

## Entrepreneurial Competencies of Library and Information Science Undergraduates in Nigeria

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### Abstract

Increasingly, undergraduates in Nigerian universities are required to undergo compulsory training in entrepreneurship education to develop skills that could lead to job creation, economic growth, and enhance their employability upon graduation. However, despite the significance attached to entrepreneurship education in Nigeria, little is known about the entrepreneurial competencies of Library and Information Science undergraduates in Kwara State. The sample included 412 Library and Information Science undergraduates from three purposively selected universities in Kwara State. The findings revealed that the respondents were aware of various entrepreneurial opportunities within the Library and Information Science discipline. Some identified entrepreneurial competencies of the respondents included initiative, creativity and innovation, integrity, and communication and networking skills, among others. The study recommends that university management should improve the infrastructural facilities available for entrepreneurship education in their respective institutions to enhance the training and practical experience that undergraduates receive. Additionally, university management needs to increase funding for entrepreneurship education. This improvement would significantly encourage and boost undergraduates' participation in the programme.

**Keywords:** Entrepreneurship, Entrepreneurial competencies, Entrepreneurship education, Library and Information Science, Undergraduates, Nigeria.

### 1. Introduction

The advent of the Fourth Industrial Revolution (4IR) ushered in profound changes across various domains of life. These transformations were fueled by ingenuity, creativity and innovation, thereby, spurring entrepreneurship to the forefront of international competition (Gunartin *et al.*, 2023). Entrepreneurship entails innovation, decision-making, implementation, independence, forecasting of the future and success; a vital force for economic value and job creation, stimulating innovation, and economic growth (Pauceanu, 2016; Kozlinska *et al.*, 2020). Entrepreneurship encompasses economic, environmental, and social goals, which are integrated into business activities; and has emerged as an essential component in various fields of study, and gained approval in training curriculums to impart undergraduates into job creators, rather than job seekers (Kariv, 2011; Wibowo *et al.*, 2023). Moreover, entrepreneurship is widely considered to be crucial for alleviating poverty, and unemployment among the youth because it propels societal development through job creation; and serves as the necessary ingredient for

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stimulating economic growth, and employment opportunities in society as it is closely associated with the world of business start-ups and enterprise (Botha & Taljaard, 2021). Accordingly, entrepreneurial education provides undergraduates with skills that can empower them in the transformation of ideas into visible ventures upon graduation as the development and growth of any economy hinges on entrepreneurial practices (Tondo & Ugba, 2023).

Entrepreneurial education can be defined as the process of equipping individuals with the knowledge, skills, and mindset needed to develop and succeed in entrepreneurial endeavours (Alagappan *et al.*, 2023b). Entrepreneurial education encompasses a range of educational activities and programs that aim to foster entrepreneurship, innovation, and business creation among undergraduates, prepare them for entrepreneurial practice upon graduation, and develop profound entrepreneurial competencies in them (Tittel & Terzidis, 2020; Alagappan *et al.*, 2023b). Moreso, entrepreneurial education is made up of all kinds of experience that gives individuals the ability and vision of how to access, and transform opportunities of different kinds; and remains a strategic way of tackling the scourge of unemployment the world over (Refaat, 2009). Consequently, entrepreneurial education is significant in uplifting peoples' creativity and innovativeness as it is perceived to develop their attitude to work independently and initiate enterprise ventures of their own (Hattab, 2014; Othman, & Nasrudin, 2016).

Entrepreneurial competencies refer to the specific knowledge, skills, and abilities that entrepreneurs need to effectively start, manage and grow a business (Alagappan *et al.*, 2023a). Entrepreneurial competencies encompass individual knowledge, strategy, skills, and capability that directly affect business performance, such as technical competence, marketing competence, strategy, financial competence, human relations competence, creativity, innovativeness, management skills, communication skills, analytical thinking, self-confidence, quality performance and networking among others (Sundah *et al.*, 2018). Also, entrepreneurial competence constitutes a set of qualities encompassing knowledge, motives, traits, self-image, and skills essential for establishing and growing businesses (Gunartin *et al.*, 2023). Thus, entrepreneurial competencies are essential for entrepreneurial success and can be developed through education, training and hands-on experience (Alagappan *et al.*, 2023a).

Moreover, entrepreneurial competencies are mostly learnable, act as the bedrock for individuals to navigate the dynamic business landscape, drive innovation within established organisations, and have an indispensable causal relationship with business performance (Barazandeh *et al.*, 2015). Accordingly, entrepreneurial competencies are associated with risk-taking, the ability to react and adapt to change, apply knowledge, implement ideas, identify problems, and proffer solutions (Alam *et al.*, 2016). As such, the integration of entrepreneurship into the learning systems of undergraduates in general, and the curriculum of the Library and Information Science (LIS) discipline in particular, could help promote entrepreneurial competency development, generation of employment opportunities for its graduates, improve the living standards of the community of information professionals and help in the growth and expansion of the economy (Mwanzu & Wendo, 2021). Thus, given the rising unemployment rates in Nigeria, it is crucial to encourage LIS undergraduates to engage in entrepreneurship and equip them with the necessary entrepreneurial skills and competencies so they can create jobs for themselves and others under graduation (Mahlaole & Malebana, 2021).

The Library and Information Science discipline has come a long way. The synergy with the tools of information and communication technologies (ICTs) brought great opportunities and prominence to the discipline. As such, the services of librarians are increasingly demanded across disciplines and institutions (Amazon Web Services, 2021). LIS is an interdisciplinary field of study that is concerned with the creation, management, and uses of information in all its forms (Okolo & Iwighrehweta, 2021). The

authors stated further that LIS is a multidisciplinary field that is concerned with the academic and professional study of how information and information carriers are produced, disseminated, discovered, evaluated, selected, acquired, used, organised, maintained, and managed.

Moreover, LIS is one of the major disciplines that plays a crucial role in information and knowledge management, dissemination, and research support to diverse user groups (Tondo & Ugba, 2023). Therefore, as a discipline saddled with the responsibilities of training and producing information professionals that would serve different stakeholders and sectors in the information landscape upon graduation, it is of utmost importance that information professionals in training are adequately exposed to core entrepreneurial opportunities concerning the LIS discipline, as this goes a long way to enhance their capabilities towards self-employment and self-reliance upon graduation as against the practice of waiting for non-existing white-collar jobs. Unarguably, exposing LIS undergraduates to entrepreneurial education programs and training would afford them the rare opportunity to explore alternative career paths upon graduation beyond the traditional library settings, allow them to apply acquired skills, and knowledge in innovative ways while addressing the challenges of unemployment and limited job opportunities in the field (Dangani & Moruf, 2015).

Globally, there is a concerted effort at encouraging entrepreneurship skills acquisition for sustainable development among undergraduates, through compulsory entrepreneurship education programs, experiential learning opportunities, internships, and practical experiences, both inside and outside the classroom all geared towards equipping them with abilities that would increase their employment potentials (Rezaei-Zadah *et al.*, 2017). Accordingly, Library and Information Science undergraduates are expected to be skilled in marketing, pricing of information products and services, digital literacy, social networking, creativity, conceptualise innovative ideas, ability to identify opportunities, relationship building, organise resources, develop strategic plans, ability to navigate the information landscape easily, and demonstrate commitment in their entrepreneurial endeavours within the information industry among others so that upon graduation they can become successful entrepreneurs (Ramugondo, 2021).

No doubt, promoting entrepreneurial activities among the teeming undergraduates in Nigerian universities is considered vital for stimulating job creation, innovation, and economic development among the youths of Nigeria. However, despite the overwhelming natural resources available with many economic growth prospects, extant literature has revealed that millions of Nigerian graduates lack the entrepreneurial competencies required to start up new businesses and create jobs to employ others (Okolie *et al.*, 2021). Hence, an educational programme capable of enhancing undergraduates' entrepreneurial competency is imperative. This goes a long way to ensure that universities meet the target of producing graduates who can identify and recognise business opportunities, start up new businesses, and employ and train others. It is against this background that this study investigated the entrepreneurial competencies of Library and Information Science undergraduates in universities in Kwara State, Nigeria.

### **Objectives of the study**

The broad objective of this study was to examine entrepreneurial competences of Library and Information Science undergraduates in Kwara State, Nigeria. The specific objectives of the study were to:

- i. identify the entrepreneurial opportunities available in Library and Information Science discipline;
- ii. ascertain the entrepreneurial competences of Library and Information Science undergraduates in Kwara State, Nigeria;

- iii. identify the factors influencing the development of entrepreneurial competencies among Library and Information Science undergraduates in Kwara State, Nigeria; and
- iv. identify the barriers inhibiting entrepreneurial competencies development among Library and Information Science undergraduates in Kwara State, Nigeria.

### Research questions

Based on the broad objective of the study, the following research questions were generated:

1. What are the entrepreneurial opportunities available in Library and Information Science discipline?
2. What are the entrepreneurial competences of Library and Information Science undergraduates in Kwara State, Nigeria?
3. What are the factors influencing entrepreneurial competences development among Library and Information Science undergraduates in Kwara State, Nigeria?
4. What are the barriers inhibiting entrepreneurial competences development among Library and Information Science undergraduates in Kwara State, Nigeria?

## 2. Literature review

### 2.1 Concept of entrepreneurship

Entrepreneurship has grown in importance as universities and research institutions increasingly recognise the need to transfer knowledge and technology from the academic sphere to the commercial world (Aydemir *et al.*, 2022). Entrepreneurship refers to all the activities and processes undertaken to discover, define, and exploit opportunities to promote wealth creation and engage in new ventures in the process of creating, developing, and managing a business venture to make a profit (Kozlinska *et al.*, 2020). According to Robbins and Coulter (2018), entrepreneurship is a process in which a person or a group of individuals use an organised effort and means to seek new opportunities and create a value that grows with the needs and desires through innovation and uniqueness. On their part, Li *et al.* (2022) stated that entrepreneurship is the discovery and exploitation of profit opportunities, with entrepreneurs playing a crucial role in equilibrating the market by identifying gaps and mismatches. Accordingly, entrepreneurship is a crucial force for economic value creation, stimulating innovation, job creation and economic growth (Kozlinska *et al.*, 2020).

Entrepreneurship is the process of doing something new and something different to create wealth for people and add value to society (Gamede & Uleanya, 2020). Similarly, Ozaralli and Rivenburgh (2016) averred that entrepreneurship is the process of creating something of value through the allocation of time and resources and taking on the corresponding psychological, social, and financial risks to achieve the desired outcomes. Shehata and Eldakar (2023) affirmed that entrepreneurship involves a willingness to undertake risks, foster innovation, identify novel opportunities, and achieve prosperity within competitive environments. Barba-Sanchez and Atienza-Sahuquillo (2018) explained that entrepreneurship is the viable solution to the pressing problem of unemployment and lack of white-collar jobs. Accordingly, Mars and Scott (2016) observed that entrepreneurship is a strategic process that aims to develop organisational structures needed to achieve innovation in empowering resources.

Moreover, entrepreneurship is the process of identifying and seizing opportunities to create new ventures and bring innovative ideas to life. Blasbalg (2021) remarked that it involves taking calculated risks, combining available resources, and applying creativity and innovation to overcome challenges in pursuit of business success. Consequently, the aim of entrepreneurship

education is to inculcate in undergraduates the necessary skills required to plan, organise and execute business enterprise (Muhammad & Giri, 2019).

## 2.2. Entrepreneurial opportunities in Library and Information Science

Entrepreneurial opportunities are situations in which goods and services, raw materials and organised methods are introduced, and sold at greater than their cost of productions. Entrepreneurial opportunities enable the entrepreneur to discover new methods, and techniques of harnessing goods, services, raw materials, and personnel amongst others in order to earn economic value (Musa & Tsafe, 2019). Unarguably, Library and Information Science education plays a very crucial role in the educational growth of any nation as the curriculum is designed to assist undergraduates in the acquisition and development of a wide range of soft and technical skills in different areas of librarianship that could enhance their employability upon graduation and practitioners competently serving different stakeholders for development.

Studies have reported that lots of entrepreneurial opportunities abound in the LIS discipline. For instance, Olafimihan *et al.* (2024) identified information brokerage services, content curation and management, data analytics and visualisation, digital archives and preservation, Information technology solutions, specialised consulting and publication amongst others as entrepreneurial opportunities available to LIS practitioners. Bumkeng and Adadu (2023) found that information brokerage, freelancing, current awareness/selective dissemination of information services, indexing and abstracting services are viable entrepreneurial opportunities in LIS. Wema (2021) discovered that Book industry and Trade, Editing and proofreading, Abstracting and Indexing, Bibliographic Services, Reprographics, knowledge management, Hardware and Software maintenance, Bookbinding and multimedia librarianship as entrepreneurial opportunities in Library and Information Science. Liman and Shuaibu (2023) reported that online publishing, records management, Information brokerage, translation services, abstracting and indexing services are some of the viable entrepreneurial opportunities in which LIS graduates could be engaged.

Mohammed *et al.* (2022) identified information brokerage, information systems consultancy, infopreneur, blogging and advertising, Web development/programming, database designing/distribution, and Internet Café/Business Centre as entrepreneurial opportunities available to LIS undergraduates upon graduation. Equally, Obim *et al.* (2021) reported that information brokerage, book publishing and trading, Email/Web/Desktop publishing, Library establishment and maintenance for organisations and private individuals, a compilation of directories, information services to the visually impaired, indexing and abstracting services, and freelancing are entrepreneurial opportunities which LIS graduates can explore after their education. Ali (2009) listed information broker, printing, publishing, book trade, indexing and abstracting, editorial services, communication technologies rental services, database management, Web designers, media designers, cybercafé manager, Internet services, courier services, fax services, marketing books to libraries, bookstore ownership, library establishment, event organising entrepreneurs, film entrepreneurs (audio, video, CD, DVD, and motion pictures), information packaging and ability to write clearly and communicate as some of the entrepreneurship opportunities in Library and Information Science discipline.

Moreover, Batthini (2014) stated that entrepreneurial opportunities available to Library and Information Science graduates are Book publishing, Book distribution agencies, Newspaper dealerships, Book/Stationary shops, Bindery services, lending libraries, Reading room Services, Consultancy Services, Career Counsellors, Library Software developing industry, online bookstore, digital book/periodical publishing, subscription agency for electronic book/journals and writing biographies. Likewise, Anyanwu *et al.* (2013) averred that the self-employment options available to LIS undergraduates as entrepreneurs are publishing, Software

development, Production and Sale of Library Equipment, Information brokerage and Consultancy services, bookselling business, Business Centres and Cyber Café operation, and Computer maintenance Service as against waiting endless for the unavailable white-collar jobs.

Advertently, success in entrepreneurial opportunities in LIS is hinged on the entrepreneurial competencies of individuals, which could lead to the conception and incubation of viable business ideas that would address the needs of any customer. As such, there is a need for LIS undergraduates to be adequately groomed in both the theory and practical knowledge of librarianship and entrepreneurial practices. In the long run, this could translate into viable job creation, and contribute drastically to the reduction in the unemployment rate among the LIS graduates.

### **2.3. Entrepreneurial competencies of LIS undergraduates**

The concept of competencies has been surrounded by scholarly debates because it crosses several disciplines: education, psychology, and organisational behaviour (Kozlinska *et al.*, 2020). According to Gunartin *et al.* (2023), entrepreneurial competence is the spirit of entrepreneurship, the cornerstone of success and business growth as it encompasses broad knowledge, a positive attitude, and adequate skills. Kyndt and Baert (2015) defined entrepreneurial competencies as a combination of integrated components of knowledge, skills, and attitudes. They are changeable, learnable and attainable through experience, training or coaching. Alkaabi and Senghore (2024) averred that entrepreneurial competencies refer to a particular set of skills important to the practice of successful entrepreneurship, such as problem-solving ability performance orientation. Okolie *et al.* (2021) defined entrepreneurial competency as a multi-dimensional construct that encompasses individual capabilities, cognitive and non-cognitive factors, social skills, and behaviours that enable individuals to effectively recognise and exploit entrepreneurial opportunities. As such, entrepreneurial competencies are critical in facilitating undergraduates' intentions to venture into business start-ups and enhance their employability in self-employment upon graduation (Nzilano, 2024).

Boldureanu *et al.* (2020) affirmed that entrepreneurial competences refer to a combination of domain-specific knowledge, problem-solving skills, self-regulation, personal traits such as creativity, adaptability, self-confidence; social skills such as networking, negotiation and team-building abilities which are crucial for collaborations and relationship management. Subramaniam *et al.* (2023) stated that entrepreneurial competency is an entrepreneur's typical characteristic such as the abilities, knowledge and skills that an entrepreneur required to execute a particular business. Similarly, Gunartin *et al.* (2023) explained that entrepreneurial competence is a combination of attitudes, knowledge, and skills to achieve maximum business performance. According to Al Mamun *et al.* (2019), entrepreneurial competencies refer to a specific set of valuable knowledge, skills and abilities possessed by undergraduates to differentiate themselves from others. On their part, Ibdunni *et al.* (2021) pointed out that entrepreneurial competencies, especially organising, conceptual skills, learning, strategic, opportunity, and risk-taking competencies, are essential for achieving higher innovation performance. Thus, entrepreneurial competencies could enable undergraduates to continuously learn, innovate, and adapt strategies in dynamic environments (Kyndt & Baert, 2015).

Research outcomes have revealed that entrepreneurial competencies encompass a range of skills and capabilities such as innovation, risk-taking, proactive work, competitiveness, and autonomy in task management (Promma *et al.*, 2023), creativity and innovativeness (Sakib *et al.*, 2022), social and networking skills (Kamuri, 2023), management and communication skills (Behling & Lenzi, 2019), integrity (Yener, 2020), willingness (Khan, 2021), and strategy (Gunawan, 2024). Also, Al Mamun *et al.* (2019), observed

that the more unique the entrepreneurial competency of an individual, the greater its impact on business performance, and the greater the ability to create competitive advantages in their endeavours.

Undisputedly, entrepreneurial competences integrate technical and non-technical skills into unique behaviours that are difficult for competitors to imitate; they are very important for business actors in improving their performance, competitiveness, and sustainability; and have been found to play a significant role in fostering adaptability and resilience in the face of changing market conditions and business challenges (Barazandeh et al., 2015; Zainol et al., 2018; Zighan et al., 2022; Gunartin et al., 2023). As such, the importance of entrepreneurial competences lies in the capacity to empower individuals with the capabilities to recognise opportunities, evaluate risks, make informed decisions, generate ideas and effectively execute business strategies. Thus, it is vital towards the development of the attitudes and behavioural skills of Library and Information Science undergraduates as a panacea and basis of economic growth, and to serve as the foundation for enhancing their social employability upon graduation (Bolzani & Luppi, 2021).

#### **2.4. Factors influencing entrepreneurial competences development among LIS undergraduates**

Entrepreneurship is a crucial force for economic value creation, stimulating innovation, job creation and economic growth (Kozlinska et al., 2020). Several factors have been identified by studies to have influence on entrepreneurial competences development of individuals. For instance, Alkaabi and Senghore's (2024) study in the United Arab Emirate identified creativity, initiative-taking, and risk-taking ability as factors influencing entrepreneurial competences development among their respondents. Lv et al's (2021) study in China discovered that digitisation, globalisation, infrastructure development, upbringing, and origin were factors influencing entrepreneurial competences development among undergraduates. In Iran, Hedayati et al (2017) reported that various internal and external factors such as attitude, motives, management style, skills, curricula system, management support, entrepreneurial culture, space and equipment, government policies, financial, non-financial support and strategic orientation as factors influencing entrepreneurial skills development. Hussain et al (2014) in Malaysia found that background factors such as gender, education level, and family business experience contributed to entrepreneurial competencies development of students. In Russia, Pesha (2022) observed that economic situation, technological progress, business globalisation and global socio-political turbulence have an impact on entrepreneurial competences development.

Khuong and An's (2016) study in Vietnam observed that social and cultural factors influenced entrepreneurship skills development through value formation and encourages innovation, independence, and risk taking. Other identified factors include digitisation (Morris & König, 2020); infrastructural development (Butkus et al., 2023); family values, cultural values, relationship building (Fanaja et al., 2023); Globalization (Benevolo, Penco & Torre, 2021); business climate and development strategy (Gerards et al., 2021); organisational capabilities such as information, finance, working hours (Poduška et al., 2020); values (Stewart & Roth, 2007). Therefore, entrepreneurial competences development is germane and key to start-up a successful entrepreneurial practice among LIS undergraduates.

#### **2.5. Barriers inhibiting entrepreneurial competencies development among LIS undergraduates**

Entrepreneurial competence refers to the ability to conceive a new idea, identify opportunities and act on them so as to create value for society (Crespi *et al.*, 2022). However, certain factors have been found as inhibitors to entrepreneurial competencies development. For example, In India, Agrawal *et al.* (2024) reported that financial constraints, regulatory hurdles and compliance, lack of knowledge and inadequate infrastructure were entrepreneurial barriers towards achieving sustainable business and cultivation of innovation. Crespi *et al.* (2022) mentioned that lack of willingness, finance and policy formulation were challenges in developing entrepreneurial competencies in the university. Lakovleva *et al.* (2014) identified risk aversion and lack of self-confidence as barriers to entrepreneurial competencies development.

In Nigeria, Obim *et al.* (2021) reported that inadequate ICT courses in the LIS curriculum, unavailability of funds, lack of management skills, unavailability of lecturers that are entrepreneurial inclined, and lack of entrepreneurship and marketing spirit are some of the factors inhibiting entrepreneurial competencies development of undergraduates. Nuhu *et al.* (2021) found that inadequate funding, poor infrastructural support, poor policy formulation, fear of failing and lack of willingness to take risks as some of the barriers preventing entrepreneurial competencies development among Library and Information Science undergraduates. Also, Mohammed *et al.* (2022) reported that lack of infopreneurial spirit, fear of competition, lack of requisite skills /expertise, lack of adequate capital, lack of adequate electricity and Internet bandwidth, and poor patronage were factors identified as inhibiting entrepreneurial competencies development among LIS undergraduates. Moreover, Ezeani (2018) mentioned that poor government policy, low skill and technical incompetence and low investment in education were some of the barriers inhibiting graduate employment and entrepreneurship.

Conclusively, diverse entrepreneurial opportunities abound in LIS discipline, however, an individual's level of entrepreneurial competencies such as creativity, integrity, innovativeness, and the integration of knowledge, skills, and abilities amongst others are very crucial to the success of an individual/entrepreneur within an organisation, and in different contexts be it as a start-up, job creator and employment generation. However, in Nigeria, despite the overwhelming natural resources available and many economic growth prospects, extant literature has revealed that millions of graduates lack the entrepreneurial competencies to start up new businesses and create jobs to employ others (Okolie *et al.*, 2021). It is against this background that this study examined entrepreneurial competencies of Library and Information Science undergraduates in Kwara State, Nigeria.

### **3. Methods**

#### **3.1. Background Information**

The study adopted the descriptive survey design covering Library and Information Science undergraduates in Kwara State, Nigeria. The design was chosen to examine the entrepreneurial competencies of the respondents. The study population comprised all the 2,101 Library and Information Science undergraduates in the universities duly accredited by the National Universities Commission (NUC) to run the B.Sc Library and Information Science degree programme in Kwara State, Nigeria namely Al-Hikmah University, Kwara State University and the University of Ilorin respectively as of September 2023.

#### **3.2. Participants**

Total enumeration sampling technique was adopted for this study in order to be able to have a considerable size for the study. The sample included all the four hundred and twelve (412) final year 400 level LIS undergraduates who have had exposure to entrepreneurship education which is a compulsory university-wide programme for every Nigerian undergraduate from the second year of the undergraduate programme to the final year, and are the in process of making career decisions upon completion of



their studies, which could include the entrepreneurial career option. Accordingly, all the final year LIS undergraduates who constituted the study sample have compulsorily participated in entrepreneurship education as a requirement for graduation from the university degree programme. The respondents were drawn purposively from the selected universities comprising of a private, state and federal owned institutions.

### 3.3. Procedure

The instrument used for data collection in this study was a structured questionnaire designed by the researchers based on the literature review and some relevant instruments used in previous studies. The questionnaire was divided into two sections. Section A required the demographic information of the respondents, such as age range, gender and name of institution, while the Section B featured items that capture data on each of the variables of the study, this section was subdivided into four (4) parts. There were 55 items in all the responses ranging from strongly agree (SA = 4) to strongly disagree (SD = 1). The overall reliability coefficient of the instrument was estimated using Cronbach's alpha. A reliability coefficient of 0.75 was found acceptable for this study since it was way above the 0.65 alpha coefficient set as adequate.

Copies of the questionnaire were self-administered by the researchers to the selected undergraduates in the universities sampled with the assistance of three trained research assistants. The questionnaire administration and retrieval lasted for three weeks. The participants' consent was sought through the introduction letter attached to the questionnaire. Out of the 412 copies of the questionnaire administered, 403 were duly filled and returned, giving a response rate of 98%. The data collected from the field were coded and analysed using the Statistical Products for Service Solutions (SPSS) version 26.0. Software based on the four objectives of the study. The results were presented based on the variables found in the research objectives/questions using the descriptive statistics of simple percentages and frequency counts. The results of the data analysis are presented as follows:

### 3.4. Results and Analysis

#### 3.4.1. Demographic characteristics of the respondents

The demographic profile of the respondents as presented in Table 1 showed that out of the 403 400 Level Library and Information Science undergraduates surveyed, 207(51%) were males, while the remaining 196 (49%) were females. This implies that the majority of the respondents were males. The reason could be that more males have been admitted into the B.Sc Library and Information Science degree program. Their age varied from 19 to more than 25 years. The demographic information on the respondents' age showed that 131(33%) had their age fall within 19 - 21 years. 234 (58%) had their age fall within the age group of 22 - 24 years. 38 (9%) had their age fall within 25 years and above categories. This implies that the respondents within the age range of 22 - 24 years constituted the majority of the respondents in the study and are mature enough to be entrepreneurs.

Moreover, the sampled respondents were distributed among the three (3) universities, with the majority 264(65%) of the participants from Kwara State University, Malete. 123 (31%) of the respondents were from the University of Ilorin, Nigeria while 16 (4%) of the respondents were from Al-Hikmah University. This implies that the respondents from Kwara State University, Malete constituted the majority. The results also revealed that out of the 403 respondents, 386(96%) were aware of the entrepreneurial opportunities available in the LIS discipline.

**Table 1: Distribution of demographic information of the respondents**

Variables	Frequency	Percent (%)
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<b>Gender</b>		
Female.	19	49
Male.	207	51
<b>Total</b>	<b>403</b>	<b>100</b>
<b>Age range</b>		
19 - 21 years.	131	33
22 - 24 years.	234	58
25 years and above.	38	9
<b>Total</b>	<b>403</b>	<b>100</b>
<b>Institution</b>		
Al-Hikmah University.	16	4
Kwara State University.	264	65
University of Ilorin.	123	31
<b>Total</b>	<b>403</b>	<b>100</b>
<b>Awareness of entrepreneurial opportunities in LIS discipline</b>		
Yes.	386	96
No.	17	4
<b>Total</b>	<b>403</b>	<b>100</b>

### 3.4.2. Objectives and research questions analyses

**RQ1: What are the entrepreneurial opportunities available in Library and Information Science discipline?** Findings in Table 2 revealed the 18 items used to identify the entrepreneurial opportunities available in the LIS discipline. The results showed that infopreneurship with a mean score of 3.60 was ranked 1<sup>st</sup> on the table. Indexing and Abstracting services with a mean score of 3.52 ranked 2<sup>nd</sup>. Preservation and Conservation services with a mean score of 3.50 was ranked 3<sup>rd</sup>. However, emailing/desktop publishing service was ranked the lowest, 18<sup>th</sup> with a mean score of 3.34.

**Table 2: Entrepreneurial Opportunities in Library and Information Science Discipline**

S/N	Entrepreneurial opportunities	Mean	SD	Rank
1.	Infopreneurship.	3.60	0.57	1 <sup>st</sup>
2.	Indexing and Abstracting Service.	3.52	0.61	2 <sup>nd</sup>
3.	Preservation and Conservation Services.	3.50	0.60	3 <sup>rd</sup>
4.	Information Brokerage and Consultancy Services.	3.43	0.57	4 <sup>th</sup>
5.	Information management services.	3.43	0.71	4 <sup>th</sup>
6.	Establishment of private libraries.	3.43	0.58	4 <sup>th</sup>
7.	Documentation Service.	3.42	0.65	7 <sup>th</sup>
8.	Information Service to special people.	3.42	0.64	7 <sup>th</sup>
9.	Library maintenance.	3.42n	0.61	7 <sup>th</sup>
10.	Subscription Agency.	3.42	0.62	7 <sup>th</sup>
11.	Biographers	3.40	0.63	11 <sup>th</sup>
12.	Business Centre / Cybercafe Management.	3.40	0.64	11 <sup>th</sup>
13.	Book selling /Distribution Agency.	3.40	0.63	11 <sup>th</sup>
14.	Online Bookstores	3.37	0.64	14 <sup>th</sup>
15.	Archival Services	3.36	0.63	15 <sup>th</sup>
16.	Library Equipment Vendor.	3.35	0.64	16 <sup>th</sup>
17.	Printing /Editorial Services.	3.35	0.63	16 <sup>th</sup>
18.	Emailing /Desktop Publishing Services.	3.34	0.74	18 <sup>th</sup>
<b>Weighted mean = 3.42</b>				

To identify the entrepreneurial opportunities available in Library and Information Science discipline as stated in objective number 1. Table 2 revealed the mean and standard deviation for each item. The average mean score for each of the items is 2.50. The average mean score was calculated by adding up each value of the 4-point Likert scale (Strongly agree = 4, Agree = 3, Disagree = 2 and strongly disagree = 1. that is  $(4+3+2+1 = 10 / 4 = 2.50)$ . All the items have a mean score greater than the average mean

score = 2.50. Also, the overall weighted mean of entrepreneurial opportunities available in the LIS discipline of the respondents is 3.42, which is greater than a threshold of 2.50. Table 2 shows the mean rating of the entrepreneurial opportunities in LIS discipline. From the results, a mean rating ranging from 3.34 - 3.60 was obtained. The average mean is 3.42, which is higher than the Criterion mean. Hence, all the items were accepted as entrepreneurial opportunities available in the LIS discipline.

The data here are important because the results imply that the respondents are aware of entrepreneurial opportunities in LIS discipline. Above all, Infopreneurship, (entrepreneurial pursuit of creating, marketing and selling information products and services), Indexing and Abstracting Services, and Preservation and Conservation Services were identified by the respondents as entrepreneurial opportunity they can engage in upon graduation.

### **RQ2: What are the entrepreneurial competences of Library and Information Science undergraduates in Kwara State, Nigeria?**

Table 3 shows the 15 items used in identifying the entrepreneurial competences of the respondents as stated in objective 2. The results revealed that taking initiatives with a mean score of 3.48 was ranked 1<sup>st</sup>. Creativity and innovativeness with a mean score of 3.46 was ranked 2<sup>nd</sup>. Integrity with a mean score of 3.45 was ranked 3<sup>rd</sup>, while business management skills, communication skills and self-confidence with a mean score of 3.43 were ranked 4<sup>th</sup> respectively.

**Table 3: Entrepreneurial competencies of the respondents**

S/N	Entrepreneurial competences	Mean	SD	Rank
1.	Taking initiatives.	3.48	0.64	1 <sup>st</sup>
2.	Creativity and Innovativeness.	3.46	0.60	2 <sup>nd</sup>
3.	Integrity.	3.45	0.60	3 <sup>rd</sup>
4.	Business Management skills.	3.43	0.66	4 <sup>th</sup>
5.	Communication skills.	3.43	0.64	4 <sup>th</sup>
6.	Self-confidence.	3.43	0.63	4 <sup>th</sup>
7.	Conceptual thinking.	3.41	0.63	7 <sup>th</sup>
8.	Networking skill.	3.41	0.58	7 <sup>th</sup>
9.	Strategy.	3.40	0.74	9 <sup>th</sup>
10.	Monitoring/ Environmental scanning skills.	3.39	0.63	10 <sup>th</sup>
11.	Influencing skills.	3.39	0.63	11 <sup>th</sup>
12.	Analytical skills.	3.38	0.62	12 <sup>th</sup>
13.	Social skills.	3.36	0.61	13 <sup>th</sup>
14.	Commitment.	3.35	0.70	14 <sup>th</sup>
15.	Decision-making skills.	3.35	3.35	15 <sup>th</sup>
<b>Weighted mean = 3.41</b>				

Moreover, Table 3 shows the mean rating of the entrepreneurial competences of LIS undergraduates in Kwara State, Nigeria. From the results, a mean rating ranging from 3.35 - 3.48 was obtained. The average mean is 3.41, which is higher than the Criterion mean. Hence, all the items were accepted as entrepreneurial competences possessed by LIS undergraduates in Kwara State, Nigeria. The data here were also important because the results established that taking initiatives, creativity and innovativeness and integrity were highly rated by the respondents as the competences required to engage in entrepreneurial practice.

### **RQ3: What are the factors influencing entrepreneurial competences development among Library and Information Science undergraduates in Kwara State, Nigeria?**

Table 4 presents the items used in measuring the factors influencing entrepreneurial competences development among Library and Information Science undergraduates in Kwara State, Nigeria as stated in objective 3. The results in Table 4 indicated that digitisation with a mean score of 3.56 was rank 1<sup>st</sup>. Awareness and leadership with a mean score of 3.43 were ranked 2<sup>nd</sup>, while

values with a mean score of 3.39 was ranked 4<sup>th</sup>. Competitive advantage was ranked the least, 15<sup>th</sup> by the respondents, thus, implying to be the least factor to influence entrepreneurial competence development among the respondents.

**Table 4: Factors influencing entrepreneurial competence development**

S/N	Factors influencing	Mean	SD	Rank
1.	Digitisation.	3.56	0.63	1 <sup>st</sup>
2.	Awareness.	3.43	0.70	2 <sup>nd</sup>
3.	Leadership.	3.43	0.67	2 <sup>nd</sup>
4.	Values.	3.39	0.71	4 <sup>th</sup>
5.	Creativity.	3.37	0.69	5 <sup>th</sup>
6.	Business climate.	3.37	0.69	5 <sup>th</sup>
7.	Organisational capabilities.	3.36	0.72	7 <sup>th</sup>
8.	Globalisation.	3.35	0.63	8 <sup>th</sup>
9.	Policy regulation.	3.33	0.64	9 <sup>th</sup>
10.	Family upbringing.	3.33	0.79	9 <sup>th</sup>
11.	Availability of raw materials.	3.33	0.72	9 <sup>th</sup>
12.	Policy regulation.	3.33	0.64	9 <sup>th</sup>
13.	Finance.	3.32	0.74	13 <sup>th</sup>
14.	Knowledge.	3.32	0.73	13 <sup>th</sup>
15.	Competitive advantage.	3.30	0.71	15 <sup>th</sup>
<b>Weighted mean = 3.37</b>				

Table 4 shows the mean rating of the factors influencing entrepreneurial competence development among LIS undergraduates. From the results, a mean rating ranging from 3.30 - 3.56 was obtained. The weighted mean is 3.37, which is higher than the Criterion mean of 2.50. Hence, all the items were accepted as factors influencing entrepreneurial competence development among LIS undergraduates in Kwara State, Nigeria.

#### **RQ 4: What are the barriers inhibiting entrepreneurial competence development among Library and Information Science undergraduates in Kwara State, Nigeria?**

Table 5 presents the items used in measuring the barriers inhibiting entrepreneurial competence development of Library and Information Science undergraduates in Kwara State, Nigeria. The results revealed that fear of failure with a mean score of 3.45 was ranked 1<sup>st</sup>. Social capital barrier with a mean score of 3.44 was ranked 2<sup>nd</sup>. Institutional regulatory barriers with a mean score of 3.42 was ranked 3<sup>rd</sup>. while lack of role model was ranked the least. This result is important because the study has been able to establish that the greatest barrier against entrepreneurial competence development of the respondents was fear of failure

**Table 5: Barriers against entrepreneurial competence development**

S/N	Factors inhibiting	Mean	SD	Rank
1.	Fear of failure.	3.45	0.65	1 <sup>st</sup>
2.	Social capital barrier.	3.44	0.65	2 <sup>nd</sup>
3.	Institutional regulatory barriers.	3.42	0.60	3 <sup>rd</sup>
4.	Lack of information.	3.41	0.78	4 <sup>th</sup>
5.	Lack of motivation.	3.38	0.62	5 <sup>th</sup>
6.	Lack of confidence.	3.29	0.68	6 <sup>th</sup>
7.	Lack of role model.	3.28	0.74	7 <sup>th</sup>
<b>Weighted mean = 3.38</b>				

Furthermore, Table 5 shows the mean rating of identified barriers against entrepreneurial competences development among LIS undergraduates. From the results, a mean rating ranging from 3.38 - 3.45 was obtained. The weighted mean is 3.38, which is higher than the Criterion mean of 2.50. Hence, all the items were accepted as identified barriers against entrepreneurial competences development among LIS undergraduates in Kwara State, Nigeria.

### 3.6. Discussion

Globally, entrepreneurship is widely acknowledged as a key driver of economic growth and job creation (Gamede & Uleanya, 2020). Entrepreneurial competence is the spirit of entrepreneurship and are critical in facilitating graduates' intentions to venture into business start-ups (Nzilano, 2024). This current study examined entrepreneurial competences of Library and Information Science undergraduates in Kwara State, Nigeria. The first result in this study revealed that the entrepreneurial opportunities available in Library and Information Science discipline include Infopreneurship, Indexing and Abstracting Services, Preservation and Conservation Services, Information brokerage and Consultancy Services, Information Management Services and establishment of private libraries among others. These results are supported by findings of several other studies, (Anyanwu *et al.*, 2013; Batthini, 2014; Obim *et al.*, 2021; Mohammed *et al.*, 2022; Liman & Shuaibu, 2023; Bumkeng & Adadu, 2023; Olafimihan *et al.*, 2024). These studies identified and reported that a number of entrepreneurial opportunities like Infopreneurship, Information Brokerage and Consultancy services, Abstracting and Indexing services, Internet Café/Business Centre, online publishing, Library establishment and maintenance for organisations, Bookselling business, Records / Information Management services, Translation Services, data analytics and visualization among others are available in Library and Information Science discipline that graduates of LIS can explore after their education.

The study revealed that taking initiatives, creativity and innovativeness, integrity, business management skills, communication skills and self-confidence amongst others are some of the entrepreneurial competences possessed by Library and Information Science undergraduates in Kwara State, Nigeria. In line with this finding Boldureanu *et al's* (2020) study in Romania found that creativity, adaptability, self-confidence; social skills (networking, negotiation and team-building abilities were entrepreneurial competences possessed by their respondents. Moreover, Behling and Lenzi (2019); Yener (2020); Khan (2021); Sakib *et al* (2022); Kamuri (2023); Gunawan (2024) reported that creativity and innovativeness; management and communication skills; social and networking skills; strategy; integrity and willingness were some of the entrepreneurial competences identified in their studies. Thus, implying that the more unique the entrepreneurial competency of an individual, the greater its impact on business performance, and the greater the ability to create competitive advantages in their endeavours.

The results on the third research question found that digitisation, awareness, leadership, values, creativity and business climate among others are factors influencing entrepreneurial competences development among the respondents. This finding is in tandem with Alkaabi and Senghore's (2024) study in the United Arab Emirate, who identified creativity, initiative-taking, and risk-taking ability as factors influencing entrepreneurial competences development among their respondents. Lv *et al's* (2021) study in China, who discovered that digitisation, globalisation, infrastructure development, upbringing, and origin were factors influencing entrepreneurial competences development among undergraduates. Also, these results are supported by the findings of several other studies: Stewart and Roth (2007); Morris and König (2020); Ferreira *et al* (2020); Gerards *et al* (2021); Benevolo *et al* (2021); Butkus *et al* (2023); Fanaja *et al* (2023). These studies identified and reported that a number of factors such as digitisation, creativity, value, infrastructural development, family values, cultural values, relationship building, globalisation, business climate, and development strategy influenced entrepreneurial competences development of entrepreneurs / individuals.

Also, the study found that barriers inhibiting entrepreneurial competences development among Library and Information Science undergraduates in Kwara State, Nigeria are fear of failure, social capital barriers, institutional regulatory barriers, lack of information, and motivation among others. This finding aligns with Agrawal *et al* (2024), who reported that financial constraints,

regulatory hurdles and compliance, lack of knowledge and inadequate infrastructure were entrepreneurial barriers towards achieving sustainable business and cultivation of innovation. Nuhu *et al* (2021), who discovered that fear of failing, lack of willingness to take risk, inadequate funding, poor infrastructural support, poor policy formulation, were some of the challenges identified as the barriers preventing entrepreneurial competences development among LIS undergraduates. Mohammed *et al* (2022), who found that fear of competition, lack of requisite skills/expertise, lack of adequate capital were identified as barriers against entrepreneurial competences development in their study.

#### **4. Conclusion and Recommendations**

Entrepreneurship education is phenomenal to the growth and development of every nation, through its influence on the provision of essential abilities, skills, motivation and awareness to learners and as a panacea for the unprecedented unemployment malaise in the society. Entrepreneurial competencies are crucial for effective engagement in business activities to meet or exceed the pre-defined goals of undergraduates upon graduation. The study examined entrepreneurial competencies of LIS undergraduates in Kwara State, Nigeria. Based on the findings in this study, conclusions are drawn that entrepreneurial opportunities abound within the LIS discipline and the respondents possess certain entrepreneurial competences that could help them become a successful entrepreneur upon graduation. Also, this study contributes to our understanding of the factors influencing undergraduates' entrepreneurial competency development and barriers inhibiting entrepreneurial competency development. Thus, providing valuable insights for university managements, policymakers, educators, and future research activities.

Based on the findings of the study, it is recommended that stakeholders in university education vis-à-vis policymakers, university management and educators need to emphasize the importance of fostering an entrepreneurial culture through mentorship programs, internships, and enriched entrepreneurship education. By prioritising initiatives that facilitate interactions with established entrepreneurs and provide practical learning experiences, institutions can better prepare undergraduates for entrepreneurial practices. In addition, university management should commit more institutional resources to designing and delivering entrepreneurship courses with the full involvement of entrepreneurs in curriculum planning and designing. Entrepreneurship education should be treated with utmost caution and made a practical course to reap the intended benefits. Also, the need for curricula that integrate theoretical knowledge with practical skills, enabling students to take actionable steps towards entrepreneurship upon graduation. Moreover, university management should collaborate with industry, government, or other stakeholders to drive innovation, economic development, and social impact. This goes a long way to empowering students, to turn their ideas into tangible projects and start-ups rightly position undergraduates for the future ahead enhancing creativity and problem-solving. The university management should establish innovation hubs through which mentorship and coaching programs to guide students, faculty, and community members through the entrepreneurial journey are offered. Building strong partnerships with local industries, investors, and entrepreneurs can facilitate networking and funding opportunities. Thus aligning with the university's mission to empower students and promote academic and economic excellence.

#### **5. Implication of the findings**

Entrepreneurship refers to an activity that involves the discovery, evaluation and exploitation of opportunities within the framework of an individual-opportunities nexus (Obim *et al.*, 2021). Entrepreneurship makes an individual to be self-reliant, focused, functional, realistic, productive, reliable, and creative, where he/she can manage and utilise available resources for income

generation and survival. Consequently, this present study contributes insights into entrepreneurship education literature, offering practical implications for LIS educators and the management of institutions. The implications of these findings extend to policymakers and educators, emphasising the importance of fostering an entrepreneurial culture through mentorship programs, internships, and enriched entrepreneurship education. By prioritising initiatives that facilitate interactions with established entrepreneurs and provide practical learning experiences, institutions can better prepare undergraduates for entrepreneurial activities and the world of self-employment upon graduation.

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