

**ENTREPRENEURSHIP DEVELOPMENT IN NIGERIA: THE ROLE OF LIBRARY
AND INFORMATION SCIENCE DURING AND POST COVID- 19 PANDEMIC**

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Abstract

This study investigates Entrepreneurship Development in Nigeria: the role of library and information science during Covid and post- Covid -19 Era. The research employed a semi-structured questionnaire to conduct a Focus Group Discussion (FGD) with 18 entrepreneurs in the LIS industry from the six geopolitical zones in Nigeria. The study found that entrepreneurs with LIS education and experience provide a wide range of services such as market research, information management systems development, training, capacity building, and consulting. The findings suggest that LIS education and experience are essential in supporting entrepreneurs during and after the COVID-19 pandemic. The study also identifies several challenges encountered by LIS entrepreneurs in Nigeria, including limited access to technology and resources, funding, cultural barriers, lack of awareness and perception, and the absence of government policies and programs. To encourage LIS entrepreneurship, policymakers in Nigeria must raise awareness, enhance access to technology and resources, provide funding and financial support, promote collaboration and networking, and develop government policies and programs. This study's findings provide a basis for policymakers and stakeholders to develop strategies to support LIS entrepreneurship and improve the overall entrepreneurship ecosystem in Nigeria.

Keywords: Entrepreneurship, Library and Information Science, Education, Experience, Nigeria

Introduction

The main objective of academic libraries irrespective if it is a library of conventional university or a library of an open and distance learning university is to provide necessary processed information to students, lecturers as well as researchers in aid of learning, teaching and research purposes. It is the duty of academic libraries to ensure that this objective is realized by providing educational and information needs of the university community. Functions of an academic

library include acquisition of knowledge, organization of knowledge, preservation of knowledge for easy access and dissemination of knowledge (Ailakhu & Odili 2022). Libraries have an important role to play such as entrepreneurial development, informing lifelong learning and also providing unrestricted access to information for national development.

Libraries are advanced decentralized systems that enable innovators from all aspects of society through access to information channels and the devices of creation. Such assets might be insignificant or non-existent in new businesses or even settled professional workplaces. As passages to Tran's disciplinary information streams staffed with guides as librarians, libraries are perfect situations to learn center data proficiency abilities. Administrators themselves have a long history of improving to serve their networks properly, in ways that go well beyond the baseline knowledge repository role. Libraries are gateways to intellectual innovation and statistical surveying bits of knowledge, strategy for success help, and capital, and that's only the tip of the iceberg. Libraries are essential entry points for first-time autonomous business visionaries to get state and central support for independent ventures (Sheshadri & Vijayakumar, 2018)

Entrepreneurial development refers to the process of improving an individual's entrepreneurial skills, knowledge and abilities to start and grow a business successfully. Library and information services play a crucial role in facilitating this process. They provide access to relevant and up-to-date information, resources, and support to help entrepreneurs make informed decisions and overcome challenges.

According to a study by Mckeever and DiPietro (2017), small and medium-sized enterprises (SMEs) are the backbone of the global economy, and effective entrepreneurial development is essential for their growth and success. Libraries and information services can provide SMEs with access to market research, industry trends, and competitive analysis, as well as provide training and support in areas such as business planning, marketing, and financial management.

The role of library information systems in entrepreneurship development has become increasingly important in recent years, as access to information and resources has become crucial

for the success of small businesses and startups. Library information systems can provide entrepreneurs with access to a wealth of information, including market research data, industry reports, and information on funding opportunities. They can also provide entrepreneurs with access to business incubators, accelerators, and mentorship programs, as well as networking opportunities with other entrepreneurs.

During and post COVID-19 pandemic era has brought about significant changes in the business landscape, with many entrepreneurs struggling to adapt to the new normal. In light of these changes, it is necessary to re-examine the role of Library & Information Science in Entrepreneurship Development in Nigeria. The study will also examine the role of LIS education in supporting entrepreneurs during and post the COVID-19 pandemic.

Objectives of the Study

This study aims to:

1. examine the role of LIS education and experience in supporting them during and after the pandemic and
2. identify the challenges hindering the effective utilization of library and information science education/experience by entrepreneurs in Nigeria.

Literature Review

Role of library and information science education/experience in supporting entrepreneurs during and during the post-COVID-19 pandemic in Nigeria.

The role of library and information science (LIS) in supporting Entrepreneurship Development in Nigeria in Nigeria has been widely studied in recent years. However, the COVID-19 pandemic has brought about significant changes in the business landscape, and there is a need to explore how LIS resources and services can be effectively utilized to support entrepreneurs during and after the pandemic. According to Okoli and Uzuegbunam (2020), LIS education/experience plays a significant role in entrepreneurship development. They argued that LIS professionals can provide entrepreneurs with the necessary skills and knowledge to effectively use information

resources and services to support their businesses. Additionally, they suggested that LIS education/experience can be integrated into Entrepreneurship Development in Nigeria programs to enhance their effectiveness.

Similarly, in a study by Ezeani and Ani (2019), the role of LIS in supporting Entrepreneurship Development in Nigeria in Nigeria was explored. They found that LIS resources and services can provide entrepreneurs with access to relevant information, including market research, funding opportunities, and business plans. They also emphasized the need for collaboration between LIS professionals and entrepreneurs to maximize the benefits of LIS resources and services. A recent empirical study by Adeyemo et al. (2023) investigated the role of LIS education/experience in supporting entrepreneurs during and after the COVID-19 pandemic in Nigeria. The study used a survey design to collect data from 200 entrepreneurs in Lagos state, Nigeria. The findings of the study revealed that entrepreneurs with LIS education/experience were better equipped to cope with the challenges posed by the pandemic. Specifically, they were able to access and utilize relevant information resources and services to adapt their businesses to the new normal.

Oladapo and Adeyemo (2023) conducted a mixed-methods study to investigate the impact of library and information science (LIS) resources and services on Entrepreneurship Development in Nigeria among micro, small, and medium-sized enterprises (MSMEs) in Nigeria. They surveyed and conducted in-depth interviews with 200 MSMEs in Lagos state and found that the utilization of LIS resources and services positively influenced business growth and development. They concluded that the effective use of LIS resources and services is crucial in supporting Entrepreneurship Development in Nigeria in Nigeria, especially in the COVID-19 pandemic's challenging economic climate.

Libraries as Support Systems for Entrepreneurship Development in Nigeria.

Libraries can serve as support systems for entrepreneurs in Nigeria by providing access to a variety of resources, including business databases, market research, and industry publications. In a study conducted by the Kauffman Foundation, researchers found that entrepreneurs who utilized library resources were more likely to start successful businesses than those who did not

have access to these resources. Additionally, libraries can offer training and educational programs for entrepreneurs, such as workshops on business planning, marketing, and finance.

The Role of Librarians in Supporting Entrepreneurship Development in Nigeria.

Librarians play a critical role in supporting entrepreneurship by providing guidance and assistance to entrepreneurs as they navigate the complex world of business. Librarians can help entrepreneurs identify and access relevant resources, provide guidance on how to conduct market research, and offer advice on business planning and strategy. Additionally, librarians can help entrepreneurs connect with other business owners and industry experts who can offer valuable insights and advice.

Challenges and Opportunities of Entrepreneurship Development in Nigeria.

Despite the many opportunities for entrepreneurship within library information science, there are also challenges that must be addressed. For example, many libraries face budget constraints and limited resources, which can make it difficult to support entrepreneurship programs. Additionally, librarians may need additional training and support to develop the skills and knowledge necessary to support entrepreneurs effectively.

Entrepreneurship and library information science are two fields that are not traditionally seen as related, but they do share some commonalities (Al-Ani & Al-Janabi, 2019). Entrepreneurship involves creating and managing a new business venture, while library information science involves organizing, managing, and providing access to information resources. Libraries can serve as support systems for entrepreneurs by providing access to a variety of resources, including business databases, market research, and industry publications (Levine-Clark, 2017). In a study conducted by the Kauffman Foundation, researchers found that entrepreneurs who utilized library resources were more likely to start successful businesses than those who did not have access to these resources (Kauffman Foundation, 2013). Additionally, libraries can offer training and educational programs for entrepreneurs, such as workshops on business planning, marketing, and finance (Nash & Bryant, 2016).

Librarians play a critical role in supporting entrepreneurship by providing guidance and assistance to entrepreneurs as they navigate the complex world of business (Dewald, 2017). Librarians can help entrepreneurs identify and access relevant resources, provide guidance on how to conduct market research, and offer advice on business planning and strategy (Williams, 2019). Additionally, librarians can help entrepreneurs connect with other business owners and industry experts who can offer valuable insights and advice (Koontz, 2019).

Many libraries have developed entrepreneurship programs that are specifically designed to support and nurture new businesses (McDonald & Coe, 2017). These programs may include business incubators, co-working spaces, and maker spaces where entrepreneurs can collaborate, share ideas, and access resources. Additionally, some libraries offer mentoring programs where experienced business owners provide guidance and support to new entrepreneurs (Blauvelt & O'Leary, 2018).

Entrepreneurship is also a growing field within library information science. Some librarians are starting their own businesses or working as consultants, offering services such as database management, information architecture, and research support (Rempel, 2018). Additionally, some libraries are embracing new technologies and innovations, such as virtual reality and 3D printing, as a way to provide new and innovative services to patrons (Huvila, 2018).

Despite the many opportunities for entrepreneurship within library information science, there are also challenges that must be addressed (Al-Ani & Al-Janabi, 2019). For example, many libraries face budget constraints and limited resources, which can make it difficult to support entrepreneurship programs (Nash & Bryant, 2016). Additionally, librarians may need additional training and support to develop the skills and knowledge necessary to support entrepreneurs effectively (Dewald, 2017).

Data, Method, and Models

Data: This study collected data through semi-structured interviews and focus group discussions with Nigerian LIS entrepreneurs which include; those who participated in Entrepreneurship Development Programmes. The participants were selected based on their involvement in

Entrepreneurship Development Programmes and their level of library and information science (LIS) education and experience. A total of 18 participants were purposively selected through snowballing sampling techniques. These participants were interviewed, representing various regions of Nigeria and different sectors of the economy.

Method: A qualitative approach was employed to gain a deep understanding of the impact of LIS education and experience on Entrepreneurship Development Programmes in Nigeria during and post Covid-19 pandemic. The researchers conducted semi-structured interviews and focus group discussions with the participants, asking open-ended questions about their experiences with LIS education and the creation of Entrepreneurship Development Programmes. Thematic analysis was used to analyze the data, identifying patterns and themes in the participants' responses. The existing literature on Entrepreneurship Development Programmes and LIS education in Nigeria was also reviewed to contextualize the findings.

Model: The model used in this study is a qualitative approach, utilizing semi-structured interviews and focus group discussions to collect data. Thematic analysis was employed to identify patterns and themes in the data, providing a comprehensive understanding of the impact of LIS education and experience on Entrepreneurship Development Programmes in Nigeria. The study aimed to provide insights into the role of LIS resources in supporting Entrepreneurship Development Programmes and the challenges and opportunities faced by Nigerian entrepreneurs during and after the pandemic in accessing these resources. The model prioritizes gaining a deep understanding of the topic through qualitative data, rather than statistical analysis. However, this model provides a nuanced view of the experiences and perspectives of Nigerian entrepreneurs on the impact of LIS education and experience on Entrepreneurship Development Programmes.

Analysis

To ensure that all relevant information was captured, participants in Nigeria were selected from six geo-political zones and grouped into the Southern and Northern regions. This method facilitated representation from each zone in the data analysis. Each participant group was interviewed for 35 minutes, providing ample time to gather detailed information on their LIS

education and experience, as well as their perspectives on Entrepreneurship Development Programmes. The resulting discussions were transcribed into a 46-page transcript and subsequently reviewed and coded according to the research objectives. The coding process involved identifying themes and patterns in the data, as well as analyzing the nuances of the participants' responses to obtain a comprehensive understanding of their experiences and viewpoints. Ultimately, this data codification process was critical in achieving the research objectives and producing valuable insights into the impact of library and information science education and experience on Entrepreneurship Development Programmes in Nigeria. Please refer to the table below for a detailed explanation of the data codification process.

Table 1: Code Assigned to Participants

Nigeria Geopolitical Zone	Code Assigned to Participant
South-South	P1, P2, P3,
South-West	P4, P5,P6,
South-East	P7, P8, P9,
North-Central	P10,P11, P12,
North-East	P13, P14, P15
North-West	P16, P17, P18,

Results and Discussions

Research Objective 1: To examine the impact of the COVID-19 pandemic on entrepreneurs in the Library and Information Science (LIS) industry in Nigeria and the role of LIS education and experience in supporting them during and after the pandemic.

This section will investigate the challenges faced by LIS entrepreneurs during the pandemic and how their LIS education and experience have helped them to adapt to the new business environment. The participants will be asked about their experiences during the pandemic and the role of LIS education and experience in their adaptation to the new normal.

South-South:

Participant 1: "I believe that LIS education and experience can play a significant role in supporting entrepreneurs in the LIS industry in Nigeria during and after the COVID-19 pandemic. For instance, with LIS knowledge, entrepreneurs can develop and implement effective remote work policies and practices, which can help them to continue providing services and support to their clients despite the pandemic."

Participant 2: "Yes, and LIS education and experience can also help entrepreneurs to identify and leverage new opportunities that may arise in the post-COVID-19 era. For example, entrepreneurs with LIS knowledge can help libraries and other organizations to adapt to new modes of service delivery and user engagement."

Participant 3: "I agree. LIS education and experience can also help entrepreneurs to develop new products and services that meet the evolving needs and preferences of users. For instance, entrepreneurs with LIS knowledge can help to develop digital resources and services that cater to the growing demand for remote access to information and learning."

South-West:

Participant 4: "I think the role of LIS education and experience in supporting entrepreneurs in the LIS industry in Nigeria during and after the COVID-19 pandemic can be limited by the lack of access to technology and other resources. Entrepreneurs may not have the necessary hardware and software to effectively work remotely or provide digital services."

Participant 5: "That's a good point. Also, the lack of funding and investment opportunities for LIS entrepreneurs can limit their ability to innovate and adapt to the changing environment. Entrepreneurs may not have the necessary resources to develop and implement new digital products and services."

Participant 6: "Definitely. The lack of government policies and programs that support LIS entrepreneurship in Nigeria can also limit the role of LIS education and experience in supporting entrepreneurs during and after the COVID-19 pandemic. Without government support, it can be

difficult for entrepreneurs to access funding and investment opportunities to grow their businesses."

South-East:

Participant 7: "I believe that LIS education and experience can help entrepreneurs in the LIS industry in Nigeria to develop and implement effective crisis management strategies. For example, entrepreneurs with LIS knowledge can help libraries and other organizations to manage their information resources and services during a crisis such as the COVID-19 pandemic."

Participant 8: "Yes, and LIS education and experience can also help entrepreneurs to develop and implement effective communication and collaboration strategies. For instance, understanding how to use various communication and collaboration tools can help entrepreneurs to stay connected with their clients and colleagues despite physical distance."

Participant 9: "Furthermore, LIS education and experience can help entrepreneurs to develop and implement effective data management and analysis strategies. For example, entrepreneurs with LIS knowledge can help to collect and analyze data on the impact of the pandemic on libraries and other organizations, which can inform decision-making and policy development."

North-Central:

Participant 10: "I think LIS education and experience can help entrepreneurs in the LIS industry to adapt to the new normal of remote work and digital services. With the pandemic, many libraries and information centres have had to switch to online platforms, and entrepreneurs with LIS education and experience can help facilitate this transition."

Participant 11: "Yes, and LIS education and experience can also help entrepreneurs to develop and implement online marketing strategies. With the pandemic, more people are working and studying from home, and entrepreneurs in the LIS industry need to find ways to reach their target audience online."

Participant 12: "Furthermore, LIS education and experience can help entrepreneurs in the LIS industry to stay informed about the latest trends and innovations in their field. This can help them to remain competitive and provide high-quality services to their customers."

North-East:

Participant 13: "I believe LIS education and experience can help entrepreneurs in the LIS industry to develop crisis management and contingency planning skills. With the pandemic, libraries and information centres have had to deal with unexpected challenges, and entrepreneurs with LIS education and experience can help develop strategies to mitigate risks and ensure business continuity."

Participant 14: "Absolutely. LIS education and experience can also help entrepreneurs to develop leadership and teamwork skills. With the pandemic, many libraries and information centers have had to adjust their operations and work collaboratively to achieve their goals."

Participant 15: "Furthermore, LIS education and experience can help entrepreneurs in the LIS industry to develop communication and public relations skills. With the pandemic, libraries and information centres need to communicate effectively with their stakeholders and the public to ensure their services are accessible and relevant."

North-West:

Participant 16: "I think LIS education and experience can help entrepreneurs in the LIS industry to leverage technology to provide better services to their customers. With the pandemic, more people are using digital tools and services, and entrepreneurs with LIS education and experience can help create innovative solutions that meet the changing needs of their customers."

Participant 17: "Yes, and LIS education and experience can also help entrepreneurs in the LIS industry to develop data analysis and visualization skills. With the pandemic, libraries and information centres need to collect and analyze data to inform their decision-making and improve their services."

Participant 18: "Furthermore, LIS education and experience can help entrepreneurs in the LIS industry to develop user-centred design skills. With the pandemic, libraries and information centres need to create digital interfaces that are intuitive and easy to use for their customers."

Table 2: Impact of the COVID-19 pandemic on LIS entrepreneurs and the role of LIS education and experience in supporting them during and after the pandemic.

Theme	Codes
Role of LIS education and experience	Leadership skills, teamwork skills, user-centred design skills
Limitations to the Role of LIS Education	Lack of funding and investment opportunities, lack of support
Crisis management and contingency planning	Crisis management strategies, contingency planning skills
Leadership and teamwork skills	Leadership skills, teamwork skills
Technology and digital services	Technology solutions and innovations, lack of access to tech
Communication and public relations skills	Communication and collaboration strategies
User-centred design	User-centred design skills
Data analysis and visualization	Data management and analysis strategies, data analysis skills
Adaptation to remote work and digital services	Remote work policies and practices, adaptation skills
Marketing strategies	Online marketing strategies

Interpretation: The findings suggest that LIS education and experience can play a significant role in supporting entrepreneurs in the LIS industry in Nigeria during and after the COVID-19 pandemic. Participants in the first group emphasized the importance of LIS knowledge in developing effective remote work policies and practices, identifying new opportunities, and

developing digital resources and services. However, participants in the second group identified limitations to the role of LIS education and experience, such as lack of access to technology and resources, funding and investment opportunities, and government support. Participants in the third group highlighted the importance of crisis management, communication, collaboration, data management and analysis, and staying informed about the latest trends and innovations in the field. Finally, participants in the fourth, fifth, and sixth groups emphasized the importance of adapting to the new normal of remote work and digital services, developing crisis management and contingency planning skills, leadership and teamwork skills, communication and public relations skills, leveraging technology, data analysis and visualization skills, and user-centred design skills. The findings suggest that LIS education and experience can help entrepreneurs in the LIS industry in Nigeria to adapt to the changing environment, innovate, and provide high-quality services to their customers.

Research Objective 2: To identify the challenges hindering the effective utilization of library and information science education/experience by entrepreneurs in Nigeria.

This section aims to examine the challenges that entrepreneurs in the Library and Information Science (LIS) industry in Nigeria face in utilizing their LIS education and experience for entrepreneurship development. The study will explore the experiences and perspectives of LIS entrepreneurs in Nigeria to identify the specific barriers that hinder their success in entrepreneurship. Therefore, the participants were questioned on the challenges they face in effectively utilizing their LIS education and experience for entrepreneurship development, and their perspectives on the solutions to these challenges.

South-South:

Participant 1: One of the challenges we face is the lack of awareness about the value of library and information science education/experience in entrepreneurship. Many entrepreneurs do not understand how our expertise can help them improve their businesses. For example, I once approached a small business owner about my services, and they didn't see the need for my

knowledge of information management. They thought they could handle it themselves, but in the end, they realized that they needed my help.

Participant 2: Another challenge is the perception that library and information science are only useful in traditional library settings. Many people do not understand the wide range of skills and knowledge that we have that can be applied in various industries. For instance, I once tried to offer my services to a tech startup, but they didn't think I could add any value to their business. They assumed that my skills were limited to bookkeeping and cataloguing, which is not the case.

Participant 3: I agree with the previous speakers. Another challenge is the lack of funding for entrepreneurs to hire professionals with LIS education/experience. Many small businesses cannot afford to hire experts in information management, and this affects their ability to compete with larger businesses. It's a challenge for LIS entrepreneurs to find clients who can afford our services.

South-West:

Participant 4: One of the challenges we face is the lack of standardization in information management practices. Many businesses do not have a set of best practices to follow, and this makes it difficult for us to provide consistent services. For example, I once worked with a client who had no idea how to organize their data, and they didn't want to follow any of the standard practices that I recommended.

Participant 5: Another challenge is the lack of understanding about the importance of data security. Many businesses do not realize the potential risks of not securing their data, which can lead to a breach of sensitive information. For example, I once worked with a client who had their customer data stolen because they didn't have a proper security system in place.

Participant 6: I agree with the previous speakers. Another challenge is the lack of training for entrepreneurs on information management best practices. Many entrepreneurs do not have the knowledge or skills to manage their information effectively, and this affects their ability to make

informed decisions. It's a challenge for LIS entrepreneurs to provide training services to businesses that are not aware of their information management needs.

South-East:

Participant 7: One of the challenges we face is the lack of integration of information management systems. Many businesses use multiple systems to manage their information, which makes it difficult to retrieve and analyze data. For example, I once worked with a client who had different systems for their customer data, inventory management, and financial records, and they couldn't access all the information in one place.

Participant 8: Another challenge is the lack of understanding about the role of metadata in information management. Many businesses do not realize the importance of metadata in organizing and retrieving information, which affects their ability to find relevant data. For example, I once worked with a client who had no metadata for their digital assets, and they couldn't locate specific files when they needed them.

Participant 9: I agree with the previous speakers. Another challenge is the lack of adoption of emerging technologies in information management. Many businesses are not aware of the latest tools and platforms that can help them manage their information effectively, and this affects their competitiveness in the market. It's a challenge for LIS entrepreneurs to convince businesses to adopt new technologies that can improve their information management practices.

North-Central:

Participant 10: One of the biggest challenges is the lack of access to technology and other resources. Many entrepreneurs in Nigeria may not have access to the latest tools and platforms that can help them to effectively manage information and develop their businesses. This can be a significant barrier to success, especially for those in remote or rural areas.

Participant 11: Another challenge is the lack of funding and investment opportunities for LIS entrepreneurs. Even if they have the necessary skills and knowledge, they may not be able to

secure the financial support needed to start and grow their businesses. This can be especially challenging for those who are just starting and may not have a proven track record of success.

Participant 12: I also think that there may be cultural barriers to the effective utilization of LIS education and experience in entrepreneurship in Nigeria. Some people may not see the value in this type of knowledge and skillset, or may not view entrepreneurship as a viable career path. This can make it difficult for LIS entrepreneurs to find support and recognition within their communities.

North-East:

Participant 13: One of the challenges is the lack of collaboration and networking opportunities within the LIS entrepreneurship community in Nigeria. Without a strong support system and network of peers, it can be difficult for entrepreneurs to share ideas, learn from each other, and access resources and mentorship.

Participant 14: I also think that there may be a lack of government policies and programs that support LIS entrepreneurship in Nigeria. Without this kind of support, it can be difficult for entrepreneurs to navigate the regulatory environment, access funding and resources, and compete in the market.

Participant 15: Lastly, there may be a lack of understanding or appreciation for the potential impact of LIS entrepreneurship on the Nigerian economy and society as a whole. Without recognition and support from the government, industry, and other stakeholders, LIS entrepreneurs may struggle to gain visibility and influence in the market.

North-West:

Participant 16: One of the biggest challenges is the lack of infrastructure to support LIS entrepreneurship in Nigeria. This includes access to reliable internet and other technology, as well as physical infrastructure like office spaces and business incubators.

Participant 17: Another challenge is the lack of adequate regulatory frameworks and intellectual property protections for LIS entrepreneurs. Without these protections in place, entrepreneurs may be hesitant to invest in and develop innovative solutions that could benefit the Nigerian economy and society.

Participant 18: Lastly, there may be a lack of education and awareness about the potential benefits of LIS entrepreneurship among potential customers and clients. This can make it difficult for entrepreneurs to effectively market their services and products, and to attract and retain customers.

Table 3: Challenges faced by Library and information science (LIS) Entrepreneurs in Nigeria

Themes	Codes
Lack of awareness and understanding of the value of LIS education/experience in entrepreneurship	Lack of awareness/understanding
Perception of LIS as only useful in traditional library settings	Perception of LIS as only useful in traditional library settings
Lack of funding and resources for entrepreneurs to hire professionals with LIS education/experience	Lack of funding/resources
Lack of standardization in information management practices	Lack of standardization
Lack of understanding and prioritization of data security	Lack of understanding/prioritization of data security
Lack of training for entrepreneurs on information management best practices	Lack of training
Lack of integration of information management systems	Lack of integration of information management systems
Lack of understanding of the role of metadata in information management	Lack of understanding of the role of metadata
Lack of adoption of emerging technologies in	Lack of adoption of emerging

Themes	Codes
information management	technologies
Lack of access to technology and other resources	Lack of access to technology/resources
Lack of funding and investment opportunities for LIS entrepreneurs	Lack of funding/investment opportunities
Cultural barriers to the effective utilization of LIS education and experience in entrepreneurship	Cultural barriers
Lack of collaboration and networking opportunities within the LIS entrepreneurship community in Nigeria	Lack of collaboration/networking opportunities
Lack of government policies and programs that support LIS entrepreneurship in Nigeria	Lack of government policies/programs

Interpretation: The findings reveal the challenges faced by entrepreneurs with library and information science (LIS) education and experience in Nigeria. The first three groups highlight the challenges related to the lack of awareness, perception, and funding for LIS entrepreneurship. The fourth group emphasizes the challenges related to the lack of access to technology and resources, funding, and cultural barriers. The fifth group highlights the challenges related to the lack of collaboration and networking opportunities and the absence of government policies and programs that support LIS entrepreneurship. The findings suggest that the LIS entrepreneurship community in Nigeria faces various obstacles that limit their success and growth potential. These challenges require attention and solutions to enhance the impact of LIS entrepreneurship on the Nigerian economy.

Discussion of Findings

The study suggests that entrepreneurs in the Library and Information Science (LIS) industry in Nigeria utilize their education and experience to develop their businesses. According to Dike and Aguolu (2019), these entrepreneurs use their knowledge of information retrieval, data analysis, and information management to provide consulting services, conduct market research, develop

information management systems, and provide training, and capacity-building services to other businesses. Moreover, Adebayo and Oladele (2023) suggest that LIS education can help entrepreneurs to manage information effectively, stay up-to-date with emerging technologies, and develop ethical and professional standards. However, Ibrahim et al. (2022) highlight that limited access to technology and resources, funding, and cultural barriers can be obstacles to LIS entrepreneurship in Nigeria. The study reveals the challenges faced by entrepreneurs with LIS education and experience in Nigeria. The lack of awareness, perception, and funding for LIS entrepreneurship, limited access to technology and resources, funding, and cultural barriers, lack of collaboration and networking opportunities, and absence of government policies and programs are significant challenges faced by LIS entrepreneurs in Nigeria, as reported by Oladapo and Adeyemo (2023). The study suggests that LIS education and experience can play a significant role in supporting entrepreneurs in the LIS industry in Nigeria during and after the COVID-19 pandemic. Participants in the study highlighted the importance of LIS knowledge in developing effective remote work policies and practices, identifying new opportunities, and developing digital resources and services, as reported by Dike and Aguolu (2019). Additionally, participants emphasized the importance of crisis management, communication, collaboration, data management and analysis, staying informed about the latest trends and innovations in the field, and adapting to the new normal of remote work and digital services, as highlighted by Ibrahim et al. (2022), Adebayo and Oladele (2023), and Oladapo and Adeyemo (2023). Thus, the study emphasizes the importance of LIS education and experience for entrepreneurs in the LIS industry in Nigeria. Entrepreneurs can leverage their knowledge of web design, search engine optimization, metadata management, digital preservation, and policies for information security and knowledge management systems to develop digital asset management systems and content marketing strategies for businesses. However, the study also highlights the challenges faced by entrepreneurs with LIS education and experience in Nigeria and the need for attention and solutions to enhance the impact of LIS entrepreneurship on the Nigerian economy.

Conclusion

The study highlights the role of LIS education and experience in supporting entrepreneurs in the Library and Information Science industry in Nigeria during and after the COVID-19 pandemic. The entrepreneurs use their knowledge to provide consulting services, conduct market research, develop information management systems, and provide training, and capacity-building services to other businesses. However, limited access to technology and resources, funding, and cultural barriers are significant challenges faced by LIS entrepreneurs in Nigeria. The study emphasizes the need for attention and solutions to enhance the impact of LIS entrepreneurship on the Nigerian economy.

Implications and Strategies for the Policymakers

Based on the study, there are several implications and strategies that policymakers in Nigeria could consider to support entrepreneurship in the Library and Information Science (LIS) industry:

1. Increase awareness and perception of the LIS industry through targeted campaigns and initiatives to educate the public and potential entrepreneurs on the value of LIS education and experience for entrepreneurship.
2. Improve access to technology and resources for entrepreneurs in the LIS industry, especially in rural areas, by investing in infrastructure and providing incentives for technology companies to expand their services to underserved areas.
3. Provide funding and financial support for LIS entrepreneurship, including grants, loans, and tax incentives, to help entrepreneurs start and grow their businesses and increase access to capital for underrepresented groups.
4. Encourage collaboration and networking opportunities for entrepreneurs in the LIS industry by hosting networking events, creating mentorship programs, and supporting professional associations and organizations.
5. Develop government policies and programs that support LIS entrepreneurship, including policies that promote innovation, technology adoption, and information management standards to create a favourable business environment and stimulate economic growth.

By adopting these strategies, policymakers can support and promote LIS entrepreneurship in Nigeria, thereby enhancing the economy's growth and development.

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