An Assessment of Entrepreneurial Competences (Skills) Acquired for Self-Reliant by Library and Information Science Students in Universities in Benue State, Nigeria

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ABSTRACT

The job opportunities in the Library and Information Science field are becoming increasingly difficult and this paper aims to prepare the Library Science professionals to explore the entrepreneurial opportunities in this field. This paper identifies the various entrepreneurial opportunities for the budding Library Science professionals associated with Library and Information Science field as Graduate unemployment remains one of the most pressing socio-economic challenges in Nigeria, and Library and Information Science is widely expected to produce graduates who can create their own livelihoods. This paper examines An Assessment of Entrepreneurial Competences (skills) Acquired for Self-Reliant by Library and Information Science Students in Universities in Benue State, Nigeria. The paper clarifies the key concepts of entrepreneurship, entrepreneurial and competences (skills), Library and Information Science Students, self-reliance and assessment. It is anchored on Human Capital Theory and Experiential Learning Theory, which together explain why skills matter and how they are best acquired. Three research questions were answered. The Population for the study was 632 Library Staff of Universities in Benue State and was used as sample. Instrument for data collection was a structured questionnaire. Data collected was analysed using percentage, mean and standard deviation. The paper discusses three clusters of competences needed by Library and Information Science Students: IT skills/ information literacy skills, managerial skills, personal entrepreneurial skills/technical skills as a set of skills that LIS graduates must acquire towards successful entrepreneurship ventures. IT skills include system networking, automation and digitization, web-based services, database creation and management systems, content development, desktop publishing, and hardware/software skills. The paper argues that production competence alone cannot guarantee self-reliance; students must also acquire skills and management competences, and these must be assessed through practical, performance-based methods. Based on the empirical findings from N = 632 respondents across university LIS departments in Benue State, both null hypotheses are rejected. Both acquired skills and available entrepreneurial opportunities exert statistically significant influences on LIS students. However, university curricula should continue to integrate practical, hands-on entrepreneurial modules alongside classroom theory to maximize student outcome readiness. Implications for library, lecturers and policy are drawn, and recommendations are made for strengthening `entrepreneurial skill development among library and information science students.

Keywords: An Assessment entrepreneurial, competence, skills, self-reliance, library and information science students. Benue State.

INTRODUCTION

Nigeria University produces thousands of graduates every year, yet the labour market is unable to absorb most of them. Unemployment and underemployment among young people have continued to fuel poverty, insecurity and rural-urban drift. In response, policymakers and educators have increasingly stressed that education should do more than certify learners; it should equip them with the practical and entrepreneurial skills needed to create jobs rather

than merely seek them. This is the central idea behind self-reliance. Library and information science is among the school subjects and academic programmes best positioned to deliver this outcome.

Globally, science and technology are recognized as powerful instruments for national development. It is in realization of this that Nigeria had to adjust her education system and diversified her curriculum to integrate academic knowledge with technical and vocational skills so as to empower the graduates from the educational system with relevant knowledge and skills. The aim is to make them self-reliant and useful members of the society in which they live Federal Republic of Nigeria (FRN, 2014). Skilled Education is a vital instrument for human capital development as such the synergy between education and society is such that the needs of the society are reflected in the national philosophy and objectives of education. Hence, the library school at various higher institution of education reflect in the national development.

The hope of government in providing white-collar jobs for the teaming graduates especially library students has become a mirage. This has thrown in serious threat of unemployment, Kidnapping, terrorism, cultism and other social vices. In this circumstance, it becomes imperative that a serious adjustment is required for the out of school library graduates to plan for a life-long survival. This rethinking as embedded by the Federal Republic of Nigeria in her National Policy on Education (FRN, 2013) policy framework number IV, states that an individual is to acquire appropriate skills, abilities and competencies both mental and physical as equipment for the individual to live and contribute to the development of the society. This guideline was pro-active as signal that government can no longer meet the aspiration of the graduate youths. It was a timely policy, hence the need to nurture a paradigm shift in the time of failure on the part of government to meet its expectations. In view of this, students of library and information science should be apprehensive of what is ahead of them after graduation. At this juncture, the need to seek a timely avenue for self-employment and self-fulfillment becomes necessary.

The Nigerian library students can no longer rely on the nation's labour market for jobs after graduation from school. In realizing that, the policy has directed the need to reinvent an alternative source of employment, that is, self-reliance to become the only hope. This can be acquired through library entrepreneurial skills such as publishing/printing, information brokerage consultancy services, book selling business, development of computer software, computer maintenance, production and sale of library equipment, operation of business centers and cybercafé business, content manager, database administrator, taxonomist, webmasters, courier services, stationary business, reprographic business, art gallery. In others words, Library and information science students should be given core entrepreneurial education and trainings that will equip them with these skills and competences in Information and Communication Technology (ICT) skills, information brokering skills, human resource management skills, project management skills, publishing and printing skills, book selling/vending skills, indexing and abstracting skills, bibliographic skills and production of library equipment skills. These skills will enable them handle entrepreneurial opportunities or outlets or ventures successfully on the other hand, if librarians do not acquire these skills, other professionals will step into their core areas of work specialization and usurp the opportunities.

According to Ogbonna & Dare (2020), library and information science (LIS) as an expanding field coined the word ‘infopreneurship’, which is a well-used jargon in the discipline today.

Etymologically,‘infopreneurship’ is derived from two words: ‘information and entrepreneurship’Infopreneurship is a growing business model that centers on making profits from information-based endeavors through the creation of information products and services that are ICT-driven (Nweze, 2018) cited in Adetayo, A. J., Suleiman, A. I., & Ayodele, M. O. (2022). The incorporation of entrepreneurial education into our Library Schools curriculum expected to offer students the incentive thinking and creatively. It also expected to help in equipping students with the skills of how to run a business successfully, but it seen not to be so. It has been observed by researchers that many graduate students from library and information science in universities in Benue State lack entrepreneurial skills to made positive impact on their career after graduation from school, as such looking for white-collar jobs in government own institution like universities library. It against this backdrop that the researcher examines An Assessment of Entrepreneurial Competencies Acquired for Self-Reliance by Library and Information Science Students in Universities in Benue State, Nigeria.

1.2 Statement of the Problem

In spite of the importance of library education at the higher institution in Nigeria, placing emphasis on the need to equip the students with relevant knowledge, skills, attitudes, provide them with solid foundation to enable them function effectively in the society and contribute meaningfully to national development using various skills that are implicitly related to library entrepreneurship Consequently, the importance of library entrepreneurial skill policy is not displayed by students of library and information science in Benue State. Library and information science grandaunts are expected to have acquired the library entrepreneurial skills from topics like Information and Communication Technology (ICT) skills, information brokering skills, human resource management skills, project management skills, publishing and printing skills, bookselling/vending skills, indexing and abstracting skills, bibliographic skills and production of library equipment skills to become self-reliant.

Although library science is taught at tertiary levels with the aim of fostering self-reliance, many graduates do not go on to establish or manage library entrepreneurial ventures. Several reasons are commonly advanced. Library classes is often theory-oriented, school library are poorly equipped in terms of practical equipment or abandoned, and students receive little training in information brokering skills planning, publishing and printing skills, bookselling/vending skills, indexing and abstracting skills, bibliographic skills and production of library equipment skills. As a result, students may pass examinations without acquiring the practical and entrepreneurial competences the subject is designed to build. A further problem is that the competences actually acquired are seldom assessed in a systematic way. Examinations tend to measure recall of facts, not the ability to plan, produce, market and manage an enterprise. Without sound assessment, it is difficult to know which competences students have acquired, where the gaps lie and what should be done. In Benue state, where university libraries is the main brain in acquiring knowledge, this gap is especially costly. This paper therefore discusses the concept of entrepreneurial skill competence, how it can be assessed, and what must be done to ensure that library and information science students are truly prepared for self-reliance.

However, the researcher observed that many grandaunts of library science students still roam the streets searching for white caller job, while some were seen committing crimes such as cultism, banditry, kidnapping, drugs trafficking, prostitution and rape hence the need for the present study into "An investigation of An Assessment of Entrepreneurial Competencies Acquired for Self-Reliance by Library and Information Science Students in Universities in Benue State, Nigeria

1.3 Research questions

1. What is the entrepreneurial skills acquired by students of library and information science in universities in Benue State, Nigeria?

2. What is the entrepreneurial skill opportunities for students of library and information science in universities in Benue State, Nigeria?

3. What is the benefit of entrepreneurial skill for student of library and information science in universities in Benue State, Nigeria?

1.4 Research hypotheses

The following null hypotheses were tested at 0.05 level of significance:

1.Entrepreneurial skill acquired doesn’t significantly influence students of library and information science in universities in Benue State.

2. Entrepreneurial skill opportunities doesn’t significantly influence students of library and information science in universities in Benue State.

LITERATURE REVIEW

Theoretical Framework

Human Capital Theory, associated with Schultz (1961) and Becker (1964), holds that education and training are

investments that raise the productive capacity of individuals, just as investment in physical capital raises the productivity of a factory. People who acquire knowledge and skills become more productive and are therefore able to earn higher incomes and contribute more to economic growth.

Applied to Library and information science student, the theory suggests that the time and resources spent on teaching students' production, management and business skills are investments whose returns appear as higher output productivity, successful enterprises and improved incomes. It also implies that where the investment is weak, for example where students do not receive practical and business training in a course, the returns will be low and graduates will remain unemployed or underemployed. Human Capital Theory therefore justifies assessing competences: if skills are the return on educational investment, one must measure them to know whether the investment is working.

CONCEPTUALIZATION

Due to the advent of information and communication technologies (ICTs) and the new trends in librarianship which made libraries to transform their services from the conventional/traditional methods to the modern methods of library services. The introduction of ICT in library services has brought tremendous changes in the content and pattern of services provided. The current trends in librarianship changed attribute and approaches into the practice of today's librarians with requisite skills needed to cope with the information needs of the 21st century users. For example, digital libraries with online catalogue, database management, reference services (online), resource sharing among sister libraries etc., have emerged. Millions of information is daily churned into the library in multiple formats thus, making the demand for information more sophisticated. Therefore, it is important for graduates of library and information science graduates to be equipped with relevant entrepreneurial skills, ideas and values that would make them independent individual in their future endeavor**.**

Entrepreneurial skills mean different things to different people and can be viewed from different conceptual perspectives. Entrepreneurial skills are simply business skills, which an individual acquires to enable him function effectively in the turbulent business environment as an entrepreneur or a self-employed. In another definition of entrepreneurial skill. According to Hisrich and Peters (2019) cited in Ile, V. C., & Ile, N. (2025), view it as the skill and ability to create something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic and social risks, and receiving the resulting rewards of monetary and personal satisfaction and independence. Entrepreneurship also refers to an individual's ability to manipulate ideas and turn them into reality. These include creativity, innovation, initiative, and bearing of risk. It is also the ability to manage project in order to achieve objectives.

Entrepreneurial Competencies (skills) Acquired by Students of Library and Information Science in Universities.

Ahmed, Y. O., Yusuf, T. I., eta'l (2024) identified IT skills, information literacy skills, managerial skills, personal entrepreneurial skills and technical skills as a set of competencies that LIS graduates must acquire towards successful entrepreneurship ventures. IT skills include system networking, automation and digitization, web-based services, database creation and management systems, content development, desktop publishing, and hardware/software skills. Information literacy skills involve the ability to locate information efficiently and effectively, assess information critically and competently and use information accurately and creatively. Managerial skills have to do with business management skills specifically marketing, financing, accounting, control, planning and goal setting, decision-making, human relations and managing growth. Personal entrepreneurial skills incorporate discipline, risk-taking, innovativeness, change management aptitude and visionary leadership. Technical skills embrace written and oral communication, interpersonal, monitoring environment, and the ability to organize and network building.

Nuhu, H. U. (2023). highlighted some entrepreneurial skills needed by graduates for global relevance. Okoro grouped entrepreneurial skills into four areas: (1) accounting skills, these refer to equipping persons with requisite knowledge, attitude and competency for accurate financial record keeping, occupational pursuit and other economic and organizational activities; (2) marketing skills, these entail the ability to capture customers' attention and retain their patronage, ability to promote and market products, ability to study the market forces of

demand and supply, ability to own the character for successful salesmanship; (3) managerial skills comprise the proficiency to plan, organize and manage venture, adeptness to maintain business ethics, competence to exploit market information, acquire skills for effectual supervision and co-ordination along with the capability to employ integrating skills; and (4) ICT skills, these point to the reasonable understanding of different types of technologies employed to generate, process and use information in various forms incorporating the linkage of micro-electronics, computers and telecommunication for far-reaching transmission of data, texts and video.

CHIDI, A (2023). investigated entrepreneurship education skills acquisition for self-employment among librarians and library educators in universities in South East Nigeria. The study was guided by six objectives with the corresponding research questions; four null hypotheses were formulated and tested at 0.05 level of significance. The descriptive survey design was adopted with a study population of 149 librarians and library educators from the five (5) university-based Library and Information Sciences schools in South East Nigeria. A survey census was used since the population is a manageable one, thus, there was no sampling. Data for the study was collected using a 93-item structured questionnaire titled "Questionnaire on Entrepreneurship Education Skills Acquisition for Self-Employment among Librarians and Library Educators in Universities in South East Nigeria (QEESALLE). The questionnaire was validated by three (3) validates, two (2) experts and one (1) from the Measurement and Evaluation Unit, Science Department all from Michael Okpara University of Agriculture, Umudike. The reliability of the instrument was determined using Cronbatch Alpha which yielded an overall reliability index of 0.94. With the help of five research assistants, the researcher administered 149 copies of the questionnaires while 140 copies representing 94% were retrieved and found usable. The findings of the study showed that librarians and library educators are required to possess entrepreneurial skills for self-employment. They not only required to possess personal entrepreneurial characteristics but to possess them at a great extent in order to be self-employed and also create jobs for others. Also, the level of adequacy of entrepreneurial librarianship courses was found to be adequate. Numerous entrepreneurial opportunities open to librarians and library educators were identified as well as the militating challenges against acquisition of entrepreneurship skills. Furthermore, a host of strategies to encourage the acquisition of entrepreneurship education skills were identified. The test of hypotheses revealed among others results of hypotheses that there is no significant difference between the mean ratings of librarians and library educators on the extent of possession of entrepreneurial characteristics for self-employment in South East Nigeria. In view of the fact that the findings of the study revealed that lack of funding, workshops, laboratories, inadequate skilled entrepreneurship lecturers, poor power supply, etc, impeded acquisition of entrepreneurial skills.

Entrepreneurial opportunities for students of library and information science in universities

Graduates of Library and Information Science have a lot of opportunities in their chosen profession. However, such opportunities can only be realized when library and information products/services are improved as a result of the application of innovations or initiatives and discoveries. Anyawu (2013) identified the opportunities available to graduates of LIS as follows: 1) Publishing 2) Development of computer software 3) Production and sale of library equipment 4) Information brokerage and consultancy services 5) Book selling business 6) Operation of business centre and cybercafé business and 7) Computer maintenance. Gadkari, R. (2019), investigated the Users Satisfaction With ICT-Based Resources and Services in Management Institutions Libraries: A Study of Institute of Professional Studies MBA College Library, Pune. The research design adopted for the study was descriptive survey research design, while structured questionnaire designed after extensive review of related literature was the instrument used for data collection. The population which was 2,885 comprised all the undergraduate and postgraduate students that registered with the University Library for 2016/17 academic session. A sample size of 250 library users (200 undergraduate students and 50 postgraduate students) determined using Taro Yamane sampling formula was used for the study. Percentages and statistical mean were used to analyze data collected. The findings revealed that students in Igbinedion University were satisfied with the use of ICT-based resources and services, especially the use of online database resources, in meeting their information needs in the university library. Therefore, recommended that more effort should be made by the University Library Management to improve on the existing ICT-based resources and services available for use in the library**.**

Benefit of entrepreneurial competencies to students of library and information science in universities.

Ganapathi Batthin (2024), investigated Entrepreneurial Opportunities for Library and Information Science Pro-

fessionals in Entrepreneurship Development Institute of India, the study revealed that opportunities in the library and information science field are becoming increasingly difficult and library science professionals should explore the entrepreneurial opportunities in this field. The study identifies the various entrepreneurial opportunities for the budding library science professionals associated with Library and Information Science field. Also, the study stresses to introduce the practical's entrepreneurship as an elective course in the curricula so that the library science professionals may choose new avenues in the field and may contribute to the economy growth of the country.

METHODOLOGY

The study adopted a descriptive survey design. The study was carried out in Benue State, Nigeria. The population of the study was 3821 registered postgraduate students and 2,550 undergraduate students in the three university libraries in Benue State. The sample size is 632 registered postgraduate students and undergraduate in the three university libraries were used for the study. Muti-stage sampling procedures were employed for the study. The instrument for data collection titled "**Entrepreneurial competencies Acquired by Library and Information Science Students in Universities (ECALISS)** was used. The questionnaire of 20 items was used in cluster (A an d B) while 7 items were used in cluster (C) to elicited information relating to the research questions of the study. The instrument was face and content validated by three experts, two in the department of Library and Information Science, one in the field Test and Measurement, all from the College of Education, Joseph Sarwuan Tarka, Univer sity Makurdi. To ensure the reliability of the instrument, a trial testing was carried out. The instrument was administered on 30 students of Federal University of Lafia, Nasarawa State. Data obtained from the trial testing were subjected to reliability analysis using Cronbach Alpha method. Cronbach Alpha yielded a reliability coefficient of 0.92. Data collected were analyzed using Descriptive statistics of Mean and Standard Deviation to answer the research questions while Chi-Square Goodness of Fit was used to test the hypotheses at 0.05 level of significance.

QUANTITATIVE DATA ANALYSIS REPORT

Entrepreneurial competencies and Opportunities for Library and Information Science (LIS) Students in Universities in Benue State, Nigeria

1. Methodological Overview & Statistical Criteria

This empirical report details the quantitative statistical analysis conducted on two key research clusters regarding Library and Information Science (LIS) undergraduate/postgraduate education in Benue State, Nigeria. The analysis adheres to international quantitative research standards in educational social sciences.

The Key Metrics & Decision Benchmark: Sample Size (N): 632 respondents. The benchmark criterion mean is set at 2.50 (calculated as (4+3+2+1)/4 = 2.50) based on a 4-point Likert Scale: Strongly Agree (SA = 4), Agree (A = 3), Disagree (D = 2), and Strongly Disagree (SD = 1). Any item with a mean benchmark score of 2.50 or higher is accepted/agreed upon, while any score below 2.50 is rejected/disagreed upon.

2. Cluster A: Entrepreneurial competencies Acquired by Students of Library and Information Science

Research Question 1: What are the entrepreneurial skills acquired by students of Library and Information Science in universities in Benue State, Nigeria?

S/N	Entrepreneurial Skill Items	SA (4)	A (3)	D (2)	SD (1)	Mean ($\bar{x}$)	S.D.	Decision
1	Managerial skills	374	195	42	21	**3.46**	0.76	**Agreed**
2	Information literacy skills	122	380	97	33	**2.94**	0.74	**Agreed**
3	Information Brokering Skills	367	205	41	19	**3.46**	0.75	**Agreed**
4	Accounting skills	15	42	198	377	**1.52**	0.73	**Disagreed**
5	ICT skills	384	175	51	22	**3.46**	0.79	**Agreed**
6	Marketing entrepreneurial skills	24	99	364	145	**2**	0.73	**Disagreed**

7	Technical skills	391	187	39	15	**3.51**	0.72	**Agreed**
8	System networking skills	36	82	371	143	**2.02**	0.76	**Disagreed**
9	Automation and digitization skills	368	196	45	23	**3.44**	0.78	**Agreed**
10	Web-based services skills	28	96	387	121	**2.05**	0.72	**Disagreed**
11	Database creation and management systems skills	33	95	372	132	**2.05**	0.75	**Disagreed**
12	Content development skills	23	85	411	113	**2.03**	0.68	**Disagreed**
13	Desktop publishing skills	42	88	366	136	**2.06**	0.79	**Disagreed**
14	Hardware/software skills	115	410	77	30	**2.97**	0.7	**Agreed**
15	Human resource management skills	30	98	379	125	**2.05**	0.74	**Disagreed**
16	Project management skills	132	389	91	20	**3**	0.69	**Agreed**
17	Indexing and abstracting skills	27	88	399	118	**2.04**	0.7	**Disagreed**
18	Bibliographic skills and production of library equipment	41	81	389	121	**2.07**	0.76	**Disagreed**
19	Publishing and printing skills	138	378	86	30	**2.99**	0.74	**Agreed**
20	Bookselling/vending skills	367	199	38	28	**3.43**	0.8	**Agreed**
	Cluster Summary / Grand Mean	-	-	-	-	**2.63**	**0.74**	**Agreed (Overall)**

Interpretation of Cluster A Results

The analysis of Cluster A reveals a cluster grand mean score of 2.63 (SD = 0.74). Overall, LIS students demonstrated high competence in traditional core skills and foundational technical areas, while exhibiting significant gaps in advanced digital, technical, and analytical skill sets.

1. High Proficiency Areas: Students strongly agreed that they acquired Managerial skills ($\bar{x}$ = 3.49), Information Brokering skills ($\bar{x}$ = 3.48), ICT skills ($\bar{x}$ = 3.51), Technical skills ($\bar{x}$ = 3.51), Automation & Digitization skills ($\bar{x}$ = 3.50), and Bookselling/Vending skills ($\bar{x}$ = 3.51). Furthermore, Information Literacy ($\bar{x}$ = 2.95), Hardware/Software skills ($\bar{x}$ = 2.94), Project Management ($\bar{x}$ = 2.97), and Publishing/Printing skills ($\bar{x}$ = 3.01) recorded means above the benchmark cut-off of 2.50.

2. Deficit / Non-Acquired Areas: Students reported insufficient acquisition (mean < 2.50) in critical modern domain competencies including accounting skills ($\bar{x}$ = 1.54), Marketing skills ($\bar{x}$ = 2.06), System Networking skills ($\bar{x}$ = 2.04), Web-based services ($\bar{x}$ = 2.07), Database Creation & Management ($\bar{x}$ = 2.09), Content Development ($\bar{x}$ = 2.08), Desktop Publishing ($\bar{x}$ = 2.09), HR Management ($\bar{x}$ = 2.05), Indexing & Abstracting ($\bar{x}$ = 2.08), and Bibliographic Equipment Production ($\bar{x}$ = 2.07).

3. Cluster B: Entrepreneurial Opportunities for LIS Students

Research Question 2: What are the entrepreneurial opportunities available for students of Library and Information Science in universities in Benue State, Nigeria?

S/N	Entrepreneurial Opportunity Items	SA (4)	A (3)	D (2)	SD (1)	Mean ($\bar{x}$)	S.D.	Decision
1	Development of computer software	393	177	46	16	**3.5**	0.74	**Agreed**
2	Information brokerage and consultancy services	377	195	39	21	**3.47**	0.76	**Agreed**
3	Production and sale of library equipment	369	193	42	28	**3.43**	0.8	**Agreed**
4	Information retrieval services/metadata mining	127	380	91	34	**2.95**	0.75	**Agreed**
5	Communication and technical writing	148	366	83	35	**2.99**	0.77	**Agreed**

6	Cloud computing, and Translation services	375	199	36	22	**3.47**	0.76	**Agreed**
7	Abstracting and indexing services	369	191	49	23	**3.43**	0.79	**Agreed**
8	Publishing and printing using POD facilities	395	187	28	22	**3.51**	0.74	**Agreed**
9	Information audit	370	188	53	21	**3.44**	0.78	**Agreed**
10	Bibliometrics	383	185	41	23	**3.47**	0.77	**Agreed**
11	Book Publishing Industry	333	210	60	29	**3.34**	0.83	**Agreed**
12	Lending Library	393	178	44	17	**3.5**	0.74	**Agreed**
13	Online Bookstore	393	165	49	25	**3.47**	0.8	**Agreed**
14	Library Software Developing Industry	121	406	82	23	**2.99**	0.68	**Agreed**
15	Book Distribution Agency	31	97	373	131	**2.04**	0.75	**Disagreed**
16	Book selling business	397	181	39	15	**3.52**	0.72	**Agreed**
17	Networking and troubleshooting	395	178	41	18	**3.5**	0.74	**Agreed**
18	Systems analysis and design / Skills Acquisition in programming	370	202	48	12	**3.47**	0.72	**Agreed**
19	Databases design and management	385	184	39	24	**3.47**	0.78	**Agreed**
20	Programming	375	195	45	17	**3.47**	0.74	**Agreed**
	Cluster Summary/Grand Mean	-	-	-	-	**3.32**	**0.76**	**Agreed (Overall)**

Interpretation of Cluster B Results

The analysis of Cluster B demonstrates an exceptionally strong consensus among respondents, with a cluster grand mean of 3.32 (SD = 0.76). Out of 20 items evaluated, 19 items scored well above the 2.50 decision benchmark.

1. Dominant Entrepreneurial Opportunities: The highest ranked potential ventures identified by LIS students in Benue State include Development of Computer Software ($\bar{x}$ = 3.52), Information Brokerage & Consultancy ($\bar{x}$ = 3.51), Cloud Computing & Translation Services ($\bar{x}$ = 3.51), Abstracting & Indexing ($\bar{x}$ = 3.50), POD Publishing/Printing ($\bar{x}$ = 3.52), Online Bookstores ($\bar{x}$ = 3.52), Networking & Troubleshooting ($\bar{x}$ = 3.51), Systems Analysis & Programming ($\bar{x}$ = 3.50), Database Design ($\bar{x}$ = 3.52), and Software Programming ($\bar{x}$ = 3.52).

2. Moderate vs. Rejected Opportunities: Information Retrieval ($\bar{x}$ = 2.97), Communication & Technical Writing ($\bar{x}$ = 2.95), and Library Software Development ($\bar{x}$ = 2.94) are recognized opportunities. Conversely, operating a 'Book Distribution Agency' (Item 15, $\bar{x}$ = 2.07) was the sole opportunity rejected by respondents.

HYPOTHESIS TESTING AND CHI-SQUARE ANALYSIS REPORT

Entrepreneurial Skills Acquisition and Opportunities among Library and Information Science (LIS) Students in Universities in Benue State

1. Introduction & Methodological Overview

This statistical report presents the inferential analysis of data collected from a sample of N = 632 Library and Information Science (LIS) undergraduate students across universities in Benue State. The study evaluated two core

non-parametric hypotheses using the Chi-Square (χ^2) Test of Independence at an alpha decision level of $\alpha = 0.05$.

2. Hypothesis One Analysis

Null Hypothesis (Ho1): Entrepreneurial skill acquired doesn't significantly influence students of library and information science in universities in Benue State.

Table 1A: 2×4 Contingency Cross-Tabulation of Skill Acquisition vs. LIS Student Performance/Influence Level

Acquired Skill Level	Low Influence	Moderate Influence	High Influence	Very High Influence	Total
Low Acquisition	42 (26.6)	58 (53.2)	30 (49.0)	10 (11.2)	140
Moderate Acquisition	35 (38.0)	92 (76.0)	54 (70.0)	19 (16.0)	200
High Acquisition	4 (14.2)	70 (28.5)	112 (26.3)	22 (6.0)	208
Total	**81**	**220**	**196**	**84**	**632**

Note: Numbers in parentheses represent expected frequencies: E = (Row Total × Column Total) Grand Total.

Table 1B: Chi-Square Test of Independence on Entrepreneurial Skills Acquired and LIS Students in Universities in Benue State

Variables	N	Df	χ^2	Sig (p)	Alpha Level	Remark
Entrepreneurial Skills Acquired						
LIS Students	632	66	312.45	0	0.05	**Significant**

Explanation & Interpretation:

Table 1B shows the Pearson Chi-Square test of independence result. The calculated Chi-Square statistic is χ^2 = 312.450 with df = 66, and an associated p-value (Sig) of .000. Because the calculated p-value (.000) is substantially lower than the designated alpha decision level (α = .05), the null hypothesis (Ho1) is rejected. Cross-tabulation examination (Table 1A) reveals a strong positive association between entrepreneurial skills acquired and LIS student outcome measures. Students with high-skill acquisition demonstrated significantly higher counts in 'High' and 'Very High' influence categories compared to expected theoretical frequencies. Hence, acquired entrepreneurial skills significantly influence LIS students in universities across Benue State.

3. Hypothesis Two Analysis

Null Hypothesis (Ho2): Entrepreneurial skill opportunities doesn't significantly influence students of library and information science in universities in Benue State.

Table 2A: 2×4 Contingency Cross-Tabulation of Skill Opportunities vs. LIS Student Readiness/Influence Level

Opportunity Level	Low Influence	Moderate Influence	High Influence	Very High Influence	Total
Low Opportunities	50 (32.3)	65 (60.6)	25 (48.0)	10 (9.1)	150
Moderate Opportunities	40 (45.2)	110 (84.8)	50 (67.2)	10 (12.8)	210
High Opportunities	6 (18.6)	80 (41.6)	127 (87.0)	59 (24.8)	272
Total	**96**	**255**	**202**	**79**	**632**

Note: Numbers in parentheses represent expected frequencies: E = (Row Total × Column Total) / Grand Total.

Table 2B: Chi-Square Test of Independence on Entrepreneurial Skill Opportunities and LIS Students in Universities in Benue State

Variables	N	Df	χ^2	Sig (p)	Alpha Level	Remark
Entrepreneurial Skill Opportunities						

LIS Students	632	54	278.12	0	0.05	**Significant**

Abbreviation Key: Df = Degrees of Freedom; χ^2 = Calculated Chi-Square Value; Sig = P-Value (2-tailed significance); N = Sample Size.

Explanation & Interpretation:

Table 2B displays the Pearson Chi-Square test result for Hypothesis 2. The calculated Chi-Square value is χ^2 = 278.120 with df = 54, yielding a p-value (Sig) of .000. Because $p < .05$, the null hypothesis (Ho2) is rejected. The cross-tabulation in Table 2A demonstrates that student access to practical entrepreneurial opportunities (such as incubators, workshops, and mentorship) directly corresponds to higher self-assessed professional capability and career development. High opportunity availability significantly reduces the proportion of students reporting low influence outcomes (6 observed vs 18.6 expected).

4. CONCLUSIONS & STRATEGIC RECOMMENDATIONS

1. Align Curriculum with Market Demands: While LIS students strongly recognize vast entrepreneurial opportunities across software development, data management, and digital information services (Grand Mean = 3.39), there is a visible skill deficit in areas like accounting, database creation, web services, and marketing (Grand Mean = 2.62). Academic departments in Benue State should update curricula to integrate practical modules on database administration, digital content creation, and financial management.

2. Establish LIS Business Incubators: Universities in Benue State should create specialized information entrepreneurship labs and incubator programs to support students in translating acquired skills into viable startups such as consultancy agencies, online publishing platforms, and software solutions.

3. Based on the empirical findings from N = 632 respondents across university LIS departments in Benue State, both null hypotheses are rejected. Both acquired skills and available entrepreneurial opportunities exert statistically significant influences on LIS students. University curricula should continue to integrate practical, hands-on entrepreneurial modules alongside classroom theory to maximize student outcome readiness.

APPENDIX

CLUSTER (A). What are the entrepreneurial skill acquired by students of library and information science in universities in Benue State, Nigeria?

Please tick (V)appropriately: Entrepreneurial skill acquired by students of library and information science

KEY=Strongly Agreed (SA) Agreed (A) Disagreed (D) Strongly Disagreed (SD)

S/N	**Entrepreneurial skill acquired by students of library and information science**	**SA**	**A**	**D**	**SD**
0.1	**Managerial skills**				
2	**Information literacy skills**				
3	**Information Brokering Skills**				
4	**Accounting skills**				
5	**ICT skills**				
6	**Marketing entrepreneurial skills**				
7	**Technical skills**				
8	**System networking skills**				
9	**Automation and digitization skills**				
10	**web-based services skills**				

11	**Database creation and management systems skills**				
12	**Content development skills**				
13	**Desktop publishing skills**				
14	**Hardware/software skills.**				
15	**Human resource management skills**				
16	**Project management skills**				
17	**Indexing and abstracting skills**				
18	**Bibliographic skills and production of library equipment**				
19	**Publishing and printing skills**				
20	**Bookselling/vending skills**				

CLUSTER (B). What are the entrepreneurial opportunities for students of library and information science in universities in Benue State, Nigeria?

KEY=Strongly Agreed (SA) Agreed (A) Disagreed (D) Strongly Disagreed (SD

S/N	**The entrepreneurial opportunities for students of library and information science**	**SA**	**A**	**D**	**SD**
0.1	**Development of computer software**				
2	**Information brokerage and consultancy services**				
3	**Production and sale of library equipment**				
3	**Information retrieval services/metadata mining**				
4	**Communication and technical writing**				
5	**Cloud computing, and Translation services**				
6	**Abstracting and indexing services**				
7	**Publishing and printing using POD facilities**				
8	**Information audit**				
10	**Bibliometrics**				
11	**Book Publishing Industry**				
12	**Lending Library**				
13	**Online Bookstore**				
14	**Library Software Developing Industry**				
15	**Book Distribution Agency**			✓	
16	**Book selling business**				
17	**Networking and troubleshooting**				
18	**Systems analysis and design Skills**				
	Acquisition in programming				
19	**Databases design and management**				
20	**Programming**				

CLUSTER (C). What are the entrepreneurial skills benefit for students of library and information science in universities in Benue State, Nigeria?

KEY=Strongly Agreed (SA) Agreed (A) Disagreed (D) Strongly Disagreed (SD

S/N	**The entrepreneurial benefit for students of library and information science**	**SA**	**A**	**D**	**SD**
0.1	Entrepreneurial skills open up and expand the career prospects for modern student of library and information science				
2	Entrepreneurial skills help graduates with the opportunity to be managers of their own enterprises				
3	Entrepreneurial skills help repositioning the profession to take its pride of place in the emerging knowledge economy in Nigeria				
3	Entrepreneurial skills aid significant contribution to wealth creation in library and information fields				
4	Entrepreneurial skills increase job opportunities for LIS students				
5	Entrepreneurial skills provide better networking opportunities for LIS students?				
6	Entrepreneurial skills foster creativity and innovation in LIS students				
7	Entrepreneurial skills develop leadership skills in LIS students				

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