Promoting Information Literacy in Digital Age

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ABSTRACT

This paper explores the promotion of information literacy in digital age where various concepts of information literacy and its importance in digital age were considered and describes applications of information literacy instruction in institutions of higher education. It also offers opportunities especially for those in tertiary institutions to enhance secretaries and students' information literacy skills through novel educational techniques. For instance, secretaries may likely develop tools in support of students' interaction in course management systems and virtual worlds, assist faculty in the creation of course curriculum, as well as other activities to showcase their information literacy skills. Promoting the development of a diversity of literacies among students enables secretaries to demonstrate their flexibility as well as their roles in contributing to individuals' success in academia and beyond. The 21st century has witnessed an unmatched flow in information availability, brought by rapid digital advancements. This pattern has not only transformed how information is generated and accessed but has also fundamentally altered the learning landscape. Within this vital context, the intersection of information literacy and learning emerges as a critical area of inquiry during this digital age. Information literacy, once confined to information management sciences, has evolved into a multidimensional competency encompassing adept navigation, critical evaluation, and judicious utilization of digital information sources. This review delves into the intricate relationship between information literacy and learning in the digital age, drawing from various theoretical frameworks. It aims to offer a comprehensive understanding of how information literacy influences and is influenced by the learning process and implementation process among secretaries in institutions of higher education. Additionally, the review provides practical insights for educators, policymakers, and practitioners seeking to foster robust information literacy skills in this digital age. Ultimately, it lays the foundation for designing effective pedagogies and policies to empower learners in an information-abundant digital ecosystem.

INTRODUCTION

The ability of end users to employ technology for a range of purposes supports their personal and professional undertakings in the digital age. The ability to locate, assess, comprehend, and use information in a variety of formats and circumstances is known as information literacy, and it supports students' successful technology engagement in a wide range of academic settings. Giving people technology training can help them become more productive, happier, and more adaptable in the workplace. It can also help them become more information literate. The fast development of digital technology has sparked an unparalleled period of information proliferation in the 21st century (Marín & Castaneda, 2023; OECD Publishing, 2021). In addition to changing how information is produced, shared, and used, the digital revolution has also radically changed the nature of education (Falloon, 2020). The relationship between learning and information literacy becomes a crucial field of study in this dynamic setting. Once limited to the field of information sciences, information literacy has developed into a multifaceted skill that includes the capacity to efficiently browse, assess, and use a multitude of digital information sources (Nikou, De Reuver, & Mahboob Kanafi, 2022). In essence, one can say that information literacy is the ability to find, evaluate, organize, use, and communicate information effectively

Access to information has become more accessible due to the advent of the digital era, which has brought with it both incredible opportunities and difficult obstacles (Railean & Railean, 2017; UNESCO, 2021). People had never had such instantaneous and wide-ranging access to a wealth of information, encompassing disciplines, viewpoints, and geographical locations, but in the midst of this abundance, the capacity to identify trustworthy, dependable, and contextually relevant information has emerged as a critical competency for both students and

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professionals. Thus, information literacy becomes the foundation that enables people to use judgment and critical thinking to manage this enormous amount of data (Copeland, 2021). Developing information literacy is not only a question of educational pedagogy but also a societal necessity in a time when misinformation and deception are rampant, fostering informed citizenship and contributing to the resilience of democratic discourse (Kalolo, 2019). This paper review aims to provide readers with the enhancement of information literacy by secretaries in the digital age.

LITERATURE REVIEW

Digital Literacy

Definitions of digital literacy are influenced by specific cultural and contextual circumstances. Authors from the United Kingdom and Europe often refer to digital literacy as electronic or e-information. Martin (2006) described e-information as "awareness, skills, understanding, and reflective evaluative approaches necessary to function within an information-rich and IT-enhanced environment." The author noted that the diverse terms used to describe the new literacies highlight the significance of users' comprehension of the culture and context surrounding the digital space. This viewpoint aligns with O'Brien and Scharber's (2008) definition of digital literacy, which they categorized as "socially situated practices supported by skills, strategies, and attitudes that enhance an individual's capacity to convey and grasp ideas through various modalities and digital tools." Furthermore, Jones and Lea (2008) suggested that digital literacy practices were influenced by institutional requirements as well as the social context.

Information Literacy

Information literacy encompasses a broad range of abilities that empower individuals to efficiently and ethically locate, evaluate, utilize, and produce information in various settings (ACRL, 2016). It is vital for lifelong learning, providing individuals with the capacity to interact with, benefit from, and contribute to both an information-centric society and the larger global community (Kong, 2007, 2008; UNESCO). Moreover, information literacy involves an understanding of how information is created, accessed, distributed, and valued across different disciplines and areas of study. It includes a variety of competencies, such as critical thinking, research skills, and knowledge of how information is generated and shared. Ultimately, it focuses on the ability to navigate the intricate information landscape and make well-informed choices. This includes essential principles like knowledge, method, importance, examination, dialogue, and analysis, which define the core and application of research and academic endeavors (ACRL, 2016). Information literacy can be imparted and acquired through diverse techniques and activities that promote conceptual grasp, patterns of thought, and skills or practices, and as a part of educational processes, it necessitates cooperation within an academic setting.

As stated by Tella (2016), information literacy holds a crucial role in facilitating effective learning in the present era characterized by rapid technological advancements and intricate complexities. As the information landscape grows more varied and challenging, educators are acknowledging the importance of assisting learners in navigating this context as a crucial element of their formal educational experience. As a result, numerous countries are diligently working towards the aim of providing their citizens with lifelong learning and information literacy skills, in accordance with the objectives outlined in the Millennium Development Goals. Information literacy, especially in the digital era, stands out as a crucial skill for lifelong learning. It involves the ability to find, evaluate, use, and create information in diverse contexts. However, it is essential to recognize that information literacy is not a fixed idea; instead, it evolves and adapts to align with the changing characteristics and complex interactions of information, along with its sociocultural and technological aspects.

Theoretical Review

The theoretical foundations of lifelong learning and information literacy are predicated on the ideas that learning is a continuous process that occurs outside of traditional educational settings and that information is necessary for learning. Similarly, it promotes civic engagement and citizenship in the information age, as well as the social, professional, and personal growth of people and communities. Information literacy enables learners to engage in critical thinking, problem-solving, inquiry, and communication in various contexts and disciplines, and to

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adapt to the changing information environment and needs (ACRL, 2016). Several theories and models have been put forth to elucidate the cognitive, emotional, and behavioral facets of information literacy and lifelong learning. These include Kuhlthau's (2004) Information Search Process (ISP) model, SCONUL's (2011) Seven Pillars of Information Literacy, as well as Eisenberg and Berkowitz's (2000) Big6 approach, among others. While these theories and models share some commonalities such as acknowledging the identification of an information need, devising a search plan, locating and retrieving information sources, evaluating and utilizing information, and generating and presenting fresh knowledge they also diverge in their emphasis on specific aspects of information literacy. These variances encompass considerations like the influence of emotions, motivation, collaborative efforts, introspection, and ethical considerations.

The Big 6 Model

The Big 6 Model, developed by Eisenberg and Berkowitz in 2000, provides a structured approach to information literacy and problem-solving. It outlines a systematic process for effectively navigating and utilizing information resources. In the digital landscape, this model holds significant relevance as it offers a framework for developing critical thinking skills, promoting information literacy, and facilitating meaningful learning experiences. The Big 6 Model consists of six stages:

1. Task Definition: In the digital landscape, this stage emphasizes defining the information problem or task clearly. It involves understanding the information needs, formulating research questions, and establishing clear objectives. This stage aligns with your expertise in understanding user information needs, a crucial aspect of your work as a researcher.
2. Information Seeking Strategies: This step entails locating and choosing relevant information sources, which is especially important in the digital realm due to the abundance of online resources available. Your understanding of information management gives you the ability to assist users in choosing reliable and pertinent sources.
3. Location and Access: Finding and gaining access to information is crucial in the digital realm. This step focuses on employing efficient search techniques, assessing search results, and efficiently accessing information; your proficiency with digital resource access and retrieval fits in well with this step.
4. Information Use: After information is acquired, this step stresses assessing and combining the information acquired to address the research task. In the digital landscape, this entails critically analyzing online content, discerning reliable sources from misinformation, and synthesizing information from various digital platforms
5. Synthesis: Synthesizing information from multiple sources is a crucial skill in the digital age. This stage involves integrating information to create a coherent and comprehensive understanding. As an educational researcher, you recognize the significance of synthesizing information to develop robust research papers and articles.
6. Evaluation: The final stage involves assessing the quality and effectiveness of the information gathered and the overall process. In the digital landscape, this includes critically evaluating online sources for reliability, accuracy, and relevance. Your expertise in research methodology and evaluation aligns well with this stage.

In the digital age, where information is abundant and easily accessible, the Big 6 Model provides a structured approach to ensure that individuals can navigate this landscape effectively. It promotes critical thinking, information literacy, and problem-solving skills, which are essential for both academic and real-world applications. By incorporating the Big 6 Model into information literacy initiatives, secretaries contribute to the development of digitally literate individuals who can navigate and utilize information resources effectively in the digital landscape.

SCONUL Seven Pillars of Information Literacy

The SCONUL Seven Pillars of Information Literacy framework, established by the Society of College, National and University Libraries (SCONUL) in 2011, presents a thorough structure for comprehending and cultivating information literacy proficiencies. This model holds significant pertinence within the realm of information literacy and learning in the digital environment. The SCONUL Seven Pillars framework provides a well-rounded

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strategy to information literacy, particularly crucial in the digital era. It empowers individuals with the competencies and understanding required to proficiently navigate the extensive and intricate digital information landscape. The SCONUL Seven Pillars model identifies seven key areas of information literacy:

1. Identify: This pillar focuses on recognizing when information is needed and defining the nature and scope of the information needed. In the digital landscape, this is crucial as the vast amount of available information requires users to effectively pinpoint their specific information needs.
2. Scope: In the digital age, it is crucial to comprehend the variety of information sources that are available. This pillar focuses on identifying the various formats of information, both digital and physical, and how they contribute to the body of knowledge.
3. Plan: In the digital landscape, planning entails creating efficient search strategies and using the right tools and techniques to find information. Your knowledge of information management puts you in a good position to assist users in organizing their information-seeking process in this context.
4. Gather: This pillar focuses on finding and accessing information from a variety of sources, which in the digital age includes using search engines, online databases, and digital repositories. Your expertise in digital resource access and retrieval fits in well with this stage.
5. 5. Assess: Given the abundance of false information and poor quality content in the digital world, it is critical to assess information sources critically. This pillar places a strong emphasis on the capacity to evaluate the accuracy, legitimacy, and applicability of data—skills that are essential to your work as a researcher.
6. Manage: Information must be arranged, saved, and altered for later use in order to be managed effectively. This includes using digital tools and platforms for organizing and retrieving information in a digital context. Your knowledge in this field is very helpful in helping people efficiently manage information.
7. Present: In both academic and professional settings, the capacity to effectively convey knowledge is crucial. Using digital tools and platforms to create and present information is part of the digital landscape. fits in perfectly with this period.

Information Seeking Behavior Model

Kuhlthau's 2004 Information Seeking Behavior Model offers a useful framework for comprehending how people interact with information when conducting research. When it comes to information literacy and learning in the digital age, this concept is extremely pertinent. Kuhlthau's model acknowledges that the process of finding information is a dynamic and iterative one rather than a linear one. Effective research and learning require a grasp of and ability to navigate the digital realm, where information is readily available and abundant. There are six phases in Kuhlthau's information-seeking behavior model:

1. Beginning: This stage marks the beginning of the information-seeking process, where individuals become aware of their information needs. In the digital landscape, initiation may be triggered by a variety of factors, including coursework, personal interests, or current events. Understanding this stage is crucial for guiding individuals to formulate clear research questions.
2. Selection: Based on their preliminary knowledge of the subject, people now start to choose information sources. This entails selecting relevant databases, search engines, and online repositories to investigate in the digital environment. Your proficiency in information management puts you in a good position to assist users in making wise decisions.
3. Exploration: This phase entails actively looking for information and developing a basic comprehension of the subject. This could entail browsing websites, gaining access to online databases, and looking through digital archives in the digital age. This level is a perfect fit for your ability to access and retrieve digital resources.
4. Formulation: As individuals interact with information, they begin to refine and develop their research questions or topics. This stage requires critical thinking and synthesis of information. Your expertise as a researcher equips you to guide individuals in refining their research questions and objectives.
5. Collection: In the digital world, this step focuses on obtaining pertinent information from a range of sources, such as downloading articles, accessing e-books, or saving web pages. Your familiarity with digital tools and platforms is crucial in helping users navigate this process.

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6. Presentation: The last step entails presenting or communicating the findings, which in the digital age may include producing reports, presentations, or digital projects. Your expertise in graphics design and content creation fits in nicely with this stage.

Information Literacy Competency Standards for Higher Education

The Information Literacy Competency Standards for Higher Education, developed by the Association of College and Research Libraries (ACRL) in 2000, offers a comprehensive framework for enhancing the information literacy abilities of college and university students.

This framework holds significant relevance within the domain of information literacy and learning in the digital landscape. The ACRL's Information Literacy Competency Standards acknowledge that information literacy is a dynamic and evolving set of abilities. In the digital age, characterized by the abundance and easy accessibility of information, these standards furnish a robust groundwork for cultivating the critical thinking skills and approaches essential for proficiently navigating and utilizing information. The ACRL's Information Literacy Competency Standards encompass five distinct benchmarks:

1. Standard 1: Determine the Extent of Information Needed: In the digital landscape, this standard emphasizes the importance of recognizing when information is needed and the scope of information required. It guides learners in formulating clear research questions and identifying the types of information sources that are relevant to their inquiries.
2. Standard 2: Accessing Information Effectively and Efficiently: This standard is highly pertinent in the digital age, where a plethora of online resources are available. It focuses on developing the skills to navigate digital environments, use search engines and databases, and critically evaluate the credibility and relevance of online information.
3. Standard 3: Evaluating Information and Its Sources Critically: Critical evaluation of information sources is crucial in the digital landscape, where misinformation and low quality content abound. This standard provides learners with the tools and strategies to assess the reliability, authority, and accuracy of information, regardless of its format.
4. Standard 4: Using Information Effectively to Accomplish a Specific Purpose: This standard emphasizes the application of information to solve problems, make informed decisions, and create new knowledge. In the digital realm, this involves synthesizing information from various digital platforms and using digital tools for effective communication.
5. Standard 5: Understanding the Economic, Legal, and Social Issues Surrounding Information Use: This standard is especially important in the digital world, where concerns like copyright, privacy, and information ethics are crucial. It guarantees that students understand the ethical and legal ramifications of using information in a digital setting.

Effect of Information Literacy on Digital Age

Skagen et al. (2008) proposed that digital literacy encompasses information literacy with ICT skills, and Adeyemon (2009) suggested that digital literacy is closely linked to 21st century literacies and includes technology literacy, information literacy, media creativity, as well as social competence and responsibility. Eshet-Alkali and Amichai-Hamburger (2004) highlighted specific skill sets within digital literacy, such as photovisual literacy, reproduction literacy, information literacy, branching literacy, and socio-emotional literacy. The authors maintained that digital literacy required the technical ability to operate digital devices as well as a variety of cognitive skills to execute tasks in digital environments. Beeson (2006) equated e-literacy with information literacy in the digital age. He believed e-literacy fostered collaboration between librarians and learning technologists who managed the university's virtual learning environment. Koltay (2007) also viewed information literacy and e-literacy as interrelated. According to the author, the former centered on content and communication and the latter focused on understanding technological infrastructure. Still, he argued, e-literacy was a "prerequisite for information literacy".

Pawinun and Kemparaju (2004) suggested a new definition of information literacy, one they termed "information technology literacy." According to the authors, this concept covered two levels, including fundamental technology literacy, which dealt with pupils' computer proficiency. They also suggested an additional element

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of information technology literacy that was based on Internet literacy and concentrated on Web, e-journal, and online database search skills as well as online public access catalog (OPAC) skills. Because it facilitated their use of the technology, the authors believed that Internet literacy was particularly crucial for users of digital libraries.

Taha conducted a pilot study for engineering students enrolled in online courses at the University using his e-literacy schema. The article claims that the e-literacy schema included the Association of College & Research Librarians' Standards for Information Literacy as well as the information seeking models created by Ellis, Kuhithau, Eisenberg, and Berkowitz (Taha, 2007). Because it demonstrated the "spatial relationship between the components of the cyclic six phases," Taha's e-literacy schema, which was based on the k-map, encouraged students to use Web resources effectively. Because online learning is so popular at the university, the author suggested integrating the schema into the Blackboard course management system. According to the article's conclusion, the pilot study's preliminary results were still encouraging, although Taha acknowledged that additional testing and "constant evaluation, update, and modification" of the e-literacy schema were required. Bury, Martin, and Roberts (2006) described their initiatives to improve the e-literacy of health information students at Edge Hill University, both undergraduate and graduate. The authors thought that because of the UK's heavy reliance on information technology, e-literacy was still particularly crucial for this demographic.

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An e-literacy program designed to improve pupils' Web search abilities was proposed by Beeson (2006). Finding "information on the web" is similar to looking in "uncharted area," according to the author. In order to do this, he advocated training students particular techniques that would improve their ability to find and use Web resources. The particular abilities he aimed to foster in students are listed in Table 3. According to Beeson, he took an information systems viewpoint that acknowledged how crucial it was for students to understand the material's significance both while reviewing it and when using it. The author emphasized how crucial it is for students to be able to acknowledge when they need to modify their approach without "losing sight of their primary aim." Last but not least, he saw information literacy as a learning process as opposed to a "training exercise." According to Eshet-Alkali and Amichai-Hamburger's (2004) digital literacy experiments, younger people were not always more tech-savvy than older people. The authors discovered that both high school and college students lacked information literacy skills and had poor text reproduction literacy. They suggested teaching pupils how to help themselves in these areas. In light of this, there are numerous publications in the literature that detail how instructors and librarians have used innovative teaching strategies to improve students' digital or e-literacy abilities. The goal of these initiatives was to assist students in recognizing and acquiring new digital competencies. Faculty awareness of the many information formats and communication technologies accessible in the digital age was also demonstrated by the efforts.

Sok and Skriv, also known as the Search and Write, is an information and digital literacy lesson created by librarians to assist students with their academic work and future learning pursuits (Skagen et al., 2008). The didactic relations model, which enumerated the elements of the learning environment, including objectives, procedures, conditions, and assessment methods, was the focal point of the tutorial, according to the authors. By offering the necessary infrastructure and activities to help students compose various texts, the tutorial's learning objects assisted students in the writing and search processes. A virtual discussion board also encouraged

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communication between all of the participants. The authors argued that although though the tutorial was created for students enrolled in online education, it could be used in conventional classroom settings. The benefits of using a variety of technologies to improve the Net Generation's learning environment were emphasized by Skiba and Barton (2006). These people are "both information and multimedia literate," according to the authors, who also observed that they prefer learning through a variety of technologically based communication channels. The article suggested a number of technological solutions aimed at meeting the educational demands of students, such as the provision of wired classrooms, the usage of wikis for class assignments, and the promotion of PDA use. They also recommended that teachers produce lecture recordings, communicate online, and put course materials on Web pages.

Sharkey and Brandt (2008), on the other hand, encouraged students to use new technology for their coursework. The authors claim that the goal of these initiatives was to assist students in acquiring new digital literacy abilities. The writers gave several examples, such as using the e-portfolio for projects, creating advertising campaigns for a communications course, and incorporating sophisticated PowerPoint features for class presentations. Faculty acceptance of students' technology use and their need for digital literacy training was also demonstrated by digital literacy presentations at the 2009 Georgia Conference on Information Literacy. Bailey, an English professor at Georgia Southern University, talked about his attempts to get students more accustomed to using different Web resources. According to the presenter, he required students in his composition class to subscribe to Really Simple Syndication (RSS) news feed on a particular topic and archive these items in the Google database. Bailey termed this environmental scanning and he argued it capitalized on students' power browsing, allowed learners to track a subject of interest, and provided participants' experience in database creation.

METHODOLOGY

This study employs a conceptual and theoretical research approach, concentrating on analyzing the body of knowledge gathered by seasoned authors and researchers about the advancement of information literacy in the digital age. Books, journals, papers, articles, and websites from Nigeria and other countries are among the materials evaluated. The utilization of books, journals, articles, and websites both domestically and internationally is assessed using the documents reviewed technique. This makes it possible to compile pertinent data about the topic based on recent research.

CONCLUSION

Because communication technology is so prevalent in academic contexts, information literacy is becoming increasingly important. Teaching staff and students' information literacy offers assistance and a way to improve participants' skills in online learning environments, which are becoming increasingly important, particularly in community and junior colleges. By producing comparable tools for digital literacy competencies, secretaries might use their experience in creating information literacy learning objects to enhance learning in course management systems or for virtual world instruction.

The combination of lifelong learning and information literacy becomes a potent force in a time when the limits of knowledge are continually being pushed. Modern models such as the DIL and ACRL frameworks provide vital direction for negotiating the intricacies of the digital environment. People are enabled to start a lifelong learning journey that goes beyond formal schooling and adjusts to the always changing information landscape by developing a dynamic, contextualized approach to information literacy. In addition to giving people the tools they need for both professional and personal development, this convergence of information literacy and lifelong learning promotes an intellectually empowered, curious, and flexible society. Information literacy will continue to play a crucial role in lifelong learning as the digital age develops.

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