the ability to evaluate and apply media and information. These programs may cover topics related to learning how to use myriad information technologies as well as information, media, news, or digital literacy instruction.
- *Digital access* library programs provide users with knowledge and skills related to the accessibility of information and information technology, such as where and how to access information and information technology as well as awareness of potential inequity of access to information and information within the community. These programs could focus on accessing free online resources, academic paywalls, and ability-related accessibility, as well

as addressing the digital divide or providing access to and training with technologies.

- *Digital etiquette* library programs provide users with knowledge and skills related to understanding the rules of conduct online and how one's conduct and interactions may impact others online and offline. These programs may cover topics such as cyberbullying, harassment, or discrimination as well as learning about diverse cultures and communities, developing cultural competency, and other ways of facilitating positive and respectful interactions online.
- *Digital law* library programs provide knowledge and skills related to policies and regulations as well as legal responsibilities and consequences for online behavior. These library programs may cover topics such as cyberbullying, sexting, intellectual property and copyright, deep fakes, laws and legislation related to the internet, etc.

It should also be noted that the nine elements of digital citizenship are intrinsically interrelated and not mutually exclusive, resulting in some library programs being coded with more than one of the elements. For example, topics like cyberbullying may span multiple elements, such as digital etiquette, digital health and welfare, digital law, digital rights and responsibilities, and digital security and privacy.

The authors explored the websites and event calendars of the sampled case libraries to identify programs that cover topics or themes related to digital citizenship. This study only considers synchronous, interactive programs or activities held in-person, online, or in a hybrid format, such as workshops, classes, or other educational activities, and does not include passive programs or other resources in a library's collections, such as makerspaces, exhibits, library guides, or databases. Guided by the operationalized definitions and scoping criteria, the authors used keyword searching or results sorting, where possible, of program or event titles, descriptions, and any readily available supplemental materials. A similar approach for exploring topic or theme coverage in educational activities was used by Hollister and Elkins (2017) and Hollister and Lee (2022) by collecting the titles and descriptions of courses offered by LIS programs. Searching was conducted on the case libraries' relevant program or events webpages or calendars and focused on all upcoming programs scheduled for November and December in 2023. The target audience of the collected programs was limited by age, focusing on programs for school-aged children (ages 5 and up) to tweens, teens, adults, and seniors. The two authors conducted intercoder reliability testing to ensure consistency of the new framework during the content analysis. A subsample (n=75, or 22.25% of 337) of the collected program titles and descriptions was used for intercoder reliability

testing, which yielded a 94.67% level of agreement on the first round. Lombard, Snyder-Duch, and Bracken (2002) argue that intercoder reliability testing in content analysis should be 80% or higher for reliable findings, which this study surpasses.

3.3 Case Library Summaries

This section provides brief backgrounds for each case library, an explanation of why they received the Library of the Future award, and to which elements of digital citizenship the award-winning programs connect with.

The Las Vegas-Clark County Library District (LVCCLD) serves a population of 1,722,419 with 25 branch libraries (IMLS, 2021). The LVCCLD won the Library of the Future Award in 2022 for its “Bringing the Library to Transit Riders” program which allowed commuters to sign up for and use the library’s resources via their Libby app on the region’s 400 free Wi-Fi enabled buses (ALA, 2022). It won again in 2023 for its “Cell Phone Lending Program” which loaned smartphones preloaded with library apps with 18 months of free service to community members with low income or without housing (ALA, 2023b). These library programs exhibit the themes of digital access, digital communication and collaboration as well as digital fluency.

The Plano Public Library (Plano PL) serves a population of 285,494 with a central library and 4 branch libraries (IMLS, 2021). The Plano PL won the Library of the Future Award in 2020 for its outreach program that provided one-on-one technology training to underserved members of their community, such as English language learners, seniors, and those recovering from traumatic brain injury (ALA, 2020). This program can be associated with the themes of digital access and digital fluency.

The Broward County Library (BCL) serves a population of 1,955,375 with a central library and 36 branches (IMLS, 2021). The BCL received the Library of the Future Award in 2019 for its Project Welcome, which used Amazon Echos and tablets to provide multilingual services to non-English speaking and English language learners in their community (ALA, 2020). This program can be associated with the theme of digital access.

The Muncie Public Library (MPL) serves a population of 72,057 with a central library and 3 branches (IMLS, 2021). The MPL received the Library of the Future Award in 2017 for its “Digital Climbers” program, which encourages children over 8 years old to develop skills related

to STEAM (Science, Technology, Engineering, Arts, and Mathematics) using a variety of digital technologies, such as 3D printers, design software, music production software, and digital games (ALA, 2017). This ongoing program can be associated with the elements of digital access and digital fluency.

The Indianapolis Public Library (IndyPL) serves a population of 281,955 in 2021 across a central library, 24 branches, and 1 bookmobile (Indianapolis Public Library, 2021; 2023). The Indianapolis Public Library received the Library of the Future Award in 2016 for the eBook Tinker Station project. Through this program, the library provided one-on-one instruction for community members to learn how to use eBooks, eAudiobooks, and other electronic streaming media (ALA, 2016). This program can be associated with the elements of digital access and digital fluency.

According to its website, the Queens Public Library (QPL) spans 66 locations, including a central library, branch libraries, adult learning centers (7), teen centers (2), bookmobiles (2), book bicycles (2), and 1 technology center (Queens Public Library, 2023). According to the 2021 fiscal year data from the Institute of Museum and Library Services Public Library Survey, the QPL served a population of 2,230,722 (IMLS, 2021). The QPL was recognized with the Library of the Future Award for its “Enriching the Lives of a Challenged Community by Lending Tablets Project” in 2014 (ALA, 2014). The library facilitated a lending program of customized tablets for residents impacted by Hurricane Sandy. The tablets were customized allowing for easy use by beginners and be helpful with or without internet access as many residents lacked access due to the slow rebuilding of the infrastructure following the hurricane. This program can be associated with the themes of digital access and digital fluency.

The Princeton Public Library (Princeton PL) is based in New Jersey with 1 central branch serving a community of 28,572 (IMLS, 2021). Princeton PL won the Library of the Future Award in 2013 for the Community Collaboration and Technology Services project (ALA, 2013). This project collaborated with entrepreneurs and technology experts in the area to enhance the technology and business education, services, and resources made available by the library based on the community’s needs. The program also helped the library to cross-promote other resources and services. This program can be associated with the themes of digital commerce, digital access, and digital fluency.

Ⅳ. Findings

4.1 Digital Citizenship in Public Library Programs

The websites of each of the 7 case libraries were searched to identify relevant programs scheduled for a 2-month period consisting of November and December of 2023. Prior to applying the selection and scope criteria, there were a total of 6,259 programs listed across the sample. Application of the selection and scope criteria and conducting the directed content analysis yielded a purposive sample of 337 (n=337) relevant public library programs that cover at least 1 of the 9 digital citizenship elements as per Ribble and Park (2019) and operationalized in Section 3.3. Table 3 identifies the coverage of the nine elements across each of the 7 case libraries and overall.

〈Table 3〉 Digital Citizenship Elements in Relevant Public Library Programming

	Las Vegas-Clark County Library District (n=66)	Plano Public Library (n=18)	Broward County Library (n=79)	Muncie Public Library (n=5)	Indianapolis Public Library (n=38)	Queens Public Library (n=113)	Princeton Public Library (n=18)	Overall (n=337)
Digital Health & Welfare	3 (4.55%)	0	2 (2.53%)	0	0	1 (0.88%)	1 (5.56%)	7 (2.08%)
Digital Rights & Responsibility	3 (4.55%)	0	2 (2.53%)	0	1 (2.63%)	3 (2.65%)	2 (11.11%)	11 (3.26%)
Digital Security & Privacy	11 (16.67%)	1 (5.56%)	9 (11.39%)	0	1 (2.63%)	6 (5.31%)	2 (11.11%)	30 (8.90%)
Digital Commerce	14 (21.21%)	8 (44.44%)	13 (16.46%)	0	6 (15.79%)	22 (19.47%)	6(33.33%)	69 (20.47%)
Digital Communication & Collaboration	12 (18.18%)	0	9 (11.39%)	0	3 (7.89%)	16 (14.16%)	4 (22.22%)	44 (13.06%)
Digital Fluency	40 (60.61%)	15 (83.33%)	69 (87.34%)	3 (60.00%)	30 (78.95%)	88 (77.88%)	18 (100%)	263 (78.04%)
Digital Access	49 (74.24%)	16 (88.89%)	67 (84.81%)	5 (100%)	37 (97.37%)	95 (84.07%)	15 (83.33%)	284 (84.27%)
Digital Etiquette	2 (3.03%)	1 (5.56%)	1 (1.27%)	0	0	2 (1.77%)	0	6 (1.78%)
Digital Law	4 (6.06%)	0	1 (1.27%)	0	0	2 (1.77%)	1 (5.56%)	8 (2.37%)

As seen in Table 3, the elements of digital access (84.27%) and digital fluency (78.04%) are the most covered in the programs. Digital commerce (20.47%), digital communication and collaboration (13.06%), and digital security and privacy (8.90%) are covered sparingly. The elements of digital rights and responsibilities (3.26%), digital law (2.37%), digital health and welfare (2.08%), and digital etiquette (1.78%) are rarely covered in the library programs.

〈Table 4〉 Library Program Recurrence and Format

	Singular or Recurring/ Series Program		Program Format			
	One-Time	Recurring/ Series	In-Person	Virtual	Hybrid	Total Programs
Overall	123 (36.50%)	214 (63.50%)	301 (89.32%)	28 (8.31%)	8 (2.37%)	337 (100%)
Las Vegas-Clark County Library District	15 (22.73%)	51 (77.27%)	66 (100%)	0	0	66 (19.58%)
Plano Public Library	12 (66.67%)	6 (33.33%)	12 (66.67%)	6 (33.33%)	0	18 (5.34%)
Broward County Library	37 (46.84%)	42 (53.16%)	66 (83.54%)	9 (11.39%)	4 (5.06%)	79 (23.44%)
Muncie Public Library	0	5 (100%)	5 (100%)	0	0	5 (1.48%)
Indianapolis Public Library	9 (23.68%)	29 (76.32%)	38 (100%)	0	0	38 (11.28%)
Queens Public Library	38 (33.63%)	75 (66.37%)	97 (85.84%)	13 (11.50%)	3 (2.65%)	113 (33.53%)
Princeton Public Library	12 (66.67%)	6 (33.33%)	17 (94.44%)	0	1 (5.56%)	18 (5.34%)

As seen in Table 4, there are 337 relevant programs in the study, consisting of 66 (19.58%) at Las Vegas-Clark County Library District (LVCCLD), 18 (5.34%) at Plano Public Library (Plano PL), 79 (23.44%) at Broward County Library (BCL), 5 (1.48%) at Muncie Public Library (MPL), 38 (11.28%) at Indianapolis Public Library (IndyPL), 113 (33.53%) at the Queens Public Library (QPL), 18 (5.34%) at Princeton Public Library (Princeton PL). Most of the collected programs are held in-person (301, 89.32%) and are part of a recurring or serial program (214, 63.50%). 123 (36.50%) of the programs are singular events, 28 (8.31%) are held online, and 8 (2.37%) are held in a hybrid format.

The target audiences of the programs range from babies to seniors. As denoted with asterisk in Table 5: while the selection criteria excluded programs specifically for children younger than 5, some events target multiple age groups which may have included children younger than 5 as one of the identified target audiences. As seen in Table 5, 277 (82.20%) are for adults, 106 (31.45%) for teens, 60 (17.80%) for children over 5, 58 (17.21%) of the programs are for seniors in specific, 21 (6.23%) for babies, toddlers, and preschoolers, 21 (6.23%) for All Ages, and 17 (5.04%) for tweens.

〈Table 5〉 Target Audience by Age

Target Audience	Number of Programs
Adults	277 (82.20%)
Teens	106 (31.45%)
Children Over 5	60 (17.80%)
Seniors	58 (17.21%)
Babies, Toddlers, Preschoolers*	21 (6.23%)
All Ages	21 (6.23%)
Tweens	17 (5.04%)

*While excluded from the sample, some programs were co-listed as being appropriate for younger children and are included in the table.

Beyond the title and descriptions of the programs, some libraries (n=322) included a topic categorization or descriptor for their programs. 76 different topic descriptors were consolidated into 10 topic categories, as seen in Table 6. These topic categories are not mutually exclusive as multiple of the original categories may have been used to describe one event. Computer classes account for 54.66% (176) of the programs, 40 (12.42%) are focused on arts and culture, crafts, and making, 33 (9.63%) are on career, business, and job search resources and training, 28 (8.70%) are focused on video games and gaming, 14 (4.35%) cover science-focused STEAM or STEM programs, 9 (2.80%) cover topics related to civic life, community meetings, outreach, and coping[5] skills, 9 (2.80%) cover music and audio production, 7 (2.17%) cover books, literacy, and learning, 5 (1.55%) cover topics related to financial literacy, and 3 (0.93%) cover health and wellness topics.

〈Table 6〉 Consolidated Program Topic Descriptors

Topics	Number of Programs
Computer and Technology Classes	176 (54.66%)
Arts & Culture, Crafts, Making	40 (12.42%)
Career/Business	31 (9.63%)
Video Games & Gaming	28 (8.70%)
Science, STE(A)M	14 (4.35%)
Civic Life, Community Meetings, Outreach, & Coping Skills	9 (2.80%)
Music & Audio Production	9 (2.80%)
Books, Literacy, Learning, Writing	7 (2.17%)
Financial Literacy	5 (1.55%)
Health & Wellness	3 (0.93%)

4.2 Digital Citizenship in Public Library Programming

The following sections briefly describe library programs that identify with the nine elements of digital citizenship identified during content analysis and as organized in the S3 framework (Ribble & Park, 2019).

4.2.1 Safe

The elements of digital health and welfare, digital rights and responsibility, and digital security and privacy make up the Safe frame of digital citizenship (Ribble & Park, 2019). As seen in Table 3, digital health and welfare are covered in 2.08% of collected library programs, digital rights

5) The Queens Public Library used "coping skills" as a category for citizenship and civics programs.

and responsibilities are covered in 3.26%, and digital security and privacy are addressed in 8.90%.

4.2.1.1 Digital Health & Welfare in Library Programs

The Broward County Library's "Mind and Soul Meditation (Online)" provides an accessible introduction to yoga and meditation to promote health and wellness in their community. The LVCCLD's teen program "Low Tech Tuesday" encourages life balance by disconnecting from digital technologies. The "New Mamas Virtual Support Group" offered by the QPL provides an opportunity for digital communication and sharing of health and family information resources.

As its title suggests, the BCL's program "Introduction to the Internet" provides adults an introduction to a wide variety of popular websites and apps for entertainment, education, as well as "mental growth." This program also discusses how to use the internet safely and avoid scams, connecting digital health and welfare to the element of digital security and privacy. Relatedly, the "Elder Fraud: A Guide for Seniors and Families" program also discusses the impact that fraud can have on mental health.

4.2.1.2 Digital Rights & Responsibilities in Library Programs

Digital rights and responsibilities were addressed in citizenship-focused programs such as the virtual program offered by QPL, "Citizenship Mock Interviews" which provided community members opportunities to learn about the US government and history as well as chances to practice for upcoming interviews with the US Citizenship and Immigration Service. The topics of intellectual freedom, censorship, and freedom to read are addressed in the virtual program, "Banned Books Discussion Group," also offered by QPL as well as the in-person "Banned Book Club" at the BCL. The Princeton PL will also host historians and journals for a program on "Democracy and Journalism" to "discuss the history of democracy, active citizenship, and participatory journalism."

The virtual program, "Using Artificial Intelligence (Online) as a Writing Assistant," offered by BCL connects digital rights and responsibilities with digital access, commerce, and communication, and fluency by discussing "the ethics behind using AI, and how it can help speed up your creative process." Digital rights and responsibilities was also connected with the elements of digital law and digital security and privacy, as mentioned later. For example, the "Clínica de Formularios de Derecho Familiar" or "Family Law Forms Clinic" is a Spanish language program offered by the LVCCLD that provides information and resources related to family law and their rights.

4.2.1.3 Digital Security & Privacy in Library Programs

Digital security and privacy was most often mentioned in reference to securely using the internet or devices or avoiding scams while making purchases online. For example, the Savvy Seniors Scam Prevent Workshop at the LVCCLD teaches adults and seniors how to identify and avoid scams and identity theft attempts online as well as what to do if you become a victim. The "Computer Networking" program at the QPL teaches teens and adults how to secure their computer's network and protect their identity online. The "Computer Class: Shopping Online Safely" program at the QPL connects digital commerce with digital security and privacy by teaching seniors and adults how to find deals as well as protect their personal information when shopping online.

4.2.2 Savvy

The elements of digital commerce, digital communication and collaboration, and digital fluency make up the Savvy frame of digital citizenship (Ribble & Park, 2019). As seen in Table 3, digital commerce is covered in 20.47% of the sampled library programs, 13.06% cover themes related to digital communication and collaboration, and digital fluency is addressed in 78.04%.

4.2.2.1 Digital Commerce in Library Programs

The "History & Business of Hip Hop for Teens" program at the LVCCLD collaborates with community leaders and industry experts to teach library users about the history and culture of hip hop as well as how to produce hip hop music. From its description, this program series are:

> "unique, hands-on classes and learn all about the creative history of Hip Hop and its impact on modern culture. Expert instructors provide experience in sound engineering, music production, DJing, lyric development, and more. Gain skills and learn about what it takes to succeed in the music industry and beyond. Don't miss this chance to network, make new friends and have fun in a safe and inclusive environment."

The "Queens Hip Hop 101: A Master Class" program at the QPL also discusses branding and surviving in the music industry. These programs also connect with other digital citizenship themes, such as digital communication and collaboration, etiquette, and fluency.

There were also a variety of programs focused on developing job skills and preparing for college. For example, the "Level Up Lounge" at the QPL seeks to help older kids, teens, and adults to learn about different career paths and develop digital literacy skills needed in the workplace, which

connects to the element of digital fluency. Its “Intro to Entrepreneurship” program also helps community members create unique business plans based on their needs and goals.

4.2.2.2 Digital Communication & Collaboration in Library Programs

The “Live Streaming for Beginners” program, also at the QPL, provides virtual instruction on how to build an audience, seek out collaboration opportunities, and make a living through streaming, making connections to digital commerce and digital fluency. The QPL’s “STEAM Time” also engages kids of all ages with a variety of STEAM activities to learn how to “brainstorm and work as a team.” The “Community Oral History 101 Workshops” at BCL are led by local archivists to train community members on how to capture and preserve their stories and lived experiences. The LVCCLD and QPL both offer a variety of programs focused on teaching their communities how to use audio recording equipment and software to write, record, and produce music as well as podcasts based on their interests for fun or business endeavors.

4.2.2.3 Digital Fluency in Library Programs

Library programs coded with digital fluency were predominantly focused on teaching library community members how to use a wide variety of technologies, ranging from computer and mobile devices and operating systems (such as Windows, iOS, and Android), office applications (such as Microsoft Word, PowerPoint, or Excel, and Google Docs), cloud technologies (such as Google Drive and iCloud), photo-editing and graphic design tools (Adobe projects and Canva), 3D-printing software and printers, and music and podcast production applications (such as Garage Band, Pro Tools, or Logic Pro). The QPL offers computer and technology classes in multiple languages beyond English, such as Cantonese, Bengali, and Spanish. The IndyPL offers computer classes in Kinyarwanda, Swahili, French, and English.

This also included coding and programming skills for multiple age groups. The QPL provides several coding programs for children focusing on HTML, JavaScript, CSS, Python, SQL, and Fiero. The Plano PL facilitates a “Code Your Name” program to instruct elementary school-aged children binary and ASCII. Both BCL and IndyPL participate in the Hour of Code[6] with programs for kids, tweens, and teens. The LVCCLD, QPL, and BCL all provide robotics programs for youth that combine coding with physical technology. The MPL offers its “Digital Climbers” STEAM program series at various age levels to cater to different age levels and interests.

6) https://hourofcode.com/us

There are numerous programs focused on teaching users how to explore and use the internet for various purposes, such as LVCCLD's "Internet 101" or QPL's "Computer Class: Booking Travel Online" for adults and seniors. The LVCCLD, QPL, BCL, and IndyPL also provide one-on-one technology assistance and training programs.

Several libraries provide digital, information, and media literacy instruction. The IndyPL offers several programs utilizing the Northstar Digital Literacy[7] platform. The QPL offers a teen program called "Media Master Monday" that covers "television, radio, music, and the video game industry in order for teens to have a better understanding of the media they watch, play, and use." BCL's "Beyond Fake News & Deepfake Fear: Hope & Media Literacy" also provides a hybrid lecture on these topics as well as the need for developing media literacy skills.

4.2.3 Social

The elements of digital access, digital etiquette, and digital law make up the Social frame of digital citizenship (Ribble & Park, 2019). Digital access is addressed in 84.27% of the sampled library programs, digital etiquette in 1.78%, and digital law is in 2.37%.

4.2.3.1 Digital Access in Library Programs

Most of the library programs coded for digital fluency were also coded for digital aspect as most of them provided direct access to media and technologies for recreational, professional, or learning purposes. The BCL provides access to information via its "Free Phones for the Hearing-Impaired Program" in partnership with the Center for Hearing and Communication and the Florida Telecommunications Relay. Access was also provided to technologies such as 3D printers, VR headsets, and gaming consoles, such as the "Teen Tech" programs at LVCCLD and the "Adult VR/Oculus" at QPL. The BCL hosts a variety of tech programs through its makerspace, the Creation Station.

In addition to programs providing access to technology and about how to use the internet, as mentioned in Section 4.2.2.3, several libraries provided programs specifically about where and how to access and use certain types of information and media. The Princeton PL offers the "Librarian Bootcamp," where libraries share their favorite trusted sources on a variety of topics. BCL offers a similar program such as "On-line Resources" and "Scholarship Resources Workshop" that covers all of the electronic resources available to library card holders. Plano

7) https://www.digitalliteracyassessment.org/

PL provides an instruction session for the Morningstar[8] financial database and services platform. The BCL and IndyPL both provide programs about how to find and read e-books as well as use Libby[9], a popular e-book and audiobook platform used by libraries. IndyPL provides a program called “Cutting the Cable Cord: Free to Stream” which covers the “pros, cons, and costs of streaming platforms such as Amazon and Netflix, including the library’s free streaming services.” The LVCCLD also has a “Jungkook Golden Listening Party” to celebrate the BTS member’s debut album but also instruct library users on how and where to stream the album for free using library resources.

4.2.3.2 Digital Etiquette in Library Programs

The “LEAD Workforce Development” program at the QPL addresses etiquette in the context of learning about workplace culture and networking in the US. Another program, the “Building a Professional Image” at Plano PL, also links digital etiquette with commerce. Digital etiquette is also connected to digital communication and collaboration as seen in the “Gamer Power Hour” program offered by the LVCCLD, which encourages adult gamers to compete or work together while having fun playing games.

Some programs may also promote cultural competency by connecting technology and media to diverse communities and cultures. For example, the “Cultural Conversations at AARLCC [African-American Research Library and Cultural Center[10]]” program as a part of the “Mapping Afrofuturism: Understanding Contemporary Black Speculative Practice” exhibit at the BCL addresses a variety of issues such as “representation, empowerment, science, science fiction, technology and race.” The “People’s Theater Project: Celebrate Your Culture with Community Theater Workshop Series” at the QPL provides a “fun, new way to celebrate your culture, led by the People’s Theater Project, an immigrant- and women-of-color-led cultural organization in NYC. Their workshops, rooted in creativity, fuse the body, voice, heart, and mind of participants, focusing on the language, food, music, dance, and media that are a part of our lives.”

4.2.3.3 Digital Law in Library Programs

The digital law element was often addressed in conjunction with another digital citizenship

8) https://www.morningstar.com/products
9) https://www.overdrive.com/apps/libby
10) https://www.broward.org/Library/Pages/AARLCCStory.aspx

element, such as digital security and privacy or digital rights and responsibilities. For example, the “Ask a Lawyer Seminars for Small Business Owners” series of programs at the LVCCLD has a specific event titled “Social Media and Cyberspace: Protecting Your Data & Reputation” that provides business owners an opportunity to meet one-on-one with a lawyer for free to discuss business issues related to data and social media; which also connects with the digital security and privacy element. The Princeton PL’s hybrid program on “Elder Fraud: A Guide for Seniors and Families” provides information on how to protect yourself and your family from elder fraud and connects with the digital security and privacy element as well as health and welfare.

4.3 Limitations

This study has several limitations. First, this study uses a purposive sampling of 7 library systems with a two-month-period’s worth of programs as scheduled on their library websites. Due to the sample size, selection criteria, and qualitative methods, the findings of this study are not generalizable to all public libraries in the U.S. However, given the nature, scope, and available resources of this study, the methods are appropriate as visiting and attending thousands of library programs across the United States would be infeasible. Additionally, the data includes events scheduled for a two-month period that may not be generalizable to the rest of the year and does not account for events that were canceled, rescheduled, or added outside of the data collection period. This approach was deemed appropriate as several of the libraries do not make accessible past events and the researchers wanted to collect programs from the same period for each of the libraries for comparison and analysis purposes; limiting to the sample to only libraries that provide access to past events would also further limit the sample size. Programs specifically targeted to audiences younger than 5 years old were also not collected.

The content analysis is based on publicly available information provided on each case library’s website (titles, descriptions, target audiences, categories, etc.), so the topics and themes covered during the actual programs may cover more or fewer elements of digital citizenship. However, trustworthiness and consistency of the content analysis was achieved through intercoder reliability testing, which reached a high level of agreement upon the first round of interpretation and analysis of the subsample. Furthermore, the sample includes a variety of public library types, from small city public libraries with a single location serving a population of less than 30,000 (Princeton PL) to large public library systems that serve metropolitan areas with multiple branches and

populations of around or more than 2 million (QPL, BCL, and the LVCCLD), so the results may be transferable to similar libraries serving similar population sizes and regions. The libraries were selected from award-winning libraries as determined by the ALA and Information Today, Inc.

Ⅴ. Discussion

5.1 Digital Citizenship Element Coverage Favors Digital Access and Digital Fluency

The overall findings suggest that while the case libraries' programs, in conglomerate, cover all nine of the elements of digital citizenship as specified by Ribble and Park (2019), the coverage is unequal, focusing primarily on the aspects of digital fluency and digital access. As seen in Section 3.3, these elements were common among the programs which earned the libraries their respective awards. Broward County Library, Queens Public Library, and the Las Vegas-Clark County Library District are the only case libraries that cover all nine elements of digital citizenship. However, they represent large library systems across multiple branches that serve large metropolitan areas and are likely to have more trained staff and greater opportunities to access resources, such as funds and community partnerships. The predominance of programs related to digital access and digital fluency may also be due to the intrinsic nature of libraries and librarianship, given its long history of providing access to resources and technology as well as focus on information literacy as an aspirational goal for the community and professional requirement for librarians (Julien, 2016).

While the analysis of programs was limited to titles and descriptions, the findings suggest that public libraries should consider adapting existing programming or developing new programming to cover the elements of digital citizenship more equally. Scholars argue that while digital literacy is an enabling factor of digital citizenship (Mossberger, 2008), it is not sufficient condition for digital citizenship (Choi, Glassman, & Cristol, 2017; Choi & Park, 2015). Going further, others argue digital citizenship education must go beyond digital literacy and transform the curriculum from simply learning and theorizing digital citizenship to practicing and internalizing digital citizenship in contextualized problem situations (Armfield & Blocher, 2019; Buchholz, Dehart, & Moorman, 2020; Suryanarayana & Lingaiah, 2022).

UNESCO Bangkok (2015) suggests that Media and Information Literacy (MIL) curricula can be integrated into subject areas enhancing competencies for digital citizenship. An example in line with this suggestion, Lee et al. (2021) developed lesson plans for public library-oriented media literacy education that cover the values, attitudes, skills, and knowledge of digital citizenship with additional emphasis on the elements of digital etiquette, law, rights, and responsibilities which are not typically covered in library literacy programs. Rogers-Whitehead, Milstead, and Farris-Hill (2022) recommend that libraries can prioritize a few themes first and expand to others gradually or distribute development across library systems to collaborate on making and sharing program materials.

5.2 Information Technology Programming Audiences, Topics, & Formats

Most of the identified information technology programs focus on adult audiences. While there were a fair number of programs for children, tweens, and teens, such as Muncie Public Library's award-winning "Digital Climbers" programs which offers STEAM activities to multiple youth age groups, it is clear there could be more. UNESCO argues that children of all age groups, from 0 to 18 years old, should be provided with technical infrastructure and digital literacy training (UNESCO Bangkok, 2015; 2016; 2017). Since citizenship, as a set of activities and attitudes, is something one needs to improve and internalize throughout one's life, civic education must evolve to suit the needs of digital citizens in a socially, politically, and technologically evolving world (Bennett, Wells, & Rank, 2009; Frau-Meigs et al., 2017; Yang & Kim, 2014; Yoon, 2017). Digital citizenship education reflecting users' life cycles and traits should be provided from an early age and users should practice and exercise digital citizenship throughout their entire lives (Choi, Lee, & Jung, 2022; Hollandsworth, Dowdy, & Donovan, 2011; Shim, 2017).

Reading and literacy programs for young children and pre-teens can utilize media and technology to make reading more fun, interesting, and appealing to them. Rogers-Whitehead, Milstead, and Farris-Hill (2022) suggest games and media such as Pokémon Go, Minecraft, Paw Patrol, and other character-based books and novels act as good foundations for such programming. Gaming programs were prominent in the findings and were offered to all age groups, including adults. Programs that introduce games and gaming can also serve as gateway programs that introduce participants, reluctant library users, or underserved community members to other library resources and services (Nicholson, 2010).

Imbalance in the programs offered by the case libraries can also be seen in the context of topics, which primarily focus on computers and technology. Given that digital citizenship is more than access and fluency with digital technologies, this provides an opportunity for libraries to be creative in engaging with the other elements outside of computer or technology classes. Public libraries have accumulated substantial literary education resources and expertise including print and digital media, technologies, librarians, and all types of literacy programs. By mobilizing these resources, public libraries could build upon existing information, digital, or media literacy programs into digital citizenship education programs. Especially in Korea, where current digital citizenship scholarship underestimates the importance of the knowledge aspect of digital citizenship, Choi, Lee, and Jung (2022) argue that more educational programs covering knowledge of digital citizenship and digital space as well as relevant laws and policies should be built and provided.

This is also not to say that computer and technology-focused library programs should be less emphasized. Digital inclusion is critical for digital citizenship. According to the National Digital Inclusion Alliance (NDIA, 2020), digital inclusion includes five elements of access to broadband internet, connected devices, digital literacy training, technical support, and empowering applications and content. Library programs focusing on digital access and digital fluency can support digital inclusion, as seen with the many introductory technology classes aimed at seniors in the sample. Providing digital citizenship library programs in multiple formats and languages can also facilitate digital inclusion. As noted, the QPL and IndyPL offered programs in languages besides English to better serve and include their diverse communities.

Despite this study's data collection period following the COVID-19 pandemic, an overwhelming majority of library programs related to digital citizenship are offered only in a face-to-face, in-person format; three of the case libraries did not offer a single relevant program, at least given this study's limited scope, in a virtual or hybrid format. Increased offerings in virtual or hybrid format could increase accessibility to relevant programs as well as encourage the development of digital literacy and fluency skills.

5.3 Emergent Theme: Stakeholder Partnerships

An emergent theme noticed during the analysis was that libraries often partner with community members, institutions, and other stakeholders to provide diverse programming to their users. Several examples from the findings described above feature partnerships, such as the "History

& Business of Hip Hop for Teens" program at the LVCCLD and the QPL partnered with the People's Theater Project "Celebrate Your Culture with Community Theater Workshop Series." Libraries and their communities may benefit from community outreach and building partnerships to support digital citizenship education. Hollandsworth, Dowdy, and Donovan (2011) and Phillips and Lee (2019) argue that all stakeholder groups of students, parents, teachers, library media specialists/school librarians, educators, administrators, technology specialists, and community members should take collaborative approaches to establish appropriate and consistent policies and practices of digital citizenship education. Especially for children's acquisition of digital skills, the involvement of teachers, parents, and other caregivers provides social influence and mediation necessary maximize educational benefits and minimize risks of media consumption (UNESCO Bangkok, 2015). Libraries can invite parents, caregivers, and peers to children's and teenagers' digital citizenship programs to learn together and teach each other. Peer mentorship may reduce cyberbullying and social exclusion and help teen volunteers develop a sense of ownership and belonging to their libraries (Rogers-Whitehead, Milstead, & Farris-Hill, 2022). Phillips and Anderson (2020) found that strong parental involvement and peer mentors are critical for delivering digital citizenship instruction to teens with autism spectrum disorder (ASD) at public libraries.

Pursuing a multi-stakeholders and multi-sectors approach may also help increase outreach to the communities as well (UNESCO Bangkok, 2017). For example, the Cyber Seniors[11] program pairs teens with seniors to teach digital literacy skills to seniors, which bridges a generational and multi-cultural divide as well as provides teens a chance to hone their digital literacy skills by teaching others (Rogers-Whitehead, 2016). Limited resources can also be partially addressed by pursuing partnerships within the community, with stakeholders and institutions with shared goals.

Ⅵ. Conclusions & Future Work

As noted above, digital citizenship incorporates a wide variety of elements, topics, skills, and technologies that can be addressed and taught in myriad ways. The findings of this study suggest that many public library programs do address parts of digital citizenship, but that some aspects, particularly digital access and digital fluency, are covered more than others. Based on themes identified in the research literature and from the findings, the authors recommend public libraries to consider

11) https://cyberseniors.org/about/history-and-film/

revising or building upon existing programs to find innovative ways to integrate all elements of digital citizenship, aim for inclusive and accessible digital citizenship education for all ages, and leverage resources and expertise from community, stakeholder, and institutional partnerships.

Future research on digital citizenship in library programming could explore the perceptions and needs of public librarians and community partners regarding digital citizenship instruction and program development, as well as identifying best practices. This could be facilitated by an expanded scope that includes a larger sample size with different types of libraries, fieldwork that involves attending a sampling of information technology or digital citizenship programs from other critically acclaimed or award-winning libraries, or via an exploration and comparison of how libraries in different countries promote digital citizenship in their respective communities. Library and Information Science (LIS) curricula could also be analyzed to see if future librarians are versed in digital citizenship so that libraries, librarians, and LIS educators are better prepared to promote digital citizenship in their communities and around the world.

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