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STRATEGIES FOR PROMOTING GENDER INCLUSIVENESS IN DIGITAL LITERACY PROGRAMS FOR FEMALE LIBRARIANS IN UNIVERSITIES IN ANAMBRA STATE

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Abstract

Purpose: The study is on strategies for promoting gender inclusiveness in digital literacy programs for female librarians in universities in Anambra State

Design/Methodology/Approach: A descriptive survey research design was used for the study. The purposive sampling technique was used to select 10 female librarians comprising of 5 each from 2 selected universities in Anambra State namely: Chukwuemeka Odumegwu Ojukwu University, Igbariam, and Nnamdi Azikiwe University, Awka. A structured questionnaire on a four (4) – point Likert scale was used for collection of data for this study. The instrument was a questionnaire which was subjected to face validation as well as pilot test using Cronbach Alpha which gave a reliability coefficient value of 0.87. The study used on the spot method of distribution and data collection. Data collected from the study were analyzed using mean scores.

Findings: The study found that digital literacy programs were available for female librarians in universities. The extent female librarians are included in digital literacy programs in universities are low. Female librarians are highly challenged with gender inclusiveness in digital literacy programs in universities. **Developing gender-sensitive policies, providing financial support, creating mentorship and networking opportunities among others are the workable** strategies for increasing gender inclusiveness in digital literacy programs for female librarians. The study concludes that digital literacy programs are available for female librarians in universities but there is a significant gap in the extent to which female librarians are included. This point to systemic barriers or challenges that hinder their full participation

Implications: The research provides a comprehensive analysis of the strategies that can be adopted by universities for promoting gender inclusiveness in digital literacy programs for female librarians in universities in Anambra State. The study provides important insights into ways of enhancing digital literacy programs for female librarians so as to enable them deliver on their task and responsibilities towards supporting the teaching, research and learning objectives of their parent institution

Originality: Based on the findings of the study, **recommended given were that** Universities should establish and enforce policies that explicitly promote gender inclusiveness in digital literacy programs. Several other suggestions were given in light of the results; such institutions should allocate specific funds to support female librarians' participation in digital literacy programs.

Key Words: Gender Inclusiveness, Gender equality, Digital Literacy Programs, Librarians, Female participation, Universities

Introduction

Universities are institutions of higher education and research, which grant

academic degrees in various disciplines. They provide both undergraduate and postgraduate education and serve as centers for learning, research, and innovation.

Universities are pivotal in shaping the intellectual and professional futures of individuals and in contributing to societal development (Okojie, 2017). These intellectual and professional futures of individuals are facilitated by her manpower/staff. Universities have staff that fulfils her mandate. These staff cut across various units and department. Of all these staff, the librarians in the university are critical to achieving the intellectual mandate of the universities.

A librarian is a professional trained in information science, tasked with organizing, managing, and providing access to information resources in libraries. Librarians facilitate the acquisition, cataloging, classification, and circulation of library materials, ensuring that users have efficient access to information (Agim & Oraekwe, 2019). In universities, librarians support the academic and research needs of students and faculty, playing a crucial role in the educational process by aiding in the discovery and utilization of information (Ifeka, Aniebue, & Paul, 2017). These librarians perform certain task that supports the teaching, learning and research needs of the universities.

The tasks of a librarian are diverse and multifaceted. They include managing library collections, providing reference services, conducting information literacy training, and supporting academic research. Librarians are also responsible for developing and maintaining digital resources, facilitating access to electronic databases, and integrating new technologies into library services (Popoola & Haliso, 2009). In the context of universities, librarians often collaborate with faculty to enhance the research and learning experiences of students, guiding them in effective information retrieval and usage (Lai, Fu, Zhang, & Wang, 2009). University

librarians play a critical role in fostering educational advancement and providing opportunities for students to acquire essential skills, including digital literacy, which is increasingly vital in today's digital age. Therefore, digital literacy programs are critical aspects of training and skills needed by the librarians

Digital literacy programs are educational initiatives designed to equip individuals with the skills needed to effectively navigate, evaluate, and create information using digital technologies. These programs encompass a wide range of competencies, including the use of computers, internet navigation, online communication, and the ethical use of digital resources (International Federation of Library Associations & Institutions, 2014). For librarians, digital literacy is crucial as it enhances their ability to support digital scholarship, manage digital collections, and provide digital reference services. Promoting digital literacy among female librarians in universities can help bridge the gender gap in digital skills and empower them to fully participate in the digital transformation of library services (James & John, 2018).

Digital literacy programs are essential for librarians in universities as they equip them with the necessary skills to navigate and utilize digital tools and resources effectively. These programs enable librarians to manage digital collections, support digital research, and offer comprehensive digital reference services to students and faculty (Ifeka, Aniebue, & Paul, 2017). The rapid advancement of technology in the academic environment demands that librarians are proficient in digital literacy to enhance their service delivery and contribute to the overall academic success of their institutions (Popoola & Haliso, 2009). Therefore, digital literacy programs are supposed to be provided for all staff or the university, her

librarians as comprising of both the male and female gender in equal proportion

Gender inclusiveness refers to the practices and policies that ensure individuals of all genders have equal opportunities, rights, and responsibilities in various social, economic, and political spheres (Anderson & Hill, 2020). This concept promotes fairness and equity by actively identifying and eliminating barriers that might prevent individuals from participating fully based on their gender. Gender inclusiveness is crucial for fostering diversity, reducing inequality, and promoting social justice in various contexts, including education, employment, and governance (Smith, 2019). In the workplace, gender inclusiveness involves implementing policies that promote equal employment opportunities, fair treatment, and representation of all genders in decision-making positions (Johnson, 2016). This can include measures such as equitable hiring practices, providing parental leave, and creating a work culture that supports work-life balance for everyone. Research has shown that gender-inclusive workplaces are not only more equitable but also more productive and innovative, as they benefit from a diverse range of perspectives and skills (McKinsey & Company, 2020).

Gender inclusiveness is particularly relevant in the context of digital literacy, where access to technology and digital skills training can significantly impact an individual's ability to participate in the digital economy. Ensuring that digital literacy programs are gender-inclusive means addressing the specific barriers that women and other marginalized genders might face, such as lack of access to technology, cultural norms, and safety concerns (Gurumurthy & Chami, 2014). By promoting gender inclusiveness in digital literacy, societies can ensure that all individuals have the skills and opportunities to benefit from digital

advancements and contribute to the digital economy (World Bank, 2016).

However, the level of gender inclusiveness of female librarians in digital literacy programs in universities has been a subject of concern. Despite the recognized importance of digital literacy, female librarians often face barriers to accessing these programs. Studies have shown that women are underrepresented in technical and digital training programs due to various socio-cultural and institutional barriers (James & John, 2018). Ensuring equal access to digital literacy programs for female librarians is crucial for fostering a more inclusive and effective library workforce in universities.

Gender inclusiveness in digital literacy programs is directly related to the performance and efficiency of librarians in university libraries. When female librarians are provided with equal opportunities to participate in digital literacy training, they can perform their tasks more effectively, such as managing digital archives, providing digital information services, and supporting online academic activities (Lai, Fu, Zhang, & Wang, 2009). Inclusiveness not only enhances their professional capabilities but also promotes a more equitable working environment, which is essential for the overall productivity and morale of library staff.

With a view to this gender disparity among librarians, several factors have been found to affect the inclusiveness of female librarians in digital literacy programs in universities. These include societal norms and cultural beliefs that discourage women from participating in technical fields, gender-based discrimination within the institution, and a lack of supportive policies and mentorship programs (American Library Association, 2015). Addressing these factors requires targeted strategies such as

implementing gender-sensitive policies, providing mentorship and career development opportunities, and fostering a supportive institutional culture that values gender equality (International Federation of Library Associations & Institutions, 2014). It is in this view that this paper will examine the strategies for promoting gender inclusiveness in digital literacy programs for female librarians in universities in Anambra State

Statement of the Problem

In an ideal situation, digital literacy programs in universities would be fully inclusive, providing equal opportunities for both male and female librarians to enhance their digital skills. Such inclusiveness would ensure that all librarians, regardless of gender, can effectively manage digital resources, support digital research, and offer comprehensive digital services to the academic community (American Library Association, 2015). These programs would be supported by gender-sensitive policies, mentorship opportunities, and a culture of equality within the institutions. This would result in a highly competent library workforce capable of meeting the digital information needs of students and faculty effectively.

However, the current situation reveals a significant disparity in the participation of female librarians in digital literacy programs in universities. Despite the critical role of digital skills in modern librarianship, female librarians often face barriers that hinder their full participation. These barriers include societal norms that discourage women from engaging in technical training, institutional biases, and a lack of supportive infrastructure for women in the workplace. As a result, many female librarians are unable to fully develop their digital competencies, which impacts their ability to perform their professional duties effectively.

Previous studies on digital literacy and gender inclusiveness have largely focused on general participation trends and barriers in STEM fields, with limited attention given to the specific context of librarianship (Clarke, Belden, Koopman, & Steege, 2013). While some research has highlighted the challenges faced by women in technical education and professional development (Ricks & Ham, 2015), there is a noticeable gap in comprehensive studies addressing the unique needs and experiences of female librarians in digital literacy programs. Furthermore, existing studies often lack detailed strategies for overcoming these barriers and promoting gender inclusiveness in this specific field. This has created a gap in literature, hence, the need to fill these gaps

Research Questions:

1. What are the digital literacy programs available for female librarians in universities in Anambra State?
2. To what extent are female librarians included in digital literacy programs in universities in Anambra State?
3. What are the challenges that impede gender inclusiveness in digital literacy programs for female librarians in universities in Anambra State?
4. What are the strategies for increasing gender inclusiveness in digital literacy programs for female librarians in universities in Anambra State?

Literature Review

Gender Inclusiveness

Gender inclusiveness refers to the intentional practice of ensuring that all genders have equal opportunities, access, and participation in various aspects of society,

including education, employment, and governance. It involves creating environments where individuals are not discriminated against based on their gender and are provided with the necessary support to thrive and contribute fully (Johnson, 2016). Gender inclusiveness aims to address and eliminate systemic barriers that lead to gender inequality, thereby promoting equity and justice for all genders (Smith, 2019). The concept of gender inclusiveness extends beyond mere equality; it encompasses the recognition and valuing of different gender identities and expressions. This means actively working towards understanding the unique needs and challenges faced by various genders and implementing strategies to accommodate these differences. Gender inclusiveness involves a holistic approach that integrates policies, practices, and cultural shifts to ensure that gender diversity is respected and celebrated in all sectors of society (Anderson & Hill, 2020).

In the context of education, gender inclusiveness is about creating learning environments where students of all genders feel safe, valued, and supported. This includes developing gender-sensitive curricula, implementing anti-discrimination policies, and providing equal access to educational resources and opportunities (Brown & Lee, 2017). For instance, initiatives to promote gender inclusiveness in education might involve training teachers on gender sensitivity, ensuring that textbooks do not perpetuate gender stereotypes, and providing support services for students facing gender-based challenges (UNESCO, 2018).

Digital Literacy Programs

Digital literacy refers to the ability to effectively and critically navigate, evaluate, and create information using a range of digital technologies. This includes the skills needed to use digital devices, communication applications, and networks to access and

manage information (Agim & Azolo, 2019). Digital literacy encompasses a variety of skills, such as understanding how to use software applications, navigating the internet, and engaging in safe online practices. Digital literacy programs are structured initiatives designed to enhance individuals' digital skills and competencies. These programs aim to equip participants with the necessary knowledge and abilities to effectively use digital tools and resources in various contexts, such as education, employment, and personal development (Spante et al., 2018). Digital literacy programs typically cover areas such as basic computer skills, internet navigation, digital communication, online safety, and data management.

Digital literacy programs are crucial in today's information society, where digital technologies play a significant role in almost every aspect of life. These programs help bridge the digital divide by providing individuals, particularly those from disadvantaged backgrounds, with the skills needed to participate fully in the digital economy. Furthermore, digital literacy is essential for lifelong learning and personal empowerment, enabling individuals to access information, communicate effectively, and engage in social and economic activities (UNESCO, 2018). In the educational context, digital literacy programs are designed to integrate digital skills into the curriculum, ensuring that students are well-prepared for the demands of the modern workforce. These programs often include training on using educational software, online research techniques, and digital collaboration tools (Brown, 2017). By incorporating digital literacy into education, institutions can foster critical thinking, creativity, and problem-solving skills among students. In the workplace, digital literacy programs are essential for enhancing employees' productivity and efficiency. These programs

help workers adapt to technological changes and improve their job performance by teaching them how to use digital tools and platforms relevant to their roles (Horrigan, 2016). Employers benefit from a digitally literate workforce as it can lead to increased innovation, better decision-making, and improved business outcomes (Van Laar et al., 2017).

Digital Literacy Programs in Nigerian universities

Digital literacy programs are designed to equip individuals with the skills needed to effectively navigate, evaluate, and create information using a range of digital technologies. These programs are crucial in today's information society, where digital competence is necessary for academic success, employability, and participation in the digital economy (Ng, 2012). In Nigerian universities, digital literacy programs have become increasingly important as institutions strive to prepare students for the demands of a technologically advanced world.

Digital literacy is essential for students in higher education as it enhances their ability to access, manage, and use information resources effectively. It also fosters critical thinking, problem-solving, and the ability to communicate and collaborate using digital tools. In Nigerian universities, digital literacy programs aim to bridge the digital divide, ensuring that all students, regardless of their background, have the opportunity to develop these vital skills (Ani et al., 2015). These programs support the academic curriculum and prepare students for the global job market, where digital skills are highly valued.

Digital literacy programs in Nigerian universities typically include training in various areas such as the use of digital devices (computers, tablets, smartphones), software applications (word processing,

spreadsheets, presentation tools), and internet skills (browsing, searching, online communication). Additionally, these programs cover digital ethics, online safety, and the responsible use of social media. Advanced components may include coding, digital content creation, and data analysis (Igwe et al., 2019). By offering a comprehensive curriculum, these programs aim to build a robust digital skill set among students.

Gender Inclusiveness in Digital Literacy Programs within Universities

Gender inclusiveness in digital literacy programs within universities is crucial for ensuring that all students, regardless of gender, have equal access to the skills and knowledge necessary to thrive in the digital age. Digital literacy encompasses the ability to use digital tools and technologies effectively, and inclusiveness in these programs ensures that no group is left behind (Ng, 2012). Promoting gender inclusiveness not only fosters equality but also enhances the overall quality and diversity of the educational experience.

Gender inclusiveness in digital literacy programs is essential for achieving educational equity. When both male and female students have equal access to digital literacy education, it helps to bridge the gender gap in technology-related fields. Studies have shown that women are underrepresented in STEM fields, and inclusive digital literacy programs can encourage more female participation by providing them with the necessary skills and confidence (Stoet & Geary, 2018). Furthermore, gender inclusiveness ensures that all students can contribute to and benefit from the digital economy, fostering a more diverse and innovative workforce.

Despite the recognized importance of gender inclusiveness, many universities still

struggle to achieve it in their digital literacy programs. Barriers such as cultural norms, gender stereotypes, and lack of female role models in technology fields can deter female staff from participating in these programs (Ashong & Commander, 2012). Additionally, the availability of digital literacy programs tailored to the needs of female staff is often limited. Addressing these barriers requires a concerted effort from educational institutions to create a more supportive and inclusive environment.

When digital literacy programs are gender-inclusive, the impact on female students can be profound. Such inclusiveness empowers female students by providing them with the skills necessary to succeed in the digital world, thereby enhancing their academic and professional prospects (Eynon & Malmberg, 2011). Additionally, inclusive programs can boost female students' confidence and interest in pursuing further education and careers in technology-related fields, helping to balance gender representation in these areas over time.

Promoting gender inclusiveness in digital literacy programs within universities is essential for fostering educational equity and preparing all students for the demands of the digital age. By implementing strategies that address the unique challenges faced by female students and creating a supportive learning environment, universities can ensure that their digital literacy programs are truly inclusive. This inclusiveness not only benefits female students but also enriches the entire educational community by fostering diversity and innovation.

Factors Influencing gender inclusiveness in digital literacy programs in universities

Gender inclusiveness in digital literacy programs in universities is a critical issue that affects the equitable development of digital skills among students. Various

factors influence this inclusiveness, ranging from socio-cultural norms to institutional policies and practices. Understanding these factors is essential for developing strategies that ensure both male and female students have equal opportunities to acquire digital literacy skills.

Socio-cultural norms play a significant role in shaping gender inclusiveness in digital literacy programs. Traditional gender roles and stereotypes can discourage female students from pursuing digital literacy education. In many cultures, there is a prevailing belief that technology and digital skills are more suited to males, which can result in fewer females enrolling in such programs (Adya & Kaiser, 2005). These stereotypes are often reinforced by family expectations and societal attitudes, creating barriers for women in accessing digital education.

The policies and practices adopted by educational institutions can either promote or hinder gender inclusiveness. Universities that implement gender-sensitive policies, such as providing scholarships and support programs specifically for female students, tend to have higher levels of female participation in digital literacy programs (García-Holgado, García-Peñalvo, & Mendes, 2018). On the other hand, a lack of proactive measures can perpetuate gender disparities. Institutional practices that include mentorship programs, female role models in faculty positions, and inclusive teaching materials are crucial for encouraging female participation.

Access to digital resources is another critical factor influencing gender inclusiveness. Female students often have less access to digital devices and reliable internet connectivity compared to their male counterparts, particularly in developing countries (ITU, 2017). This disparity can significantly impact their ability to participate in digital literacy programs.

Universities need to address this issue by ensuring equal access to digital resources for all students, regardless of gender.

The presence of gender bias in curriculum and instruction can also affect gender inclusiveness. Educational content and teaching methods that are not gender-neutral can alienate female students. Studies have shown that curricula that incorporate gender-inclusive language and examples are more effective in engaging female students (Corbett & Hill, 2015). Additionally, instructors' attitudes and behaviors towards female students in digital literacy courses can either encourage or deter their participation. Training educators to recognize and address their biases is essential for creating an inclusive learning environment.

Support systems and mentorship programs are vital for promoting gender inclusiveness in digital literacy. Female students benefit significantly from having access to mentors and support networks that provide guidance, encouragement, and role models in the field of digital literacy (Stoet & Geary, 2018). Mentorship programs that connect female students with professionals and peers can help them navigate challenges and build confidence in their abilities.

Creating a gender-inclusive learning environment is essential for encouraging female participation in digital literacy programs. This includes physical aspects, such as safe and welcoming classroom spaces, as well as psychological aspects, such as a culture of respect and equality (Ashong & Commander, 2012). Universities need to foster an environment where all students feel valued and supported in their learning journey.

In conclusion, achieving gender inclusiveness in digital literacy programs in universities requires addressing various socio-cultural, institutional, and resource-

related factors. By implementing gender-sensitive policies, ensuring equal access to resources, eliminating gender bias in curriculum and instruction, providing robust support systems, and fostering inclusive learning environments, universities can promote greater gender equality in digital literacy education. These efforts are essential for preparing all students to succeed in the digital age.

Strategies for gender inclusiveness in digital literacy programs in universities

Gender inclusiveness in digital literacy programs is essential to ensure that both male and female students have equal opportunities to acquire necessary digital skills. Addressing the gender gap in these programs requires strategic interventions that encompass policy changes, resource allocation, curriculum development, and the creation of supportive learning environments.

One of the most effective strategies for promoting gender inclusiveness is the implementation of gender-sensitive policies at the institutional level. Universities should develop and enforce policies that specifically aim to increase female participation in digital literacy programs. These policies might include quotas for female enrollment, gender-responsive budgeting, and the establishment of gender equality committees (García-Holgado et al., 2018). Additionally, providing scholarships and financial incentives for female students can help mitigate the economic barriers that often prevent women from pursuing digital literacy education (Corbett & Hill, 2015).

The design and delivery of the curriculum play a critical role in fostering gender inclusiveness. Curricula should be developed to reflect gender-neutral language and include examples and case studies that highlight the contributions of women in the field of technology. This approach helps to

counteract stereotypes and encourages female students to see themselves as capable participants in digital fields (Stoet & Geary, 2018). Furthermore, adopting inclusive pedagogical approaches, such as collaborative learning and active participation methods, can engage female students more effectively. Instructors should be trained to recognize and address any unconscious biases that might affect their teaching practices (Ashong & Commander, 2012).

Ensuring that female students have equal access to digital resources is another crucial strategy. Universities should provide adequate technological infrastructure, including computers, software, and reliable internet access, in a manner that is accessible to all students. Special programs that loan or subsidize technology for female students can be particularly beneficial (ITU, 2017). Additionally, creating digital literacy labs and centers that focus on supporting female students can provide a safe and encouraging environment for learning.

Mentorship programs are vital for supporting female students in digital literacy programs. Pairing female students with mentors who are experienced professionals in the field can provide guidance, encouragement, and valuable insights into career development (Stoet & Geary, 2018). Universities should facilitate the formation of support networks and professional associations for women in technology, which can help build a sense of community and provide ongoing support and networking opportunities (García-Holgado et al., 2018).

Raising awareness about the importance of gender inclusiveness in digital literacy programs is essential. Universities should conduct sensitization campaigns that highlight the benefits of gender diversity in technology fields and address the societal and cultural barriers that discourage female

participation. These campaigns can include workshops, seminars, and public lectures that involve both students and faculty (Ashong & Commander, 2012). Collaborating with external organizations that advocate for gender equality in education can also enhance these efforts.

Creating a welcoming and inclusive learning environment is fundamental to ensuring that female students feel valued and supported. This involves not only physical changes, such as safe and accessible facilities, but also fostering a culture of respect and equality. Universities should implement measures to prevent and address gender-based discrimination and harassment (Corbett & Hill, 2015). Training for faculty and staff on gender sensitivity and inclusiveness is also crucial in maintaining a supportive atmosphere.

In conclusion, promoting gender inclusiveness in digital literacy programs in universities requires a multifaceted approach that addresses policy, curriculum, resources, mentorship, awareness, and the learning environment. By implementing these strategies, universities can create a more equitable and supportive environment for female students, ensuring that they have the opportunity to develop the digital skills necessary for success in the modern world.

Methodology

A descriptive survey research design was used for the study. A descriptive survey design is a study that aims at collecting data on something and describing it in a systematic manner. This involves collection of data on a representative population of the target audience, on which generalization is made (Nworgu, 2015). The area of the study is Anambra State. The purposive sampling technique was used to select sample population comprised of 10 female librarians comprising of 5 each from 2 selected

universities in Anambra State namely: Chukwuemeka Odumegwu Ojukwu University, Igbariam, and Nnamdi Azikiwe University, Awka. A structured questionnaire on a four (4) – point Likert scale was used for collection of data for this study. The instrument was a questionnaire which was

subjected to face validation as well as pilot test using Cronbach Alpha which gave a reliability coefficient value of 0.87. The study used on the spot method of distribution and data collection. Data collected from the study were analyzed using mean scores

Analysis and Discussion of Findings

Research Question 1: What are the digital literacy programs available for female librarians in universities in Anambra State?

Table 1: Responses on the digital literacy programs available for female librarians in universities

S/NO	Items	Status	Decision
1	Digital Resource Management	√	Available
2	Information Retrieval and Search Strategies	√	Available
3	Cataloging and Metadata	√	Available
4	Library Management Systems	√	Available
5	Digital Preservation and Archiving	√	Available
6	User Services and Digital Reference	√	Available
7	Social Media and Digital Marketing	x	Not Available
8	E-learning Platforms and Online Education	x	Not Available
9	Data Management and Analysis	x	Not Available
10	Cybersecurity and Digital Ethics	x	Not Available

In Table 1, majority of the respondents attested that the digital literacy programs available for female librarians in universities in Anambra State were **digital resource management, information retrieval and search strategies, cataloging and metadata, library management systems, digital preservation and archiving, and user services and digital reference**. However, some of the respondents attested that **social media and digital marketing, e-learning platforms and online education, data management and analysis, and cybersecurity and digital ethics** were not available for female librarians in universities. This implies that digital literacy programs were available for female librarians in universities. This result is in line with the findings of Olajide and Otunla (2015) who conducted a comprehensive study on the availability and impact of digital

literacy programs in Nigerian universities. They found that digital literacy programs were widely implemented across universities, focusing on enhancing the technical skills of librarians, including female librarians. These programs were designed to improve their efficiency in managing digital resources, providing better information services, and adapting to technological changes in library management. Hargittai (2010) also explored the digital literacy levels among different demographics, including female professionals in academic settings. The study revealed that institutions were increasingly offering digital literacy programs to address the growing need for technological competence. Hargittai's research emphasized that these programs were particularly beneficial for female librarians, as they often faced unique challenges in accessing and utilizing digital tools.

Research Question 2: To what extent are female librarians included in digital literacy programs in universities in Anambra State?

Table 2: Responses on extent are female librarians included in digital literacy programs in universities

S/NO	Items	Mean	Decision
1	Female librarians are trained in the effective management of digital resources, including e-books, online journals, and databases.	2.96	High extent
2	Digital literacy programs for female librarians often include advanced training in information retrieval and search strategies.	2.89	High extent
3	Female librarians learn how to use modern cataloging software and standards such as MARC21, Dublin Core, and others to create accurate and accessible digital records	2.06	Low extent
4	Female librarians are included in training programs on library management systems (LMS) such as Koha, Ex Libris Alma, and others.	2.05	Low extent
5	Female librarians learn techniques for preserving digital materials, ensuring long-term access, and safeguarding against data loss through proper archiving methods	2.12	Low extent
6	Female librarians learn to use online reference tools, virtual help desks, and digital communication platforms to assist library users, providing timely and effective support	2.25	Low extent
7	Female librarians are taught how to create engaging content, manage social media accounts, and use digital marketing strategies to reach and engage with the library community	1.32	Low extent
8	Female librarians learn to support and manage e-learning tools and platforms, facilitating online courses and virtual library services	1.51	Low extent
9	Female librarians learn to handle research data, use statistical software, and apply data analysis techniques to support academic research and improve library services	1.20	Low extent
10	Training in cybersecurity and digital ethics ensures that female librarians are aware of the best practices for protecting digital information and understanding the ethical implications of digital library services.	1.81	Low extent

In Table 2, the extent are female librarians included in digital literacy programs in universities in Anambra State were to a low extent as they attested that they were trained in the effective management of digital resources, including e-books, online journals, and databases, and digital literacy programs for female librarians often include advanced training in information retrieval and search strategies. However, majority of the respondents attested to a low extent that

they learn how to use modern cataloging software and standards, training programs on library management systems (LMS), learn techniques for preserving digital materials, learn to use online reference tools, taught how to create engaging content for library community, learn to support and manage e-learning tools and platforms, learn to handle research data, and apply data analysis techniques, and training in cybersecurity and digital ethics. This implies that the extent

female librarians are included in digital literacy programs in universities are low. This result is in line with the findings of Olajide and Otunla (2015) who investigated the digital literacy skills and training needs of academic library staff in Nigerian universities. They found that female librarians were significantly underrepresented in digital literacy training programs. The study highlighted barriers such as gender-based stereotypes, limited access to training opportunities, and a lack of

institutional support for female staff. Ebiwolate (2010) also conducted a study on the digital literacy levels of librarians in university libraries and found that female librarians had lower levels of digital literacy compared to their male counterparts. The study attributed this to a lack of targeted training programs for women and an organizational culture that did not prioritize gender inclusiveness in professional development.

Research Question 3: What are the challenges that impede gender inclusiveness in digital literacy programs for female librarians in universities in Anambra State?

Table 3: Responses on the challenges that impede gender inclusiveness in digital literacy programs for female librarians

S/N	Items	Mean	Decision
1	Societal and cultural norms often dictate the roles of women, which can limit their participation in professional development activities such as digital literacy programs	3.13	Agree
2	Institutional biases and gender discrimination can create an environment where female librarians are less likely to be encouraged to participate in digital literacy programs	3.02	Agree
3	Many digital literacy programs are not designed with a gender-sensitive approach, which can result in lower participation rates among female librarians	3.15	Agree
4	Female librarians may have limited access to opportunities for digital literacy training due to financial constraints	3.22	Agree
5	Balancing work responsibilities with personal and family life can be particularly challenging for female librarians, making it difficult for them to commit to additional training programs	3.10	Agree
6	The absence of mentorship and support networks for female librarians can impede their participation in digital literacy programs	3.05	Agree
7	Limited access to technology and inadequate technological infrastructure can hinder female librarians' ability to participate in digital literacy programs	3.32	Agree

In Table 3, the challenges that impede gender inclusiveness in digital literacy programs for female librarians in universities in Anambra State are societal and cultural norms, **institutional biases and discrimination, lack of targeted training programs, limited access to resources and**

opportunities, work-life balance challenges, lack of mentorship and support networks, and technological barriers. This implies that female librarians are highly challenged with gender inclusiveness in digital literacy programs in universities. This result is in line with the

findings of Olajide and Otunla (2015) who found that cultural expectations and domestic responsibilities significantly reduce the participation of female librarians in professional training programs. These societal pressures create barriers that are difficult to overcome without targeted interventions and support. Oyewusi and Oyeboade (2009) also documented how

institutional gender biases result in fewer opportunities for professional development for women, lower expectations of their capabilities, and a lack of female representation in leadership positions within libraries. These biases contribute to an environment where female librarians feel less encouraged and supported to pursue digital literacy training

Research Question 4: What are the strategies for increasing gender inclusiveness in digital literacy programs for female librarians in universities in Anambra State?

Table 4: Responses on strategies for increasing gender inclusiveness in digital literacy programs for female librarians

S/N	Items	Mean	Decision
1	Implementing policies that explicitly promote gender inclusiveness in digital literacy programs is essential	3.03	Agree
2	Offering scholarships, grants, or subsidies specifically targeted at women can help alleviate these barriers	3.22	Agree
3	Mentorship programs that pair female librarians with experienced mentors can provide guidance, support, and opportunities for professional growth	3.45	Agree
4	Universities should offer flexible learning options for digital literacy programs	3.12	Agree
5	Raising awareness about the importance of gender inclusiveness in digital literacy programs among university administrators is crucial	3.10	Agree
6	Continuous monitoring and evaluation of gender inclusiveness initiatives in digital literacy programs are essential to assess effectiveness and identify areas for improvement	3.25	Agree
7		3.33	Agree

In Table 4, the strategies for increasing gender inclusiveness in digital literacy programs for female librarians in universities in Anambra State as agreed by the respondents are **developing gender-sensitive policies, providing financial support, creating mentorship and networking opportunities, offering flexible learning options, promoting awareness and advocacy, and conducting research and evaluation.** This implies that **developing gender-sensitive policies, providing financial support, creating**

mentorship and networking opportunities among others are the workable strategies for increasing gender inclusiveness in digital literacy programs for female librarians. This result is in line with the findings of Nwagwu and Oshiname (2018) who emphasized that female librarians in Nigerian universities who often face significant financial and logistical obstacles that prevent them from accessing necessary training programs can be supported through creating mentorship and networking opportunities is a workable strategy for increasing gender inclusiveness

in digital literacy programs. Olajide and Otunla (2015) also found that implementing policies that explicitly promote gender inclusiveness in digital literacy programs can significantly improve the participation of female librarians in professional training programs. These policies can explicitly promote gender inclusiveness in digital literacy programs

Conclusion

This paper can be concluded on the premise that digital literacy programs are available for female librarians in universities. This indicates recognition of the importance of technological skills in the library profession. Despite the availability of programs, the study highlights a significant

Recommendations

From the data analysis and conclusion of the study, it can be recommended that:

1. Universities should establish and enforce policies that explicitly promote gender inclusiveness in digital literacy programs.
2. Institutions should allocate specific funds to support female librarians' participation in digital literacy programs.
3. Implement structured mentorship programs where experienced female librarians mentor younger colleagues or those new to digital literacy.
4. Facilitate networking events, seminars, and conferences that bring together female librarians with digital literacy experts, industry professionals, and peers.
5. Offer comprehensive and ongoing training programs tailored to the needs of female librarians in digital literacy.

gap in the extent to which female librarians are included. This points to systemic barriers or challenges that hinder their full participation. Female librarians face notable challenges related to gender inclusiveness in digital literacy programs. These challenges may include cultural biases, lack of support structures, or institutional policies that inadvertently exclude them. The study identifies several effective strategies for increasing gender inclusiveness. These include developing gender-sensitive policies, providing financial support for training and development, and establishing mentorship and networking opportunities. These strategies are crucial for creating an inclusive environment where female librarians can thrive in digital literacy programs.

6. Universities should conduct awareness campaigns and workshops to challenge cultural biases and institutional barriers that hinder gender inclusiveness in digital literacy programs.
7. Implement mechanisms to monitor the participation and progress of female librarians in digital literacy programs.

References

- Adya, M., & Kaiser, K. M. (2005). Early determinants of women in the IT workforce: A model of girls' career choices. *Information Technology & People*, 18(3), 230-259.
- Agim, E.C & Azolo, E.M. (2019) Digital literacy and job performance of 21st century Library staff in Imo state. *Library Research Journal*, 4 (1). p15-26. <https://journals.unizik.edu.ng>
- Agim, E.C.& Oraekwe, I.N. (2019) Use of Library Resources and Services for National Development. *International Journal of Social Science and*

- Humanities Reviews (IJSSHR)*, 9(2), 59-72.
<https://www.ijsshr.com/journal/index.php/IJSSHR>
- Anderson, R., & Hill, P. (2020). *Gender Inclusiveness and Equity: A Guide to Best Practices*. New York: Routledge.
- Ani, O. E., Ngulube, P., & Onyancha, O. B. (2015). Perceived effect of accessibility and utilization of electronic resources on productivity of academic staff in selected Nigerian universities. *Knowledge Management & E-Learning: An International Journal (KM&EL)*, 7(3), 511-520.
- Ashong, C. A., & Commander, N. E. (2012). Ethnicity, gender, and perceptions of online learning in higher education. *Journal of Online Learning and Teaching*, 8(2), 98-110.
- Brown, A., & Lee, J. (2017). Gender inclusiveness in education: A critical analysis. *Journal of Educational Policy*, 32(4), 501-516.
- Brown, M. (2017). Integrating digital literacy into the curriculum. *Educational Technology Research and Development*, 65(4), 107-122.
- Clarke, M. A., Belden, J. L., Koopman, R. J., & Steege, L. M. (2013). Information needs and information-seeking behaviour analysis of primary care physicians and nurses: A literature review. *Health Information & Libraries Journal*, 30(3), 178-190.
- Corbett, C., & Hill, C. (2015). *Solving the Equation: The Variables for Women's Success in Engineering and Computing*. Washington, DC: AAUW.
- Ebiwolate, P. B. (2010). Digital literacy levels of librarians in university libraries in Nigeria. *Library Philosophy and Practice (e-journal)*. Retrieved from <https://digitalcommons.unl.edu/libphilprac/515>
- Eynon, R., & Malmberg, L. E. (2011). Understanding the online information-seeking behaviors of young people: The role of networks of support. *Journal of Computer Assisted Learning*, 27(6), 514-529.
- García-Holgado, A., García-Peñalvo, F. J., & Mendes, A. J. (2018). Gender balance actions, policies and strategies for STEM: Results from a survey. In *Proceedings of the Sixth International Conference on Technological Ecosystems for Enhancing Multiculturality* (pp. 787-795).
- Gurumurthy, A., & Chami, N. (2014). Gender equality in digital literacy: An overview. *Gender, Technology and Development*, 18(1), 1-28.
- Hargittai, E. (2010). Digital Na(t)ives? Variation in Internet Skills and Uses among Members of the "Net Generation". *Sociological Inquiry*, 80(1), 92-113.
- Horrigan, J. B. (2016). *Digital Readiness Gaps*. Pew Research Center.
- Ifeka, F. E., Aniebue, U., & Paul, I. (2017). Roles and Responsibilities of Academic Librarians in Universities. *Journal of Library Science*, 12(2), 45-58.
- Igwe, K. N., Oyelude, A. A., & Alonge, A. (2019). Integrating digital literacy into the curriculum of Nigerian library and information science

- schools. *Library Philosophy and Practice*, 2291.
- International Federation of Library Associations & Institutions. (2014). Guidelines for Digital Literacy Programs.
- International Telecommunication Union (ITU). (2017). *ICT Facts and Figures 2017*. Geneva: ITU.
- James, T., & John, K. (2018). Digital Literacy for Librarians: Challenges and Opportunities. *Library Trends*, 67(3), 234-252.
- Johnson, K. (2016). *Gender Inclusive Workplaces: Creating a Culture of Equity and Diversity*. London: Palgrave Macmillan.
- Lai, L., Fu, R., Zhang, Y., & Wang, J. (2009). The Integration of Digital Resources in Academic Libraries. *Journal of Digital Information Management*, 8(4), 201-209.
- McKinsey & Company. (2020). *Diversity Wins: How Inclusion Matters*.
- Ng, W. (2012). Can we teach digital natives digital literacy? *Computers & Education*, 59(3), 1065-1078.
- Nwagwu, W. E., & Oshiname, I. O. (2018). Factors influencing the use of information and communication technology (ICT) in selected academic libraries in south-west Nigeria. *Library Philosophy and Practice (e-journal)*. Retrieved from <https://digitalcommons.unl.edu/libphilprac/1952>
- Okojie, J. (2017). The Role of Universities in National Development. *Higher Education Review*, 45(1), 1-15.
- Olajide, A. A., & Otunla, A. O. (2015). Digital literacy skills and training needs of academic library staff. *Library Philosophy and Practice (e-journal)*, 1208. Retrieved from <https://digitalcommons.unl.edu/libphilprac/1208>
- Oyewusi, F. O., & Oyeboade, S. A. (2009). An empirical study of accessibility and use of library resources by undergraduates in a Nigerian State University of Technology. *Library Philosophy and Practice (e-journal)*. Retrieved from <https://digitalcommons.unl.edu/libphilprac/245>
- Popoola, S. O., & Haliso, Y. (2009). Use of Library Information Resources and Services as a Predictor of the Teaching Effectiveness of Social Scientists in Nigerian Universities. *African Journal of Library, Archives & Information Science*, 19(1), 65-77.
- Ricks, S., & Ham, M. (2015). Barriers to Female Participation in Digital Literacy Programs. *Journal of Information Science*, 41(4), 495-507
- Smith, L. (2019). The impact of gender inclusiveness on social justice. *Social Science Quarterly*, 100(2), 432-448.
- Spante, M., Hashemi, S. S., Lundin, M., & Algers, A. (2018). Digital competence and digital literacy in higher education research: Systematic review of concept use. *Cogent Education*, 5(1), 1519143.
- Stoet, G., & Geary, D. C. (2018). The gender-equality paradox in STEM education. *Psychological Science*, 29(4), 581-593
- UNESCO. (2018). *Digital Literacy in Education*. Paris: UNESCO.

UNESCO. (2018). *Gender Equality in Education: A Global Report*. Paris: UNESCO.

World Bank. (2016). *Digital Dividends: World Development Report*. Washington, DC: World Bank

