

Leadership Innovation and Gender Issues in Academic Libraries in Southwest Nigeria

Daramola C.F.

University Library, Federal University of Technology, Akure

Email address: funmidaramola25@gmail.com.

Abstract

The study assessed leadership innovation and gender issues in academic libraries in Southwest Nigeria, focusing on leadership innovation, gender composition in leadership positions, and barriers to adopting innovative leadership practices. A multi-stage sampling technique was used to select 176 respondents (80 females and 96 males). Data was collected through an online survey distributed via email and institutional platforms and analyzed using descriptive statistics, and Chi-square with results presented through charts and tables. Four key innovative leadership initiatives were identified: Adoption of Digital Tools and Platforms – Mean scores were 3.90 for males and 4.18 for females. Creation and Promotion of Open-Access Institutional Repositories – Mean scores were 4.67 for males and 4.60 for females. Mentorship and Professional Development Programs – Mean scores were 4.00 for males and 3.90 for females. User-centered Design Approach to Library Services – Mean score of 4.48 for both genders. There was no significant difference in perceptions of these initiatives, showing strong consensus across genders. However, of the four innovative technologies introduced, only one (library mobile application) was widely adopted, while the others showed low adoption rates. The study revealed gender disparities in leadership representation. Men predominantly occupied senior leadership positions (e.g., library directors), whereas women were mostly in middle-management roles. The p-value (0.008) indicated a statistically significant difference in perceptions of gender representation. Despite this, a majority perceived gender balance in leadership roles, with 54.2% of males and 55.0% of females believing leadership roles were equally distributed ($p=0.938$). However, the overall gender distribution suggested otherwise. The study identified several barriers to leadership innovation in academic libraries, lack of funding for new technologies, training, and innovation projects, inadequate technological infrastructure, rigid organizational structures and institutional culture that resist change, risk aversion among leaders and staff, preference for traditional leadership methods among existing leaders, fear of the unknown, leading to resistance to innovation and shortage of leadership development programs. The study concluded that leadership development programs are crucial for fostering innovation in academic libraries. Addressing these barriers could enhance leadership innovation and promote gender diversity in leadership roles within academic libraries in Southwest Nigeria

Keywords: Academic Libraries, Gender Diversity, Gender Issues, Leadership Innovation, Southwest Nigeria,

DOI: 10.7176/IKM/15-1-04

Publication date: April 30th 2025

1.0. Introduction

Academic libraries, traditionally regarded as the heart of educational institutions, are undergoing significant transformations. According to Cox, (2023). the role of academic libraries has evolved due to rapid technological advancements and changing user expectations. Academic libraries are no longer just information repositories but dynamic learning, research, and innovation centres (Corral & Jolly, 2019). The pressure to adapt to technological changes, evolving user expectations, and the demand for more efficient services have placed library leadership under intense scrutiny (Kearl, 2024). The process of introducing new and creative leadership strategies and practices usually called Leadership innovation has been recognized as a critical factor in ensuring that academic libraries remain relevant, functional, and capable of delivering high-quality services. In recent years, various studies have examined the impact of leadership innovation on library operations, highlighting its role in improving functionality and service delivery.

Leadership innovation plays a pivotal role in enhancing the functionality of academic libraries. Scholars such as Stueart and Moran (2007) argue that innovative leadership is essential for modern libraries to respond effectively to the complexities of digital information management, user engagement, and resource allocation. Innovative leaders are more likely to embrace change, encouraging the integration of new technologies, such as library automation systems, digital repositories, and user-centered service models. These advancements enable libraries to deliver more efficient services, streamline operations, and enhance user satisfaction. Martin's (2015) work on academic library leadership reveals how leadership styles, vision, and innovation are intimately related. Important leadership attributes include the creation and sharing of a vision for the library, being innovative, and having the self-confidence to forge ahead in a changing environment. The integration of the leadership team and

the individual leader's attitude toward organizational change were discovered to be major elements associated with innovativeness in previous research library innovation studies (Jantz 2016, and Jantz, 2017).

Leadership innovation fosters collaboration within library teams (Calvert, 2018). Effective leaders who introduce innovative practices encourage the development of a shared vision, creating an environment where staff members are more likely to work collaboratively to solve problems and improve service delivery. According to Kouzes and Posner (2017), leaders who foster collaboration and empower their teams to take ownership of innovative initiatives are more successful in driving institutional change.

It means that academic libraries will be better able to adapt to new technology, perform better as an organization, and better meet the requirements of

both students and teachers.

The adoption of new technologies in academic libraries is one of the most visible outcomes of leadership innovation. According to Breeding (2015), innovative academic library leaders are more likely to invest in digital infrastructure that enhances service delivery, including integrated library systems (ILS), digital resource management tools, and online databases. According to Kempf, (2023); and Lu & Lin, (2024) the digital transformation of libraries enables them to offer a wider range of services, from remote access to resources to personalized research support. This not only improves user satisfaction but also increases the library's relevance in the academic community.

Leadership innovation also plays a critical role in managing the human aspect of technological change. Effective library leaders facilitate staff training and development, ensuring that employees are equipped with the skills to use new tools and technologies. According to Holt and Elliott (2018), innovative leadership in libraries promotes continuous professional development, which is vital for the successful implementation of new systems and services. This ensures that libraries remain functional and responsive to the needs of their users.

In recent years, there has been a shift toward user-centered service models in academic libraries, a trend driven largely by innovative leadership. User-centered services focus on understanding the needs and preferences of library users—students, faculty, and researchers—and tailoring services to meet those needs effectively. Innovative leaders in academic libraries have introduced initiatives such as personalized research consultations, digital literacy workshops, and data management services, all aimed at enhancing user experience.

According to Tait et al. (2016), leadership innovation in libraries has been instrumental in promoting a service-oriented culture. Leaders who adopt a user-centred approach are more likely to implement feedback mechanisms, allowing libraries to continuously improve their services based on user input. This not only increases user satisfaction but also positions the library as a proactive partner in the academic enterprise.

The concept of leadership innovation is grounded in several theoretical frameworks, including transformational leadership theory and adaptive leadership theory. Transformational leadership, as described by Bass and Avolio (1994), focuses on leaders who inspire and motivate their followers to exceed expectations by fostering an environment of creativity, vision, and change. This model is particularly relevant in academic libraries, where leaders must inspire their staff to embrace new technologies and methods for delivering information services. Similarly, Heifetz's (1994) adaptive leadership theory emphasizes the importance of flexibility and the ability to address challenges with innovative solutions, which is crucial in a rapidly changing information landscape. These leadership frameworks provide a foundation for understanding how innovative leadership practices can foster a culture of continuous improvement and adaptability in academic libraries. It is paramount to note that innovativeness within the academic library leadership must be inclusive. Both men and women are expected to be represented. However, the issues of gender persist in academic libraries. There is a growing concern of the underrepresentation of women in leadership roles in academic libraries.

Even though the library profession is predominantly female. Numerous studies highlight this paradox: women make up the majority of the library workforce but are underrepresented in senior leadership roles. A study by Wolniak et.al., (2023) reported that while women occupy about 80% of the workforce in academic libraries, they hold fewer leadership positions, particularly at higher administrative levels. This disparity is often attributed to structural inequalities, including societal expectations of gender roles, which affect career progression. As noted by Lawton, (2018), women are more likely to be clustered in lower-level administrative or technical roles, while men dominate the positions of university librarians, library directors, or deans of libraries. These structural barriers are deeply rooted in traditional patriarchal norms that position men as the more "natural" choice for leadership. Gender bias, both explicit and implicit, plays a significant role in shaping leadership opportunities in academic libraries. Studies suggest that societal stereotypes about leadership often align with masculine traits,

such as assertiveness and dominance, while leadership traits associated with women, such as empathy and collaboration, are undervalued. Eagly and Karau's (2002) Role Congruity Theory suggests that women face a "double bind" in leadership: when they adopt assertive leadership styles, they are often viewed as less likable or competent compared to their male counterparts. On the other hand, if they adopt more traditional "feminine" leadership traits, they may be perceived as too weak for leadership positions.

In the context of academic libraries, where collaboration, teamwork, and service-oriented leadership are often emphasized, the persistence of gender biases can still limit the advancement of women into leadership roles. In addition, a study by (Tremmel, & Wahl, 2023) highlights that male library directors are often judged based on their potential, while female leaders are judged based on their proven experience, creating an uneven playing field for leadership opportunities.

Institutional cultures in academia and academic libraries often reflect broader societal gender norms, which can create barriers for women aspiring to leadership positions. O'Connor and White (2011) argue that academic institutions are often structured around masculine norms of competitiveness and assertiveness, which disadvantage women who may feel uncomfortable navigating such environments. In many cases, informal networks and mentorship opportunities that are essential for leadership development are less accessible to women, particularly those from marginalized backgrounds. Additionally, the glass ceiling phenomenon, described by Morrison, White, and Van Velsor (1987), continues to be prevalent in academic libraries. The glass ceiling refers to the invisible yet impenetrable barriers that prevent women from reaching top leadership positions, regardless of their qualifications and achievements. For example, despite the increasing number of women obtaining advanced degrees in library and information science, they are still significantly underrepresented in senior leadership roles. Research shows that gender diversity in leadership teams can lead to more effective decision-making and improved organizational performance. Studies by Larson (2017) emphasize that diverse leadership teams bring varied perspectives, leading to more comprehensive solutions to challenges. In academic libraries, gender-diverse leadership can result in a more inclusive environment that better serves the needs of a diverse student and faculty population. In Southwest Nigeria, these issues are particularly relevant, as academic libraries strive to remain competitive and inclusive while addressing traditional gender disparities.

1.1.0. Statement of the Problem

Despite the increased attention to leadership innovation in academic institutions globally, academic libraries in Nigeria face challenges in fully adopting innovative leadership practices. Furthermore, gender disparities persist, with limited representation of women in leadership positions within these libraries. This raises concerns about the potential for gender bias in decision-making processes and the impact on library management. Existing literature suggests that innovation in leadership can significantly improve academic library functionality and service delivery. However, the extent to which academic libraries in Southwest Nigeria embrace innovative leadership practices and address gender issues remains unclear. This study seeks to explore these gaps, investigating both leadership innovation and gender dynamics in the management of academic libraries in Southwest Nigeria.

1.1.2. Research Questions

1. What is the level of leadership and technological innovations in academic libraries in Southwest Nigeria?
2. How are gender issues affecting leadership roles in these libraries?
3. What are the barriers to the adoption of innovative leadership practices in academic libraries in the region?

1.1.3. Objectives of the Study

The study's primary goals are to evaluate the degree of leadership innovation implementation in Southwest Nigerian university libraries and investigate how gender-related issues impact leadership opportunities, practices, and results in these institutions.

The specific objectives include to:

1. assess the current state of leadership innovation in academic libraries in Southwest Nigeria.
2. examine the gender composition of leadership in these libraries
3. identify the barriers to adopting leadership innovation in academic libraries.

2.0. Methodology

2.1. The Study area: The study was conducted in Southwest Nigeria. Southwest Nigeria consists of six states: Lagos, Ogun, Oyo, Osun, Ondo, and Ekiti. The region is home to several federal, state, and private universities, which host well-established academic libraries. These libraries vary in size, resources, and leadership structures, making them ideal for studying leadership innovation and gender issues.

2.2. Sample Frame: The target population for this study consists of library leaders and staff in academic libraries across public and private universities in the six states of Southwest Nigeria. Specifically, the sample frame includes: the University librarians (library directors), Deputy and assistant librarians, Departmental heads in libraries (e.g., heads of cataloging, acquisitions, reference services) and Other professional library staff. A list of academic libraries in the region was obtained, and the sampling frame was drawn from these libraries' staff directories and organizational structures.

2.3. Sampling Techniques

A multi-stage sampling technique was employed to select participants for the study. The academic libraries were stratified by state (Lagos, Ogun, Oyo, Osun, Ondo, Ekiti) and by type of institution (federal, state, and private universities). This ensures the sample includes libraries from different states and institutional types for representativeness. Within each stratum, a simple random sampling technique was used to select the academic libraries in the study. Within the selected libraries, purposive sampling was employed to identify respondents holding leadership positions (e.g., university librarians, departmental heads) and other professional library staff who play roles in library decision-making and operations. This ensures that the study includes individuals with direct experience in leadership and innovation.

2.4. Sample Size

The study used a total of 180. This sample size is sufficient to ensure the representativeness of the academic library staff across the six states in Southwest Nigeria. The sample was distributed proportionately across the states and institutional types, ensuring adequate representation of both men and women in leadership and non-leadership roles.

2.5. Method of Data Collection

The primary data for this study was collected through an online survey. The survey was designed using a well-structured questionnaire. The questionnaire included sections on: Demographics (gender, age, educational background), leadership roles and experiences, perceptions of leadership innovation in academic libraries, and barriers to innovative leadership in academic libraries. The online survey was distributed via email and institutional platforms to reach the target respondents.

2.6. Method of Data Analysis

Data was analysed using descriptive statistics (mean, standard deviation, frequency distribution). The linear regression model was used to show the factors affecting Innovative leadership initiatives introduced in the libraries. The results were presented through Charts and Tables

3.0. Result and discussions

3.1.1. Innovative Leadership Initiatives in Academic Libraries: Data in Table 1 presents the level of agreement among library staff on various innovative leadership initiatives introduced in their libraries, with mean scores and p-values reflecting their perceptions. The first one is the Adoption of cutting-edge Digital Tools and Platforms, with a mean score of 3.90 for males and 4.18 for females. The p-value was 0.252, showing that there is no significant difference in gender views about the adoption of cutting-edge Digital Tools and Platforms in academic libraries. The moderately high mean scores show that library staff generally agree that digital tools have transformed traditional libraries. According to Lankes (2016), integrating digital technologies enhances accessibility, streamlines information retrieval, and improves user experience. However, the slightly lower score among male respondents may indicate challenges in adoption, such as resistance to change, digital literacy gaps, or inadequate technical support (Gorman, 2019). To fully leverage digital transformation, libraries must provide continuous training on digital tools; ensure infrastructure development to support digital innovations; and encourage user engagement in digital platform usage.

The second innovative initiative is the Creation and Promotion of Open-Access Institutional Repositories which have the Mean scores of 4.67 for males and 4.60 for females. The P-value is 0.289 (No significant gender difference) implies a high level of agreement among both male and female staff indicates strong support for institutional repositories. Suber (2012) highlights that repositories increase institutional visibility, facilitate knowledge sharing, and improve research impact. The commitment to open access aligns with global trends in scholarly communication, where universities and libraries are prioritizing repositories for academic content dissemination (Pinfield et al., 2014).

Concerning Mentorship and Professional Development Programs and innovation initiatives, the Mean scores for Males were 4.00 and 3.90 for females. The P-value (0.669) also implies no significant gender difference. The positive response suggests that mentorship initiatives are valuable for staff development. Eby et al. (2013) state that structured mentorship programs enhance career progression, leadership skills, and job satisfaction. However, the slightly lower mean score among female staff may suggest disparities in access to mentorship opportunities, aligning with research indicating gender gaps in leadership mentoring in academia (Cheryan et al., 2017). The User-Centred Design Approach to Library Services had the same mean score (4.48) for both the male and female genders and a P-value of 0.780 (No significant gender difference). This shows a strong consensus supports the adoption of user-centered design (UCD) in library services. Research shows that UCD enhances user engagement, improves information retrieval, and tailors library services to meet diverse needs (Norman, 2013). The findings suggest that both male and female library staff recognize the value of designing services based on user preferences, aligning with best practices in modern library management (Dudek et al., 2020).

Table 1: Innovative Leadership Initiatives in Academic Libraries

Innovative Leadership Initiatives in Academic Libraries	Male (Mean)	Female Mean	p-value (t-test)
cutting-edge digital tools and platforms to transform traditional libraries into smart, digital-friendly environments	3.90(0.88)	4.18(0.71)	0.252
creation and promotion of open-access institutional repositories to store and share academic works, research, and data produced within the institution	4.67(0.47)	4.60(0.59)	0.289
Mentorship and professional development programs	4.00(0.94)	3.90(0.87)	0.669
User-centred design approach to library services	4.48(0.68)	4.48(0.64)	0.780

Table 2: Technological Innovations Utilised in Academic Libraries

variables	Male		Female		p-value (chi-square)
	Yes	No	Yes	No	
a. Artificial intelligence (AI)-powered search tool	4(4.2)	92(95.8)	4(5.0)	76(95.0)	0.000
b. Virtual and Augmented Reality (VR/AR) Learning Spaces	7(7.29)	89(92.7)	19(23.75)	61(76.25)	0.000
c. Library Mobile Apps	82(85.4)	14(14.6)	74(92.5)	6(7.5)	0.297

d. Radio Frequency Identification (RFID) technology	10(10.4)	86(89.6)	18(22.5)	62(77.5)	0.123
-----------------------------------------------------	----------	----------	----------	----------	-------

The high level of agreement on digital transformation, open-access repositories, mentorship, and user-centered design suggests that innovative leadership is positively impacting library services. However, continued efforts are needed to address digital adoption barriers through training, enhance mentorship inclusivity for both genders, ensure repository sustainability for long-term benefits, and Strengthen user engagement to optimize library services.

3.1.2. Technological Innovations Utilized in Academic Libraries: Data in Table 2 highlights the adoption of technological innovations in academic libraries, very few percentages (4.2 and 5.0) of the male and female respondents indicated the limited introduction of Artificial Intelligence (AI)-Powered Search Tools to enhance user experience in academic libraries. The p-value was 0.000 which indicates significant disparities in the adoption of AI-powered search tools and VR/AR learning spaces. The significant gender disparity in perceived adoption suggests that female staff are more aware or involved in AI implementation than their male counterparts. AI-powered search tools improve information retrieval, enhance recommendations, and personalize library experiences (Cox et al., 2020). However, the low overall adoption rate indicates potential barriers such as Limited AI literacy among library staff, resistance to automation and digital transformation (Tammaro, 2021), and Infrastructure constraints hindering full deployment.

Also, 7.29% and 23.75% of the male and female respondents indicated the introduction of Virtual and Augmented Reality (VR/AR) Learning Spaces with a p-value of 0.000, showing a significant gender difference. The findings suggest that VR/AR technologies are more recognized by female staff, possibly due to their involvement in user engagement roles. VR/AR enhances library services by creating immersive learning environments, allowing users to explore digital archives, virtual laboratories, and historical simulations (Huang et al., 2021). The relatively low adoption rate among the respondents may indicate a lack of exposure or skepticism about VR/AR's applicability in library services, high implementation costs (Pomerantz, 2022), limited expertise among librarians in handling VR/AR tools, and concerns about accessibility and inclusivity for all users. Both the male and female respondents (85.4% and 92.5%) respectively indicated the deployment of Library Mobile Apps. The P-value was 0.297 indicating No significant gender difference. The high adoption rate suggests that mobile apps are a widely accepted technological innovation in academic libraries. Mobile apps enhance remote access to resources, self-service options, and personalized alerts (Kim et al., 2020). The lack of a significant gender difference indicates that both male and female staff acknowledge their impact. However, the potential challenges in using mobile applications could be the usability and accessibility issues for some users, frequent updates and maintenance requirements and the potential digital divide among students lacking smartphone access.

The responses to Radio Frequency Identification (RFID) Technology were low (10.4% and 22.5%) respectively, and a P-value of 0.123 showed no significant gender difference. RFID technology enhances inventory management, automates book checkouts, and reduces theft (Islam, 2019; Cheng, et.al., 2022). The low adoption rate suggests poor implementation in the institution's library. While there is no significant gender difference, the overall low adoption rate indicates that RFID is either not fully deployed or underutilized. This might result from high initial installation costs (Okuy, 2020), data security concerns and privacy risks and the librarians' hesitation in transitioning from traditional systems.

Of the four innovative technologies stated, only one (library mobile application) is well-adopted, the other three have low adoption rates. The low adoption of Artificial Intelligence (AI)-powered search tools, Virtual and Augmented Reality (VR/AR) learning spaces, and Radio Frequency Identification (RFID) technology in academic libraries has several implications. While library mobile apps have seen high adoption, the limited use of other innovative technologies restricts access to digital resources, reduces service efficiency, and affects user engagement (Chisita & Chiparausha, 2019; Okuy, 2020). This also weakens institutional competitiveness, hinders remote learning, and widens the digital divide (Van de Werfhorst, et.al. 2022; Golden et.al., 2023). Addressing these gaps through increased awareness, training, and investment in digital infrastructure is crucial for modern academic excellence.

3.2. Gender Composition of Leadership in academic Libraries

The findings in Table 3 indicate gender disparities in leadership representation within the university library. The p-value (0.008) suggests a statistically significant difference in perceptions of gender representation. The findings show that 33.3% of males and 20.0% of females believed that most leadership positions are held by men ($p=0.162$). Men primarily occupy senior leadership roles (e.g., library directors), while women tend to hold middle-management positions ($p=0.078$). There is a perceived gender balance (54.2% of males and 55.0% of females believe leadership roles are equally distributed) ($p=0.938$), though the overall representation issue suggests otherwise. While no male respondent indicated female underrepresentation, 5.0% of females did ($p=0.117$), suggesting a gendered perception of leadership access. Kumar, (2020) highlights a glass ceiling effect in library leadership, where men are more likely to attain senior roles while women are confined to middle management. Tamaro, (2021) indicates that institutional cultures, promotion criteria, and gender biases influence leadership representation. To address disparities, affirmative leadership development programs and mentorship for women in libraries are recommended (Ezeani & Ezema, 2021).

Table 3: Gender Composition in Leadership Positions

Statements	Male	Female	p-value (Chi-square)
	Freq. (%)	Freq. (%)	
Are the male and female genders adequately represented in leadership positions within your university library?	0	64(80.0)	0.008
Most of leadership positions (e.g., library directors, and department heads) are held by men.	32(33.3)	16(20.0)	0.162
Most of the leadership positions are held by women	16(8.3)	8(5.0)	0.537
Leadership positions are equally distributed between men and women	64(54.2)	44(55.0)	0.938
Senior leadership positions (e.g., library directors or university library system heads) are primarily occupied by men, while women hold more middle-management positions (e.g., department heads, section leaders)	8(4.2)	24(15.0)	0.078
There is an underrepresentation of Women in leadership	0	8(5.0)	0.117

Table 4: Barriers to adopting leadership innovation in academic libraries

Barriers to adopting leadership innovation in academic libraries	Male (Mean)	Female (Mean)	p-value	Ranking
lack of funding to invest in new technologies, training programs, or innovative projects	4.65±0.56	4.42±0.74	0.089	1 st
Inadequate technological infrastructure to support innovative leadership strategies, such as digital transformation	4.58±0.74	4.30±0.75	0.092	2 nd
Institutional culture or rigid organizational structures	4.48±0.74	3.88±0.96	0.010	3 rd

Leadership or staff may be overly risk-averse, fearing failure or potential negative outcomes from trying	4.38±0.73	3.90±0.98	0.084	4 th
Existing leaders have a preference for traditional methods.	4.31±1.04	3.62±1.27	0.009	5 th
Staff and existing leadership may resist new ideas or innovative changes due to fear of the unknown	4.25±0.97	3.55±1.30	0.028	6 th
shortage of leadership development programs specifically tailored for library staff	4.25±0.97	4.15±0.73	0.011	6 th

3.3.Barriers to Leadership Innovation in Academic Libraries:

The Barriers to leadership innovation in academic libraries are ranked based on the mean values for male and female respondents, with higher means indicating stronger perceived barriers. The p-value determines whether the gender differences in perceptions are statistically significant (Table 4). Lack of funding for new technologies, training, or innovation projects (M: 4.65, F: 4.42, $p = 0.089$), ranked first. Studies highlight that insufficient funding in academic libraries restricts the adoption of innovative practices (Ocholla & Shongwe, 2013). Similarly, Connell, et.al., (2023). points out that budgetary constraints prevent libraries from developing leadership capacity and acquiring new technologies. This was followed by inadequate technological infrastructure (M: 4.58, F: 4.30, $p = 0.092$). Even when funding is available, poor infrastructure impedes digital transformation in libraries. Many academic libraries in developing countries lack the technological backbone needed for innovation (Odeyemi, & Ogundare, 2019). Without reliable ICT resources, cloud computing, or automation, leadership innovation remains a challenge (Tise & Raju, 2019). Institutional culture or rigid organizational structures (M: 4.48, F: 3.88, $p = 0.010$) ranked 3rd. A bureaucratic culture can hinder leadership innovation. Traditional hierarchies in academic institutions discourage experimentation and slow decision-making (Kezar & Eckel, 2002). A rigid structure makes it difficult for library staff to adopt novel leadership strategies, especially in settings where hierarchical leadership dominates (Germano, 2011). Risk aversion among leaders and staff (M: 4.38, F: 3.90, $p = 0.084$). The fear of failure discourages leadership innovation, particularly in resource-constrained environments. Innovation requires taking risks, but academic librarians often hesitate due to the potential for negative consequences (Jantz, 2012). This aligns with the work of Rogers (2003) on innovation diffusion, which emphasizes that individuals' resistance to uncertainty slows innovation adoption. The existing leaders' preference for traditional methods (M: 4.31, F: 3.62, $p = 0.009$) ranked 5th. Many senior library leaders adhere to conventional leadership models, viewing them as effective despite changing technological landscapes (Hernon et al., 2013). A conservative mindset among leaders restricts the willingness to embrace modern leadership techniques, such as participatory or transformational leadership (Bryson, 2018). The resistance to innovation due to fear of the unknown (M: 4.25, F: 3.55, $p = 0.028$) and Shortage of leadership development programs (M: 4.25, F: 4.15, $p = 0.011$) ranked 6th respectively. Change can be intimidating, especially in professions where stability has been the norm. Staff members accustomed to established routines may resist innovative leadership out of fear of job loss or increased workload (Stueart & Sullivan, 2010). Research by Kotter (1996) confirms that change resistance is a major obstacle in leadership transitions. Leadership training tailored for librarians is often inadequate. Many library staff do not receive formal leadership training, limiting their ability to drive innovation (Aguolu & Aguolu, 2002). Leadership programs in academic institutions tend to focus on faculty and administrators rather than library professionals, further exacerbating this issue (Niewiesk & Garrity-Rokous, 2021).

One can conclude that financial constraints, technological deficiencies, and rigid institutional structures are the most critical barriers to leadership innovation in academic libraries. Addressing these issues requires targeted policy interventions, investment in leadership training, and fostering a culture that encourages risk-taking and digital transformation.

Summary, conclusion and recommendations

Summary

The study was carried out to assess leadership Innovation and gender Issues in Academic Libraries in Southwest Nigeria. The specific objectives include assessing the current state of leadership and technological innovations in academic libraries in Southwest Nigeria, examining the gender composition of leadership in these libraries, and identifying the barriers to adopting leadership innovation in academic libraries. The target population for this study consists of library leaders and staff in academic libraries across public and private universities in the six states of Southwest Nigeria. A list of academic libraries in the region was obtained, and the sampling frame was drawn from these libraries' staff directories and organizational structures. A multi-stage sampling technique was employed to select 176 respondents (80 females and 96 males). The primary data was collected through an online survey. The survey was designed using a well-structured questionnaire. The online survey was distributed via email and institutional platforms to reach the target respondents. Data collected was analysed using descriptive statistics (mean, standard deviation, frequency distribution). The results were presented through Charts and tables. The findings show that four innovative leadership initiatives were introduced. These were the Adoption of cutting-edge Digital Tools and Platforms, with a mean score of 3.90 for males and 4.18 for females. The p-value was 0.252, showing that there is no significant difference in gender views about the adoption of cutting-edge Digital Tools and Platforms in academic libraries. The second Innovative initiative is the Creation and Promotion of Open-Access Institutional Repositories which have the Mean scores of 4.67 for males and 4.60 for females. The P-value is 0.289 (No significant gender difference) implies a high level of agreement among both male and female staff indicates strong support for institutional repositories. The third one was Mentorship and Professional Development Programs and innovation initiatives, the Mean scores for Males were 4.00 and 3.90 for females. The P-value (0.669) also implies no significant gender difference. The User-Centred Design Approach to Library Services had the same mean score (4.48) for both the male and female genders and a P-value of 0.780 (No significant gender difference). This shows a strong consensus supports the adoption of user-centered design (UCD) in library services.

Very few percentages (4.2 and 5.0) of the male and female respondents indicated the introduction of Artificial Intelligence (AI)-Powered Search Tools to enhance user experience in academic libraries. The p-value was 0.000 which indicates significant disparities in the adoption of AI-powered search tools and VR/AR learning spaces. Also, 7.29% and 23.75% of the male and female respondents indicated the introduction of Virtual and Augmented Reality (VR/AR) Learning Spaces with a p-value of 0.000, showing a significant gender difference. Both the male and female respondents (85.4% and 92.5%) respectively indicated the deployment of Library Mobile Apps. The P-value was 0.297 indicating no significant gender difference. The responses to Radio Frequency Identification (RFID) Technology were low (10.4% and 22.5%) respectively, and a P-value of 0.123 showed no significant gender difference. Of the four innovative technologies stated, only one (library mobile application) was well-adopted, the other three had low adoption rates. The study also showed gender disparities in leadership representation within the university library. The p-value (0.008) suggests a statistically significant difference in perceptions of gender representation. The findings show that 33.3% of males and 20.0% of females believed that most leadership positions are held by men ($p=0.162$). Men primarily occupy senior leadership roles (e.g., library directors), while women tend to hold middle-management positions ($p=0.078$). there is a perceived gender balance (54.2% of males and 55.0% of females believe leadership roles are equally distributed) ($p=0.938$), though the overall representation issue suggests otherwise. While no male respondent indicated female underrepresentation, 5.0% of females did ($p=0.117$), suggesting a gendered perception of leadership access. The barriers to Leadership Innovation in Academic Libraries includes lack of funding for new technologies, training, or innovation projects (M: 4.65, F: 4.42, $p = 0.089$), Inadequate technological infrastructure (M: 4.58, F: 4.30, $p = 0.092$), Institutional culture or rigid organizational structures (M: 4.48, F: 3.88, $p = 0.010$), Risk aversion among leaders and staff (M: 4.38, F: 3.90, $p = 0.084$), existing leaders' preference for traditional methods (M: 4.31, F: 3.62, $p = 0.009$), resistance to innovation due to fear of the unknown (M: 4.25, F: 3.55, $p = 0.028$) and shortage of leadership development programs (M: 4.25, F: 4.15, $p = 0.011$). Leadership development programs are crucial for fostering innovation in libraries.

Conclusion

The high level of agreement on digital transformation, open-access repositories, mentorship, and user-centred design suggests that innovative leadership is positively impacting library services.

There were low adoption rates of Artificial Intelligence, VR/AR technologies and RFID. There was a high adoption rate of mobile apps. Gender composition still shows male dominance in leadership positions, while women hold middle management positions. Financial constraints, technological deficiencies, and rigid institutional structures are the most critical barriers to leadership innovation in academic libraries.

Recommendations

There is a need to invest in leadership development to foster a dynamic, innovative, and future-ready library system. Concerted efforts should be made to deploy more modern infrastructure to academic libraries. Continued training and capacity building should be embarked upon on the use of modern facilities. Stakeholders should increase funding of academic libraries to meet global standards. Efforts should be made to reduce the traditional structures in academic libraries to embrace inclusivity. There is a need for targeted policy interventions, investment in leadership training, and fostering a culture that encourages risk-taking and digital transformation

References

- Aharony, N. (2013). Librarians' leadership style and their impact on libraries' innovation. *Journal of Academic Librarianship*, 39(3), 288-292.
- Aguolu, C.C. and Aguolu, I.E. (2002) Libraries and Information Management in Nigeria: Seminal Essays on Themes and Problems. Ed-Linform Services, Maiduguri.
- Arunachalam, S., & Nagarajan, R. (2019). Inclusive leadership practices in academic libraries: The impact of gender diversity programs. *Library Management*, 40(4/5), 200-210. <https://doi.org/10.1108/LM-10-2018-0225>.
- Bass, B. M., & Avolio, B. J. (1994). Improving Organizational Effectiveness through Transformational Leadership. Sage Publications.
- Bell, A. (2015). Mentoring and its importance in leadership development for women in academia. *Journal of Women in Higher Education*, 4(3), 25-39.
- Breeding, M. (2015). Library Systems Report 2015: Agents of Change. American Libraries.
- Bryson, J. (2018). *Strategic planning for public and nonprofit organizations: A guide to strengthening and sustaining organizational achievement*. John Wiley & Sons.
- Bush, T. (2011). *Theories of educational leadership and management*. SAGE Publications.
- Calvert, K. (2018). *Collaborative Leadership: Cultivating an Environment for Success*. Collaborative Librarianship, 10(2), Article 4. <https://digitalcommons.du.edu/collaborativelibrarianship/vol10/iss2/4>.
- Cheng, C. H., Lin, C. H., & Wu, T. Y. (2022). "IoT-Enabled RFID-Based Library Management and Automatic Book Tracking System." In *Advances in Intelligent Systems and Computing*, vol. 1395, pp. 637-646. Springer. Link
- Cheryan, S., Ziegler, S. A., Montoya, A. K., & Jiang, L. (2017). Why are some STEM fields more gender balanced than others? *Psychological Bulletin*, 143(1), 1-35
- Chisita, C. T., & Chiparausha, B. (2019). *Open Access Initiatives in Zimbabwe: Case of Academic Libraries*. Retrieved from Academia.edu.
- Clark, S. C. (2001). Work/family border theory: A new theory of work/family balance. *Human Relations*, 54(6), 747-770.
- Connell, R., Wallach, S., & Lu, Y. (2023). Systematic Review of Libraries and Financial Management Practices Amidst COVID-19. In *Pandemic Risk Management in Operations and Finance: Modeling the Impact of COVID-19* (pp. 123-140). Springer. https://link.springer.com/chapter/10.1007/978-3-031-64869-4_8
- Corrall, S., & Jolly, L. (2019). Innovations in Learning and Teaching in Academic Libraries: Alignment, Collaboration, and the Social Turn. *New Review of Academic Librarianship*, 25(2-4), 113-128. <https://doi.org/10.1080/13614533.2019.1697099>
- Cox, J. (2023). The Position and Prospects of Academic Libraries: Strengths and Opportunities. *New Review of Academic Librarianship*, 29(4), 367-393. <https://doi.org/10.1080/13614533.2023.2238692>
- Cox, A. M., Pinfield, S., & Rutter, S. (2020). The intelligent library: AI, machine learning, and the future of academic libraries. *Library Hi Tech*, 38(1), 10-24.
- Detlor, B., Julien, H., Willson, R., Serenko, A., & Lavallee, M. (2015). Learning outcomes of information literacy instruction at business schools. *Journal of the Association for Information Science and Technology*, 66(10), 2075-2087.
- Dudek, B., Mendoza, A., & Britton, L. (2020). User-centered design and academic libraries: A roadmap for service improvement. *Library Trends*, 69(1), 125-140.
- Eagly, A. H., & Carli, L. L. (2007). Through the labyrinth: The truth about how women become leaders. *Harvard Business Press*.
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review*, 109(3), 573-598.

- Eagly, A. H., & Szcesny, S. (2019). Gender roles in organizations: A social psychological perspective. *Handbook of Gender and Work*, 21(2), 73-91.
- Eby, L. T., Allen, T. D., Evans, S. C., Ng, T., & DuBois, D. L. (2013). "Does mentoring matter? A multidisciplinary meta-analysis comparing mentored and non-mentored individuals." *Journal of Vocational Behavior*, 83(1), 106-120. <https://doi.org/10.1016/j.jvb.2013.03.008>.
- Ezeani, C. N., & Ezema, I. J. (2021). Gender equality in library leadership: Challenges and opportunities. *International Journal of Library Science*, 14(2), 73-86. <https://doi.org/10.11648/j.ijls.2021.14.02.13>
- Germano, M. A. (2011). "Library Leadership that Creates and Sustains Innovation." *Library Leadership & Management*, 25(1). Retrieved from <https://llm.corejournals.org/llm/article/view/2085>
- Golden, A. R., Srisarajivakul, E. N., Hasselle, A. J., Pfund, R. A., & Knox, J. (2023). What was a gap is now a chasm: Remote schooling, the digital divide, and educational inequities resulting from the COVID-19 pandemic. *Current Opinion in Psychology*, 101632. <https://doi.org/10.1016/j.copsyc.2023.101632>
- Heifetz, R. A. (1994). *Leadership Without Easy Answers*. Harvard University Press.
- Holt, L. E., & Elliott, C. M. (2018). *A Practical Guide to Library Leadership*. American Library Association.
- Hernon, P., & Pors, N. O. (2013). *Library leadership in the United States and Europe: A comparative study of academic and public libraries*. Libraries Unlimited.
- Huang, L., Chen, C., & Chou, Y. (2021). A systematic review of augmented reality and virtual reality in language learning. *Sustainability*, 13(9), 4639. <https://www.mdpi.com/2071-1050/13/9/4639>.
- Gorman, M. (2019). *The enduring library: Technology, tradition, and the quest for balance*. ALA Editions.
- Islam, M. S. (2019). "Unlocking Efficiency: The Role of Radio Frequency Identification (RFID) Technology in Modernizing Library Management Systems." *Library Philosophy and Practice*, Article 386408928. Link
- Jantz, R. C. (2012). Innovation in academic libraries: An analysis of university librarians' perspectives. *Library & Information Science Research*, 34(1), 3-12. <https://doi.org/10.1016/j.lisr.2011.07.008>.
- Jantz, Ronald C. (2016) Managing Creativity: The Innovative Research Library: PIL 70 Association of College and Research Libraries (ACRL) <https://alastore.ala.org/content/managing-creativity-innovative-research-library-pil-70>.
- Jantz, Ronald C. (2017) Vision, innovation, and leadership in research libraries, *Library & Information Science Research*, Volume 39, Issue 3, Pages 234-241, ISSN 0740-8188, <https://doi.org/10.1016/j.lisr.2017.07.006>. (<https://www.sciencedirect.com/science/article/pii/S0740818816302948>).
- Johnson, M., Roberts, T., & Smith, L. (2020). Academic libraries as community knowledge hubs: The role of external partnerships in outreach programs. *Library & Information Science Research*, 42(2), 124-137.
- Johnson, J. L., Duffy, M., & Patel, P. (2020). Breaking the glass ceiling: Gender diversity and leadership in academic libraries. *Journal of Library Administration*, 60(5), 467-487. <https://doi.org/10.1080/01930826.2020.1798386>
- Kearl Mary (2024). The Impact of Digital Transformation on Customer <https://www.medallia.com/blog/digital-transformation-customer-experience-impact/>.
- Kempf, K. (2023). Moving Libraries toward Digital Transformation. *The International Information & Library Review*, 55(3), 233–240. <https://doi.org/10.1080/10572317.2023.2231715>
- Kristin Calvert (2018) Collaborative Leadership: Cultivating an Environment for Success collaborative librarianship vol.10 issue 2chrome <https://digitalcommons.du.edu/cgi/viewcontent.cgi?article=1378&context=collaborativelibrarianship>.
- Kouzes, J. M., & Posner, B. Z. (2017). *The Leadership Challenge: How to Make Extraordinary Things Happen in Organizations*. Wiley.
- Kezar, A., & Eckel, P. D. (2002). The effect of institutional culture on change strategies in higher education: Universal principles or culturally responsive concepts? *The Journal of Higher Education*, 73(4), 435-460. <https://doi.org/10.1353/jhe.2002.0038>.
- Kim, S., Song, J., & Yoon, S. (2020). Mobile library apps: Trends and user expectations. *Information and Library Science Journal*, 41(3), 85-102.
- Kotter, J. P. (1996). *Leading change*. Harvard Business Press.
- Kumar, R. (2020). Gender and leadership in academic libraries: A study on collaborative approaches and decision-making styles. *Journal of Librarianship and Information Science*, 52(4), 605-621.
- Lankes, R. D. (2016). *The new librarianship field guide*. MIT Press.

- Larson, E. (2017). New Research: Diversity + Inclusion = Better Decision Making At Work. *Forbes*. <https://www.forbes.com/sites/eriklarson/2017/09/21/new-research-diversity-inclusion-better-decision-making-at-work/>
- Lawton, S. (2018). Reflections on Gender Oppression and Libraries. *Public Libraries Online*. <https://publiclibrariesonline.org/2018/03/reflections-on-gender-oppression-and-libraries/>
- Lu Y, Lin S (2024) Digital transformation in college libraries: The effect of digital reading on reader service satisfaction. *PLoS ONE* 19(8): e0307699. <https://doi.org/10.1371/journal.pone.0307699>.
- Niewiesk, S., & Garrity-Rokous, E. G. (2021). The academic leadership framework: A guide for systematic assessment and improvement of academic administrative work. *Global Business and Organizational Excellence*, 40(4), 50-63. <https://doi.org/10.1002/joe.22083>
- Norman, D. (2013). *The design of everyday things*. Basic Books.
- Martin, J. (2015). Transformational, transactional, and laissez-faire leadership styles of academic library leaders: An exploratory examination of gender, experience, and institution type. *portal: Libraries and the Academy*, 15(2), 331-351. <https://doi.org/10.1353/pla.2015.0015>.
- Morrison, A. M., White, R. P., & Van Velsor, E. (1987). *Breaking the Glass Ceiling: Can Women Reach the Top of America's Largest Corporations?* Pearson Education. <https://archive.org/details/breakingglasscei00morr>.
- Ocholla, D. N., & Shongwe, M. (2013). An analysis of the library and information science (LIS) job market in South Africa. *South African Journal of Libraries and Information Science*, 79(1), 35-43. https://www.researchgate.net/publication/259646947_An_analysis_of_the_library_and_information_science_LIS_job_market_in_South_Africa
- O'Connor, P., & White, K. (Eds.). (2011). *Gender and Power in Higher Education in a Globalised World: Where to Now?* Palgrave Macmillan. https://www.academia.edu/49987617/Naming_it_the_problem_of_male_privileging_in_higher_education
- O'Connor, P. (2019). Gender imbalance in senior positions in higher education: What is the problem? *Social Sciences*, 8(7), 196.
- Odeyemi, S. O., & Ogundare, A. B. (2019). *Infrastructural Readiness of Nigerian Academic Libraries for Deploying Robots*. IFLA Library. This study shows significant deficiencies in library automation infrastructure, hindering advanced technology adoption. Link to study
- Okiy, R. B. (2020). Adoption of Contemporary Technology for Effective Service Delivery by Librarians in Delta State University Library, Abraka. *Journal of Applied Information Science and Technology*, 10(3), 77-85. <https://jatlim.org/volumes/Volume%2010%20No%203/7%20Patience-1.pdf>
- Rogers, E. M. (2003). *Diffusion of innovations (5th ed.)*. Simon and Schuster.
- Sahaf, M. A. (2019). *Strategic marketing: Making decisions for strategic advantage*. Pearson.
- Stueart, R. D., & Moran, B. B. (2007). *Library and Information Center Management*. Libraries Unlimited.
- Stueart, R. D., & Sullivan, M. (2010). *Developing Library Leaders: A How-to-do-it Manual for Coaching, Team Building, and Mentoring Library Staff*. Neal-Schuman Publishers. <https://www.amazon.com/Developing-Library-Leaders-How-do/dp/1555707254>
- Suber, P. (2012). *Open access*. MIT Press.
- Tait, E., Martzoukou, K., & Reid, P. (2016). Libraries for the Future: The Role of Innovative Leadership in Academic Libraries. *Journal of Librarianship and Information Science*.
- Tammaro, A. M. (2021). Mentorship and work-life balance: Key factors in promoting women's leadership in libraries. *The Journal of Academic Librarianship*, 47(3), 102287. <https://doi.org/10.1016/j.acalib.2021.102287>.
- Wolniak, G. C., Chen-Bendle, E. C., & Tackett, J. L. (2023). Exploring Gender Differences in Leadership Aspirations: A Four-Year Longitudinal Study of College Students From Adverse Backgrounds. *AERA Open*. <https://doi.org/10.1177/23328584231183665>.
- The International Federation of Library Associations, IFLA. (2020). *Continuing professional development: Principles and best practices*. International Federation of Library Associations.
- Pinfield, S., Salter, J., & Bath, P. A. (2014). The development and implementation of open-access institutional repositories in the UK. *Library & Information Science Research*, 36(1), 1-10.
- Tremmel, M., & Wahl, I. (2023). Gender stereotypes in leadership: Analyzing the content and evaluation of stereotypes about typical, male, and female leaders. *Frontiers in Psychology*, 14, 1034258. <https://doi.org/10.3389/fpsyg.2023.1034258>.

- Pomerantz, J. (2022). *Virtual reality and academic libraries: Challenges and opportunities*. Library Future Press.
- Mary-Jo Romaniuk & Ken Haycock (2011) Designing and evaluating library leadership programs: improving performance and effectiveness, *The Australian Library Journal*, 60:1, 29-40, DOI: 10.1080/00049670.2011.10722554.
- McNicol, S., & Nankivell, C. (2014). *The Innovative Academic Library: Implementing and Assessing Innovative Services*. Chandos Publishing.
- Tise, E. R., & Raju, R. (2015). *The Role of the Library in Open Distance Learning (ODL): Reflections and Lessons Learned from the University of South Africa (UNISA) and the Open University of the United Kingdom (OUUK)*. In *The Future of Library Space* (pp. 77-92). De Gruyter Saur.
- Ocholla, D. N., & Shongwe, M. (2013). An analysis of the library and information science (LIS) job market in South Africa. *South African Journal of Libraries and Information Science*, 79(1), 35-43.
- Uwandu Linda Ijeoma (2020): Influence of Leadership Styles on Job Performance of Librarians in Public University Libraries in Imo State. *Journal of applied Information Science and Technology* 13 (2), 207-216.
- Van de Werfhorst, H. G., Kessenich, E., & Geven, S. (2022). The digital divide in online education: Inequality in digital readiness of students and schools. *Computers and Education Open*, 3, 100100. <https://doi.org/10.1016/j.caeo.2022.100100>