Entrepreneurship Opportunities for Library and Information Science Degree Holder: - An Analytical Study

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April 2024

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I

DECLARATION BY STUDENT

I hereby declare that the data presented in this Dissertation report "**Entrepreneurship Opportunities for Library and Information Science Degree Holder: - An Analytical Study**" is based on the results of investigations carried out by me in the **Library and Information Science at the D.D. Kosambi School of Social Sciences and Behavioural Studies, Goa University** under the Supervision of **Mr. Rohan L. Parab** and the same has not been submitted elsewhere for the award of a degree or diploma by me. Further, I understand that **Goa University** or its authorities will not be responsible for the correctness of observations/experimental or other findings given in the dissertation.

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COMPLETION CERTIFICATE

This is to certify that the dissertation report **"Entrepreneurship Opportunities for Library and Information Science Degree Holder: - An Analytical Study"** is a Bonafide work carried by **Ms. Pooja Bhaskar Bhandari** under my supervision in partial fulfilment of the requirements for the award of the degree of **MLISc.** in the Discipline **Library and Information Science** at the **D.D. Kosambi School of Social Sciences and Behavioural Studies, Goa University.**

Mr. Rohan L. Parab

Date: 19th April 2024

Signature of Dean of the School/Programme Director   School/Programme Stamp

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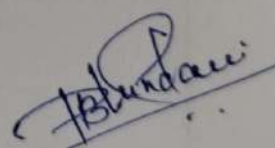
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III

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CHAPTER I

INTRODUCTION

CHAPTER I

INTRODUCTION

1.1 INTRODUCTION

Entrepreneurship has been frequently explored in academic and industrial circles, especially in relation to concerns affecting emerging economies. The concept of sustainable development is increasing in popularity, particularly with the rapid evolution of information and communication technologies (ICTs). Entrepreneurship is the process of creating, launching, and running a new business venture. It involves taking risks, innovating, and problem solving. Entrepreneurship skills are the abilities and competencies that enable entrepreneurs to succeed in their ventures. Some of these skills include creativity, opportunity recognition, problem-solving approaches, communication, teamwork, leadership, resilience, self-motivation, etc. LIS degree holders are well-positioned to become entrepreneurs in the rapidly evolving information management landscape. With the rise of technology and information complexity, they can offer innovative solutions and services in areas like digital archiving and knowledge management. This shift in traditional librarian roles can transform them into dynamic information entrepreneurs. The aims of the researchers were to unveil contemporary trends in entrepreneurship, some self-employment businesses, soft skills needed to create wealth and employment, and small business opportunities for graduates in the information science and business education professions. Entrepreneurial opportunity exists where there is a need, want, problem, or challenge in librarianship that can be addressed, solved, or satisfied in an innovative way. It is about the recognition or discovery of new ways of providing library and information services and allied or information-related services.

1.2 OBJECTIVES

Research is an analytical study done with the establishment of a set of objectives. Objectives state the primary purpose of the research that has been undertaken; they also state what will or will not be addressed. The present study is carried out with the following aims and objectives:

1. To determine factors essential elements for entrepreneurship among LIS students.
2. To ascertain different entrepreneurship opportunities in the fields of library and information science.
3. To explore the need for creating awareness about entrepreneurship prospects in the fields of library and information science.
4. To identify the skills and competencies required for entrepreneurship through a LIS degree.

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1.3 SCOPE OF THE STUDY

The scope of the study will highlight the skills required to be an entrepreneur in library and information science. Moreover, the study also endorses different alternatives for the LIS aspirants who wishes to be an entrepreneur. This study will also allow the library and information science degree holders to learn about the technicalities required to be an entrepreneur in the library field.

1.4 LIMITATIONS

This study is confined only to degree holders in library and information science.

1.5 HYPOTHESIS

- The concept of entrepreneurship among LIS in its infancy stage.
- Conventional library mind-set supports the library entrepreneurship initiative.

1.6 RESEARCH METHODOLOGY

The researcher has browsed most of the literature available on this topic in open access. Further, the researcher has visited a maximum number of websites related to the topic. Based on the literature review, the researcher will identify the vulnerability of libraries. The research design adopted in this study will be a survey method. The research instrument employed will be a questionnaire in the form of Google Forms to gather the data. In this questionnaire, both open-ended and closed-ended types of questions will be included according to the nature of the objectives. The researcher will discuss the topic with experts to analyse its functioning. The researcher will make use of suitable statistical techniques in finalizing the data and will make use of charts and graphs in the presentation of results to make the interpretation clear and precise.

1.7 POPULATION OF THE STUDY

This study is confined to the alumni of Goa University and IGNOU Library and Information Science who have passed out from the year 2013 to 2023, either with a BLISC or MLISC degree.

1.8 ORGANIZATION OF THE STUDY

Chapter I – Introduction

Chapter II – literature review

Chapter III – Background of the study

Chapter IV – National / International

Chapter V – Data analysis

Chapter VI – Finding/ Suggestion/ Hypothesis testing and Conclusion

1.9 CONCLUSION

This study will benefit various library and information science post graduates in taking up entrepreneurial opportunities available in LIS field. Ascertain different avenues existing in this field and what needs to be done to achieve the same and come out as a successful entrepreneur.

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CHAPTER II

LITERATURE REVIEW

Chapter II

Literature Review

2.1 Literature Review

A research study must have a literature review as it is critical for researchers to be aware of the quality and content that has been developed on a particular topic well in advance.

The study explores the concept of entrepreneurship skills and opportunities for professionals in the fields of library and information science.

1. "Contemporary Issues on Entrepreneurship in Information Science and Business Education Professions: Implications to Education of Nigeria Tertiary Institutions" by **(Oghenetega & Ugeh, , 2014)** in their paper discuss the role of entrepreneurship in the field of business education and information science, and how it affects tertiary education in Nigeria. The article highlights current business trends, self-employment options, and soft skills required to build wealth, employment, or small businesses for Nigerian graduates in the fields of business education and library and information science. Choosing entrepreneurial education for undergraduate students is imperative for Nigerian higher education institutions to prevent the development of a high number of unemployed graduates and socially unwell youth. These graduates introduced in small-scale entrepreneurial business can assist to solve current problems and guarantee a more sustainable future for Nigeria's youth.

2. The article "Entrepreneurial Opportunities in Librarianship" by **(Muhammad & Giri, August. 2019)** this article focuses on the business prospects available to librarians and discusses the concept of entrepreneurial librarianship. In order to satisfy users' needs in novel and inventive ways, it represents librarians as entrepreneurs who can start or provide information services and products. It also highlights the essential components that every librarian must have in order to be creative and function within the system of global information services, including the book publishing sector, library software development, online bookstores, digital books, and book binding workshops. It also focuses on the steps in the

entrepreneurial growth process, such as selecting possible targets, locating local talent and markets, choosing the ideal site, and creating an entrepreneurship program as needed.

3. According to the **(Batthini, January 2014)** "Entrepreneurial opportunities for library and information science professionals" explores that 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 also identifies the various entrepreneurial opportunities for the budding library science professionals in the field of library and information science.

4. "Entrepreneurship education for library and information science professionals in Nigeria: a critical review" by **(Ogar, Nkanu, & Eyo, 2014)** this paper examined the concept for Entrepreneurship education and highlighted its brief historical review in Nigeria. It assessed the current condition and defended the importance of information business in modern library and information science programs by providing a brief historical overview of Nigerian library education. The paper also concluded by recommending that library schools evaluate their programs and reorganise themselves better in order to fulfil their set goals. They need to collaborate with willing and reputable industries to design and establish a well-conceived curriculum and programs in order to meet their expectations.

5. According to the **(Musa & Tsafe, 2019)** "Entrepreneurship opportunities for graduates of library and information science" the author Investigated and discussed a number of opportunities that graduate of library and information science (LIS) can explore to get employment and become self -reliant. Entrepreneurship has been identified as a solution to the problems of unemployment being experienced in most economies of the world. This is because it provides a lot of opportunities for employment, self-reliance, skills and knowledge development and success in life. Graduates of LIS sometimes find it difficult to secure jobs after graduation.

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6. The qualitative study "Entrepreneurship Opportunities for Library and Information Science Graduates" by **(Butt & Ahmad, 2022)** focuses on the changing roles and opportunities for people with a background in Library and Information Science (LIS) in entrepreneurial organizations. The study explores the experiences, issues, and successes of LIS graduates who have explored entrepreneurial enterprises in the dynamic field of information management through in-depth qualitative analysis.

7. **(Stanley & Oghenetega, 2021)** "Entrepreneurship Skills and Opportunities for Librarians in the Field of Library and Information Science: A Perspective in View". The paper investigates entrepreneurship skills and prospects for librarians, an intriguing and generally ignored element of the library and information science world. The paper's perspective adds an essential layer to librarians' traditional roles, putting light on their capacity to engage in entrepreneurial initiatives. The author also effectively shows the different opportunities for librarians to take advantage of their abilities and embrace entrepreneurship. This includes topics like information consulting, content development, and digital services, showing a forward-thinking attitude to the field.

8. "Educating the entrepreneurial librarian" by **(Crumpton & Bird, 2019)** this article will discuss the value of applying or including an entrepreneurial education component into LIS programs. Changes in to internship experiences can also help students engage more broadly and redefine how to provide library resources and services in an uncertain future. Library and Information Studies (LIS) education is changing to meet the needs of a dynamic, information-seeking public by infusing new skills development into the education process. This includes new ways to teach from a theoretical point of view in the classroom, new partnerships and expectations, and learning from practitioners through, internships, and volunteering. Embracing innovation and entrepreneurship within the education framework for library and information science education will ensure a profession that can change and be sustainable into the future.

9. **(Ugwu & Ezeani, 2012)** "Evaluation of Entrepreneurship Awareness and Skills among LIS Students in Universities in South East Nigeria" The study explored the knowledge and abilities of library and information science (LIS) students at two universities in Nigeria regarding entrepreneurship. If students in Nigeria's library and information science program are to be prepared to pursue careers in information management and have access to a variety of entrepreneurship jobs, the curriculum needs to be completely reorganized. To keep their relevance and identity in a quickly evolving digital age, educators must retrain and respond to these new demands in order to move their profession to new heights.

10. **(Anyanwn, Oduagwu, Ossai-Onah, & Amaechi, August 2013)** "Repositioning Library and Information Science Graduates in Nigeria for Self-Employment through Entrepreneurship Education". A reason for repositioning graduates in libraries and information for self-employment is one of the paper's major features. This article discusses the concept of entrepreneurship, the benefits of entrepreneurship education, the opportunities for self-employment that Nigerian graduates in library and information science have, and the issues that restrict the success of entrepreneurship education in Nigerian library institutions. The study made the case that self-employment will be difficult for library and information science graduates and that entrepreneurship education in these fields will not pay off if efforts are not made to guarantee that the curriculum is practical.

11. **(Edewor & Omosor, 2012)** "Reflections on prospects of entrepreneurial librarianship in Nigeria" The paper introduces the concept of entrepreneurial librarianship, highlighting the role of librarians as innovative entrepreneurs offering creative information services. It emphasizes the need for specific training to thrive in a competitive environment dominated by giants like Google and Amazon. Key ingredients for entrepreneurial success include risk-taking, collaboration, change initiation, diverse reading, and continuous international best practice assessment. The paper suggests extending this training to graduates in Library and Information Science, aiming to empower individuals with the necessary skills for global competitiveness.

12. **(Emiri & Emojorho, 2020)** "Entrepreneurship Development in University Libraries in the South- south Zone of Nigeria" The study explores entrepreneurship development in Nigeria's South-South Zone university libraries, focusing on reskilling, opportunities, and challenges for library and information science practitioners. Despite having the necessary skills, there is a low perception of entrepreneurship among practitioners. The study highlights diverse career opportunities and challenges in entrepreneurship, but no significant relationship exists between professional characteristics and entrepreneurship perception. This suggests a potential disconnect between skillset and awareness, necessitating targeted interventions to boost entrepreneurial mind-set.

13. "A systematic review on the learning outcomes in entrepreneurship education within higher education settings." By **(Wong & Chan, 2022)** this literature review, spanning 2000 to 2020, examines the current learning outcomes in entrepreneurship education programs in higher education. Based on 133 peer-reviewed articles, it provides a framework for understanding how these outcomes impact individuals, institutions, and society. The review offers insights for curricular design and educational settings, emphasizing the need for clarity in learning outcomes to improve effective teaching in entrepreneurship education. The study underscores the importance of clearer learning outcomes for societal innovation and opportunity creation.

14. **(Olayinka & Asafe, 2014)** "Multilingual Web-Based Entrepreneurship Library: An Approach in Enhancing Library System to Entrepreneurship Processes and Development, Job Creation and Entrepreneurship Education" The study emphasizes the importance of entrepreneurship in addressing global unemployment and societal issues. It suggests a multilingual web-based entrepreneurial library to address the lack of relevant information, linking political turmoil and crime to unemployment. The platform would provide public access to entrepreneurial resources at low or free costs, allowing administrators and users to retrieve, post, and download information. The deployment of this

system is expected to increase the significance of libraries in promoting business, development, education, and employment growth.

15. **(Amiri & Marimaei, 2012)** "Concept of Entrepreneurship and Entrepreneurs Traits and Characteristics" This study looks into the ideas of entrepreneurship, entrepreneurs, and entrepreneurship training. Reviewing the developing literature, it emphasizes the agreement on entrepreneurship in the face of unpredictable environmental changes, arguing that good reflexes and innovation are critical for organizational survival under strong competition. The paper advises building a hospitable environment for recruiting potential entrepreneurs and promoting their growth by emphasizing flexibility, innovation, and growth. Developing an entrepreneurial spirit inside an organization requires educational infrastructure, leadership commitment, and the development of an entrepreneurial attitude.

16. **(Awurdi & Mohammed, 2018)** "An Investigation of Entrepreneurship Awareness and Skills among Library Information Science Students at Bauchi Metropolitan Universities." The study examines entrepreneurship skills and awareness among library and information science students in Bauchi metropolitan universities, focusing on two public universities in Bauchi State. The research, using primary data, found that these students are adequately equipped with entrepreneurship skills. However, the study suggests the need for ongoing support from stakeholders, including the government and corporate entities, to prepare students for post-graduation labour market challenges. Recommendations include prioritizing practical training courses in entrepreneurship and encouraging students to engage in real-life projects related to entrepreneurship skills.

17. **(Maria , Scholastica, & Agim, 2019)** "Analysis of Entrepreneurship Courses of Library and Information Science Schools in South-East Geo-Political Zone of Nigeria." The study examined entrepreneurship courses in Library and Information Science (LIS) education in Nigeria's South-East Geo-political zone. It involved 300 and 400 level students from five LIS schools and distributed

1041 questionnaires. The findings highlighted the need for a standardized and equal LIS curriculum to ensure graduates' confidence, creativity, and contribution to Nigeria's economic development. Recommendations include collaboration among educational stakeholders, the National Association of Library and Information Science Educators, and LIS department heads to harmonize entrepreneurship education curricula.

18. **(Faulkner, 2017)** "Entrepreneurship resources in US public libraries: website analysis." The study examines entrepreneurship resources on the web pages of 46 US public libraries, assessing their support for entrepreneur patterns and suggesting areas for improvement. It identifies strengths in catalog search results but suggests improvements in site search-all box results. The study also suggests a clearer delineation of physical spaces for entrepreneurs and potential growth in partnerships with community organizations. The presence of a prominently promoted business librarian is recommended. Overall, US public libraries offer diverse resources and business expertise.

19. **(Aagaard & Arguello, 2015)** "Practical approaches to compliance for entrepreneurial uses of licensed databases in libraries." This article discusses the use of library business resources for entrepreneurial activities and provides guidance on contract compliance risks. It focuses on online business resources, as contracts for these resources are more complex than standard database licenses. Librarians working with entrepreneurs may not understand licensing limitations, but are responsible for informing researchers about appropriate use of library resources. The literature review reveals that most literature on database licensing is directed at staff directly negotiating licenses, and there is little understanding of licensing restrictions for end users. The article lists two key responsibilities for business librarians working with entrepreneurs: to inform researchers about acceptable database uses and alert license negotiation staff about new entrepreneurial engagement with library subscription products.

20. "Toward core competencies for entrepreneurship librarians." By **(Toane & Figueiredo, Toward core competencies for entrepreneurship librarians, 2018)** This article explains the findings of a study of North American academic librarians who encourage campus entrepreneurship, with the goal of describing their work duties, abilities, and experiences while taking into consideration the impact of the campus environment on their participation. Using a contextual approach, the study determines skills by modifying and rating many sources. Key competencies include research services, outreach, market and industrial research, and innovation. Overall, the findings shed light on the complex duties and distinct skill sets necessary to effectively promote campus entrepreneurship in academic library contexts.

21. **(Ilorah, Nwofor, & Onwudinjo, 2016)** "Entrepreneurial skills acquisition of library and information science students in Nigeria: challenges and prospects". Nigeria's graduate unemployment is a major issue, causing societal issues like armed robbery, human trafficking, and drug addiction. To address this crisis, the Federal Government has introduced entrepreneurship education in universities since 2007. This paper explores factors driving graduate unemployment in Nigeria, focusing on library and information science graduates. It also explores challenges in acquiring entrepreneurial skills and provides recommendations for mitigating them. The study emphasizes the importance of entrepreneurship education in empowering graduates for economic self-sufficiency.

22. **(Ngwuchukwu, Onyebuchi, & Babalola, 2022)** "Entrepreneurship in Library and Information Services" is a comprehensive book that delves into the intersection of entrepreneurship and the field of Library and Information Science (LIS). Authored by experts in the field, this book offers a detailed exploration of how LIS professionals can harness entrepreneurial principles and practices to innovate, create value, and address emerging challenges in information services. The book covers a wide range of topics related to entrepreneurship in LIS, including the evolving role of LIS professionals in the digital age, opportunities for entrepreneurial ventures within libraries and information centres, strategies for identifying and capitalizing on market needs, and practical guidance for

developing business plans, securing funding, and managing entrepreneurial projects.

23. **(Ekpoh & Edet , 2011)** "Entrepreneurship Education and Career Intentions of Tertiary Education Students in Akwa Ibom and Cross River States, Nigeria". The study examines the impact of entrepreneurship education on the career intentions of 500 students from two Nigerian universities. The research uses a structured questionnaire, the Entrepreneurship Education and Career Intentions Questionnaire (EECIQ), to analyse the data. Results show that exposure to entrepreneurship education significantly influences tertiary students' career intentions. The study also highlights the positive impact of entrepreneurship education on students' understanding of entrepreneurial processes. The findings suggest a shift from job-seeking to job-creating mind-sets among graduates, potentially addressing unemployment issues.

24. **(Christe, Bhatt, McGee, & Wolfish, 2017)** "Entrepreneurship, Engineering, Innovation and Libraries: Empowering Innovators with Information". The paper discusses the role of universities in promoting innovation and entrepreneurship, particularly in capstone senior design courses. It highlights a workshop conducted by Drexel University, University of Pennsylvania STEM libraries, and the IEEE professional society to raise student awareness of campus resources supporting entrepreneurship. The study emphasizes the importance of entrepreneurship education in a rapidly changing global economy and the role of libraries in the entrepreneurial landscape. The experiment led to the launch of a blended online PITCH competition, showcasing the potential of entrepreneurial offerings.

25. **(Howard, Zwicky, & Margaret, 2018)** "Academic Libraries Support Cross-Disciplinary Innovation and Entrepreneurship". The article highlights the role of academic libraries in fostering innovation and entrepreneurship across various disciplines. Libraries act as dynamic hubs, connecting aspiring entrepreneurs with resources and services. They facilitate cross-disciplinary collaborations,

allowing the exchange of ideas and expertise. Libraries nurture a culture of innovation by providing mentorship programs, access to maker spaces, and patent research assistance. They also embrace inclusivity and diversity, ensuring equal access to entrepreneurial success for all members of the academic community.

26. **(Larijani, Nejad, & Yazdani, 2015)**"A Study of Influence of Entrepreneurship Teaching Workshops on the Increase of Creativity and Innovation of the Payam-E- Noor Universities of the Mazandaran Province Case Study: Payam- E-Noor Universities of the Mazandaran Province's West". The study examines the impact of entrepreneurship education workshops on creativity and innovation among students at Payam-E-Noor universities in Mazandaran province. The research uses a descriptive survey-correlation method to examine traits related to success, independence, risk-taking, creativity, and innovation. The results show that traits related to success and independence, supported by entrepreneurship teaching workshops, positively influence creativity and innovation. However, the hypothesis related to risk-taking traits is not confirmed. Overall, the research suggests that entrepreneurship education workshops positively enhance students' creativity and innovation.

27. **(Ntui, 2015)**"Examining the Attitude of Library and Information Science (LIS) Students in University of Calabar (Unical) towards Entrepreneurship". The study examines the entrepreneurial attitudes of Library and Information Science (LIS) students at the University of Calabar. The research, which involved 54 participants, found that 40% of the students had an intention to become entrepreneurs, 58% had entrepreneurial competence, and 37% had a positive view of entrepreneurship desirability. The study emphasizes the importance of fostering entrepreneurial attitudes among students and advocating for entrepreneurship education in tertiary institutions. It concludes that cultivating entrepreneurial attitudes is crucial for economic growth and sustainable entrepreneurship development.

28. **(A. Whealtey & S. Armstrong, 2021)** "Entrepreneurship research guide design at Canadian university libraries". The study examines entrepreneurship research guides from 17 Canadian universities, focusing on resource prioritization and online instructional strategies. It identifies gaps in certain subjects compared to the core competency rankings. The study offers valuable insights for entrepreneurship librarians to identify gaps in their online guides and improve their comprehensiveness and effectiveness by benchmarking against other institutions.

29. "What are we talking about when we talk about entrepreneurship" by **(Gartner, 1990)** The article explores the various definitions and interpretations of entrepreneurship, highlighting its dynamic and evolving character. Gartner examines how entrepreneurship is conceptualized and studied within different disciplines, shedding light on the interdisciplinary nature of the field. He emphasizes the importance of understanding the diverse perspectives on entrepreneurship to facilitate meaningful research and policy discussions.

30. **(Gupta & Rubalcaba, 2021)** "University libraries as open innovation partners: Harnessing hidden potential to foster global entrepreneurship". The article emphasizes the vital role of university libraries in providing market knowledge, enabling resource-constrained companies to grow internationally. It emphasizes the importance of sharing knowledge within the innovation ecosystem for data-driven decisions and avoiding reliance on gut feelings. The article also highlights the benefits of university libraries for entrepreneurial globalization, promoting the use of libraries as valuable resources for market insights and strategic growth, and urging increased collaboration between libraries, entrepreneurs, and startups.

31. **(Khuntia & Mishra, 2019)** "Role and support of libraries towards India's start-up and stand-up entrepreneurship movement program". The article emphasizes the vital role of university libraries in providing market knowledge, enabling resource-constrained companies to grow internationally. It emphasizes the importance of sharing knowledge within the innovation ecosystem for data-driven decisions and avoiding reliance on gut feelings. The article also highlights

the benefits of university libraries for entrepreneurial globalization, promotes the use of libraries as valuable resources for market insights and strategic growth, and urges increased collaboration between libraries, entrepreneurs, and startups.

32. **(Scanlon & Crumpton, 2011)** "Re-conceiving Entrepreneurship for Libraries: Collaboration and the Anatomy of a Conference". This paper highlights the collaborative effort between The University of North Carolina at Greensboro and Wake Forest University to showcase entrepreneurial activities in librarianship. The project organized a conference to celebrate the unique talents of each institution and challenged common perceptions about librarians' entrepreneurial capabilities. This initiative signifies a shift towards recognizing and valuing the entrepreneurial spirit within the profession. The success of this initiative demonstrates the power of embedded collaboration, driven by a shared sense of social responsibility and a commitment to celebrating entrepreneurship.

33. **(Ritchie-Baum, Thynne , & Cramer, 2021)** "Creating the Entrepreneurship & Libraries Conference 2020: A Collaboration of Public, Special, and Academic Librarians, Vendors, and Economic Development Stakeholders". The Entrepreneurship and Libraries Conference (ELC) 2020 aimed to address the gap in professional development opportunities for librarians in entrepreneurship and economic development. Despite the COVID-19 pandemic, the conference successfully transitioned to an online format, featuring speakers, networking sessions, and a pitch competition. The collaboration between librarians and economic development stakeholders from the US and Canada highlights the importance of interdisciplinary collaboration in addressing complex challenges. The article provides a comprehensive overview of the conference's development and implementation, offering valuable assessments and recommendations for future endeavours.

34. "Earning revenue through google AdSense on website: A prospect for entrepreneurial avenue for library and information science professionals". By **(Barman D. B., 2022)** The article discusses the potential of LIS professionals to generate income through online platforms, particularly through Google

AdSense. It emphasizes the importance of digital entrepreneurship in the field, highlighting the diverse revenue streams available through online advertising. The article emphasizes the need for LIS professionals to adapt to digital trends and harness technology for entrepreneurial pursuits, highlighting the financial sustainability and professional growth opportunities offered by online advertising. The article advocates for embracing digital entrepreneurship as a viable prospect for the LIS profession.

35. **(Edewor & Omosor, Reflections on prospects of enterpreneurial librarianship in nigeria, 2012)** "Reflections on prospects of entrepreneurial librarianship in Nigeria". The paper highlights the role of entrepreneurial librarianship, where librarians are proactive in creating innovative information services and products. It emphasizes the need for training and education to navigate the competitive landscape of tech giants like Google and Amazon. Key traits include risk-taking, collaboration, and staying updated on global best practices. The paper also highlights the potential business prospects within entrepreneurial librarianship and provides valuable insights into the diverse needs of users in today's information ecosystem.

36. **(Elonye & C. P. Uzuegbu, 2013)** "Entrepreneurial Opportunities for Library and Information Science (LIS) Professionals in Contemporary Society". The article discusses the potential business opportunities for library and information science (LIS) professionals as entrepreneurs, highlighting the skills needed for success and the challenges they face. It recommends cultivating an entrepreneurial mind set and acquiring relevant ICT skills to capitalize on emerging opportunities. By fostering a culture of entrepreneurship and embracing technological advancements, LIS professionals can achieve self-employment and maintain relevance in a rapidly evolving landscape. The article provides valuable insights into the intersection of entrepreneurship and LIS, offering guidance for professionals seeking to explore entrepreneurial ventures.

37. **(Chukwuji & Umeji, 2019)** "Acquisition of Entrepreneurial Skills by Library and Information Science Students". This descriptive research survey focused on 410 library and information science students at the Federal Polytechnic, Oko, Anambra. Utilizing purposive sampling, the study revealed a low level of entrepreneurial skills acquisition among the students, with only 6 out of 16 skills agreed upon. Challenges identified included the absence of entrepreneur courses and practical ICT training in the curriculum. The study's use of descriptive statistics, particularly mean scores, provided valuable insights into the state of entrepreneurial skills acquisition among LIS students. Overall, it underscores the importance of integrating practical, entrepreneurial training into LIS education to better prepare students for the evolving demands of the field.

38. **(Mckeown, 2010)** "Challenges and Solutions for Libraries in Serving Entrepreneurship Needs: Findings from ProQuest Research". ProQuest's 2006 research with US higher education institutions looked at the information needs for entrepreneurship studies. It included qualitative, secondary, and quantitative methodologies for professors, librarians, and administrators. ProQuest conducted an extensive study in late 2006 with higher education institutions across the United States. Regardless of program differences, similar knowledge requirements for entrepreneurship education have evolved.

39. **(White, 2015)** "Entrepreneurship and the library profession" The article explores the intersection between entrepreneurship and the library profession. The author emphasizes the need for librarians to cultivate entrepreneurial mindsets characterized by innovation, risk-taking, and adaptability. The article discusses various ways in which librarians can apply entrepreneurial strategies. The author highlights the importance of proactive leadership and collaboration within library organizations to foster a culture of entrepreneurship. Overall, the article offers valuable insights and practical guidance for librarians seeking to embrace entrepreneurship as a means of advancing their profession and serving their communities more effectively.

40. "Libraries, Entrepreneurship, and Risk". By (Mason, 2015) This article emphasizes that to remain relevant, libraries and librarians must proactively seek opportunities to innovate, leverage new technologies, and offer novel services. However, such endeavours entail inherent risks stemming from uncertainty and the probability of loss. Risk, creativity, innovation, uncertainty, and vulnerability are integral components of adapting to changing environments. Yet, these concepts often clash with traditional library management practices. To thrive, libraries must navigate this tension and cultivate a culture that embraces risk-taking as a means to effectively evolve and meet the demands of the modern information age.

41. (Awujoola & Ikegune, 2018)"Entrepreneurship Education in Library and Information Science and Marketing of Library Services: Issues in Nigeria". The article emphasizes the need to expand library career opportunities in Nigeria, especially in developing countries like Nigeria. It suggests equipping undergraduates with entrepreneurial skills to enable self-employment post-graduation. The article also suggests revamping library services to align with user preferences and make them more financially viable. Challenges include product repackaging, pricing strategies, and fundraising for entrepreneurship training. Effective lobbying and advocacy strategies are also crucial for promoting libraries and integrating entrepreneurship education into curricula. This will contribute to the growth and sustainability of the library sector in Nigeria.

42. "Working Independently: Entrepreneurial Approach in Library and Information Science Profession". By (Barman & Baishya, 2015) This paper explores the entrepreneurial approach within the Library and Information Science (LIS) profession, focusing on the opportunities for working independently. Drawing on a range of literature, case studies, and expert insights, the paper examines the evolving role of LIS professionals in embracing entrepreneurship, identifies the key factors driving this trend, and highlights successful strategies for

establishing independent ventures within the field. By delving into the entrepreneurial mindset, skills, and challenges specific to LIS professionals, this paper provides valuable insights for individuals seeking to pursue entrepreneurial endeavours in the dynamic landscape of information services and technologies.

43. "Awareness and competency level of undergraduates for entrepreneurship opportunities in library and information science profession in university of Nigeria, Nsukka".by (**Ify Evangel, Evangeline U., & Jude Chidike , 2021**) The study at the University of Nigeria, Nsukka, examined the awareness and competency levels of 43 final-year students about entrepreneurship opportunities in the Library and Information Science (LIS) profession. The research found that the LIS curriculum adequately covers entrepreneurship and marketing courses, with students showing high awareness and positive perceptions of entrepreneurship opportunities. However, challenges included student apathy, inadequate facilities, lack of ICT skills, and deficiencies in the curriculum, such as insufficient ICT courses.

44. (**Emerald Insight , 2016**) "Seeking social entrepreneurs: using libraries to enhance social entrepreneurship" The article highlights the importance of libraries in promoting social entrepreneurship. It advocates for libraries to serve as catalysts for social innovation by offering resources, networking opportunities, and support services to aspiring social entrepreneurs. Libraries can enhance social entrepreneurship through training programs, networking events, and access to relevant information and funding sources. The article also highlights the financial constraints faced by non-profit organizations like libraries in supporting entrepreneurship. It emphasizes the importance of non-financial services in entrepreneurship, particularly in technological management transfer skills.

45. "Developing and implementing entrepreneurship curriculum in Nigerian library and information science programmes" by (**Innocent I. Ekoja & Alice O. Odu, 2016**) The paper proposes a theoretical framework for developing and implementing an entrepreneurship curriculum in Library and Information

Science (LIS) education. It acknowledges the introduction of entrepreneurship education in Nigerian universities in response to a Presidential directive in 2004. The paper proposes a course called Infopreneurship in undergraduate LIS education, equipping students with entrepreneurial skills like abstracting, indexing, publishing, database development, and knowledge management. Implementation requires a conducive environment, including the right mindset, qualified staff, hands-on experience opportunities, and entrepreneurship awareness. The paper emphasizes the government's role in providing infrastructure, funding, and regulatory support for successful entrepreneurship education. The success of entrepreneurship education in Nigerian universities depends on collaboration between academic institutions, government, and stakeholders.

46. **(Qian, et al., 2020)** "Application research on service innovation and entrepreneurship education in university libraries and archives". The article discusses the current state of innovation and entrepreneurship education among college students in China, emphasizing the need for improvement. It suggests enhancing students' innovation abilities, increasing the proportion of initiatives, and improving entrepreneurial success rates. The article proposes a three-step approach: defining innovation and entrepreneurship education, integrating data resources from various departments, and establishing new archives. It emphasizes the importance of university libraries as hubs of knowledge and advocates for collaboration with archives and other departments to provide personalized services using semantic analysis, semantic association, and big data technology.

47. "The Entrepreneurial Library: Creating Revenue in the Age of E-Commerce" by **(Kirk, 2001)** The article discusses how libraries can generate revenue through e-commerce, suggesting that they can use entrepreneurial strategies to supplement traditional funding sources and adapt to changing information access and distribution landscapes. It highlights various revenue-generating

opportunities, such as selling merchandise, offering premium services, and hosting events. Understanding patrons' needs is crucial for successful initiatives. By leveraging e-commerce platforms and digital technologies, libraries can expand their revenue streams while fulfilling their core mission of providing access to information and resources.

48. (Nijboer, 2006) "Cultural entrepreneurship in libraries". This research emphasizes the need for librarians to adopt a cultural entrepreneurial mindset to ensure the vitality of libraries in the digital age. It also highlights the growing importance of creativity in driving economic growth, particularly in urban areas. Librarians are positioned to capitalize on this trend by promoting their libraries as hubs of creativity and demonstrating their ability to foster cultural entrepreneurship. The study suggests that librarians can leverage local authorities' interest in the creative industry to enhance the profile and relevance of their libraries. It calls for the exploration of effective strategies and the development of necessary competencies for librarians to thrive as cultural entrepreneurs.

49. "Impact of library information literacy training on entrepreneurship competition scores: A quantitative study at University of California, Irvine". By (Heimann, 2023). A study conducted by the University of California, Irvine's Innovation and Entrepreneurship Librarian and the New Venture Competition found that teams receiving information literacy training had higher concept paper and evidence question scores. The study, which lasted three years, found significant increases in scores for both experimental groups compared to the control group. The findings are valuable for librarians and educators seeking to improve entrepreneurship competitions through research and information literacy training. The study contributes to the growing body of successful collaborations between libraries and entrepreneurship groups, providing evidence of the benefits of such partnerships.

50. (Entrepreneurship in Librarianship, 2021) "Entrepreneurship in librarianship". explores the concept of entrepreneurship within the field of librarianship. The authors examine the evolving role of librarians as

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entrepreneurs, highlighting the importance of innovation and adaptability in meeting the changing needs of library users. They discuss various entrepreneurial opportunities for librarians. The article also addresses challenges faced by librarians in embracing entrepreneurship, including limited resources and institutional barriers. They provide insights into how librarians can develop entrepreneurial skills and cultivate a culture of innovation within library organizations.

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CHAPTER III
BACKGROUND OF THE STUDY

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3.1 INTRODUCTION

The word entrepreneur originated from the French word "entreprenerd" which means "to undertake". The term was first defined by the Irish-French economist Richard Cantillon and first appeared in the French Dictionary "Dictionnaire Universal de Commerce" of "Jacques des Bruslons" published in 1723 (Corbett, 2008). Entrepreneurship is a programme that inculcates creative, innovative, productive and managerial skills needed in business enterprises for self-reliance and national development. Entrepreneurs are the persons who establish their own venture and spread the job opportunities for them and for the others. Entrepreneurship has emerged in the 21st century as the most potent economic force the world has ever experienced. Library entrepreneurship is a vast field of knowledge that serves young entrepreneurs by providing necessary information to users. As job opportunities in the library and information science field are becoming increasingly difficult, it is essential for librarians to start businesses in this field. Library entrepreneurship helps libraries stay relevant and evolve in the digital age by providing information services and products to meet user needs in new and creative ways. The entrepreneurial approach in library and information science will attract more students for obtaining degree in LIS and can shift the profession to a vocational one. It can transform the profession from service oriented to a business oriented and strongly motivate people to take it in a different way. The rise of internet users in India provides a favourable condition to practice entrepreneurship in LIS. Librarianship, as a profession, provides a variety of employment opportunities. Most library science professionals (LIS) choose employment for their career prospects. The employment avenues in the library field are limited, and the number of graduating LIS professionals is increasing year by year, hence increasing unemployment levels in library and information science field. Due to unemployment in the LIS field, a many LIS professionals are forced to undertake other jobs. Also, IT professionals are encroaching into this field, which is threatening to the LIS as a career profession. To retain LIS professionals in the same industry and to serve the library field, there is an urgent need to explore alternatives to LIS jobs. The best and alternate solution would be entrepreneurship, where LIS professionals may start a

venture in the library and information science fields and become budding entrepreneurs. Librarians can become entrepreneurs by providing information, data, and services to users in new and creative ways. By encouraging people to read more books, library entrepreneurship can be a good career option. It involves using traditional knowledge hubs with modern entrepreneurial needs, making them economically viable. Although the profession is primarily a non-profit organization, being an entrepreneur related to the library field could serve knowledge and provide an opportunity to earn.

3.2 THE CONCEPT ENTREPRENEURSHIP

The concept of entrepreneurship According to the research, it is defined as the process of learning the necessary information and abilities to be self-sufficient, stand alone, and be self-employed without the need for a white-collar job. From an economics point of view, an entrepreneur is the one who bears all the risk of a business. And in return, he gets to enjoy all of the profits from the business as well.

3.3 CHARACTERISTICS OF LIBRARY ENTREPRENEURSHIP

Library entrepreneurship is a dynamic and flexible strategy for establishing libraries as creative hubs in the age of digitization. Entrepreneurs in libraries stress user-centricity, working with communities to understand and address varied needs. Strategic cooperation with external partners, such as enterprises and educational institutions, broadens the library's effect. Digital literacy programs, creative programming, and a proactive approach define library entrepreneurship, which fosters a culture of continual learning and growth. Entrepreneurs actively promote information literacy and inclusion while ensuring resource accessibility and fighting for the importance of libraries. In short, library entrepreneurship transforms libraries into lively, community-centric venues, developing to meet the increasing demands of the current information world.

3.3.1 CHARACTERISTICS OF ENTREPRENEURSHIP TO INCLUDE:

- **Interest and Vision –**

The first factor for entrepreneurial success is interest. Since entrepreneurship pays off according to performance rather than time spent on a particular effort, an entrepreneur must work in an area that interest him, otherwise he will not be able to maintain a high level of work ethics, and he will most likely fail. This interest must also translate into a vision for the company's growth. Even if the day-to-day activities of a business are interesting to an entrepreneur, this is not enough for success unless he can turn this interest into a vision of growth and expansion. This vision must be strong enough that he can communicate it to investors and employees.

- **Skill –**

All the interest and vision cannot make up for a total lack of applicable skill. For instance, if he wants to start a business that creates mobile games, he should have specialised knowledge in mobile technology, the gaming industry, game design, mobile app marketing or programming.

- **Investment –**

An entrepreneur must invest in his company. This investment may be something less tangible, such as the time he spends or the skills or reputation he brings with him, but it also tends to involve a significant investment of assets with a clear value whether they are cash, real estate or intellectual property. An entrepreneur who will not or cannot invest in his company cannot expect others to do so and cannot expect it to succeed.

- **Organisation and Delegation –**

While many new businesses start as one-man business, successful entrepreneurship is characterised by quick and stable growth. This means hiring other people to do specialised jobs. For this reason, entrepreneurship requires extensive organisation and delegation of tasks. It is important for entrepreneurs to pay close attention to everything that goes on in their companies, but if they want their companies to succeed, they must

learn to hire the right people for the right jobs and let them do their jobs with minimal interference from management.

- **Risk and Rewards –**

Entrepreneurship requires risk. The measurement of this risk equates to the amount of time and money one invests into a business. However, this risk also tends to relate directly to the rewards involved.

3.4 HOW TO BE AN ENTREPRENEUR IN LIS:

Entrepreneurship is a hot topic of discussion throughout the world where job prospects become saturated. Increasing unemployment throughout the world has raised a steadily growing interest in entrepreneurship and continuously pressurizing all the subjects to be merged in its fold. Just like other subjects, the information science professionals should also try to acquire the concept at the earliest to grow up with the society and the emerging trend. Further, technology and entrepreneurship are the foundations for national development. In the 21st century, the information science professionals should acquire technology, should know how to market and be an entrepreneur, otherwise they will soon become irrelevant. Courses in Entrepreneurship are already started invading the Library and Information Science programmes throughout the world. Now it's the time to proceed towards real entrepreneurism.

In proceeding towards entrepreneurship in LIS, the following steps can be helpful.

- **Preparing Yourself:**

Entrepreneurship is all about facing challenges and taking risks. Things can only happen when there is a conviction to face the challenge and surpass the fear of risk. Fear of taking risk is the reason why people pulling themselves back from taking the entrepreneurial approach and becoming an entrepreneur. Such mental blockages forces people to stick within a job or search for a job (with assured monthly income) than to take entrepreneurship as a viable career option without any consideration of job satisfaction. So, self-motivation is the first thing to do something new, creative and innovative.

- **Background and Market Study:**

Before implementing an idea, it is very important to study the pros and corns of the background of that idea e.g. what are the underlying issues, what are the problems, prospects, scopes, risks and most importantly what will be the expectations of the patrons. Opening a new venture in LIS should be to enable one in meeting the competitions in the information society to sustain for long. Therefore, being an information science professional it's necessary to identify various information sources to study the background of the entrepreneurial thought.

- **Making a B- Plan:**

Business plan is always the base for any enterprise. A blue print of the plan should be prepared to have a clear concept of the service or the product right from the venue, manpower, monetary issues, etc. Initially, the professionals should get started with the b-plan as a small project. After completion of the project, it will become easier to decide whether someone should go for the same or should drop out from that idea.

- **Deciding the Format and pricing of the Product or Service:**

The feasibility of a product depends upon the use of that product. Web has made it very easier to launch a service online or in a physical format. If the product is launched in physical format, then they must be priced after conducting proper market research. In case of online products, online advertisements can be considered as a boon for the entrepreneurs as can be used to meet the running cost of a venture. Sometimes affiliate programmes can also be a good source to generate some money.

- **Marketing and Publicity:**

The product will gain momentum only when it will be publicized in every possible way. Creating website, promoting in social media, advertising online, presenting in seminar and conferences, publishing brochures, leaflets, writing articles, making the people aware by giving lectures, etc. are some of the possible productive ways to market any new venture.

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3.5 ENTREPRENEURSHIP EDUCATION IN LIBRARY AND INFORMATION SCIENCE

Entrepreneurship education was introduced to library and information science courses to solve the problem of many librarians remaining unemployed after graduation. Entrepreneurship education is an integral part of general education aimed at preparing individuals for self-employment, occupational fields, and effective participation in the world of work. The primary goal of entrepreneurship education is to provide students with skills that will allow them to be self-employed and create jobs for library and information science graduates.

3.6 ENTREPRENEURSHIP AS AN ELECTIVE PAPER IN LIS CURRICULUM

In order to create an entrepreneurship environment within the Library and Information Science students it is suggested for the LIS Departments of Universities to introduce the Entrepreneurship in the curriculum as an elective paper with the following brief contents. Entrepreneurship, as an elective paper in Library and Information Science (LIS) curriculum, offers students a unique opportunity to explore the intersection of information management and business acumen. In today's rapidly evolving digital landscape, libraries and information centres are increasingly becoming hubs of innovation and entrepreneurship, where professionals are not only stewards of information but also catalysts for creativity and economic development. By incorporating entrepreneurship into the LIS curriculum, students gain insights into how to identify and leverage opportunities within the information ecosystem to create value and drive positive change.

Entrepreneurship education in LIS curriculum encourages students to adopt a proactive and innovative mindset, essential for navigating the complexities of today's information-driven society. It fosters a culture of experimentation, risk-taking, and continuous learning, empowering future information professionals to adapt to changing environments and seize opportunities for growth and impact.

3.6.1 BENEFITS OF ENTREPRENEURSHIP EDUCATION

The following are the benefits of Entrepreneurship education:

- It encourages students to innovate by introducing new products, services, and market strategies, leading to excellent entrepreneurship.
- It trains individuals on how to start and run their own businesses.
- It will equip library and information science graduates with a wide knowledge base and creative abilities to start, manage, and run businesses that contribute to national growth.
- It is an excellent way for bridging the gap between science and the market, creating new enterprises.
- It helps the development of young people's innovative skills.

There is no such thing as a typical entrepreneur. Some entrepreneurs are quiet and hardworking, while others are more outgoing and flamboyant. The key to being a successful entrepreneur lies in the ability to take an idea and then through the process of innovation, develop it in such a way that it becomes a marketable product or service.

3.7 AREAS OF OPPORTUNITIES FOR A LIBRARIAN AS AN ENTREPRENEUR IN THE FIELD OF LIBRARIANSHIP

1. Library Software Dealership

Library automation has become a global best practice in the library and information science professions. In order to automate library services, library-oriented software packages are needed. Librarians can become entrepreneurs by dealing with library software and installation. Software packages are important for library in-house operations. A librarian can become a middleman between the software developers and various libraries that want to upgrade to automated services.

2. Freelancing

A freelancer is an independent person who offers his or her service where required and is not attached to any single establishment. It can be in several fields, like outdoor writing, copyediting, publishing, proofreading, real estate editing, etc. The internet has helped to improve this career, as freelancers can always find substantial information on the internet.

3. Library consultancy services

This is where a professional librarian will use his wealth of experience to offer professional advice and other consulting services to his clients, especially newly established institutions, in setting up their libraries, either for private organizations or individuals who are willing to establish libraries for an agreed fee. He or she can serve as a resource person and undertake manpower training and development as well as other consulting services requested by his or her clients.

4. Binding and reprographic service business

This type of business consists of the repair of minor or major damaged books in order to restore them to their original shape and prevent further deterioration. Binding of books, documents, research materials, projects, and other vital documents is a very brick-and-mortar business, especially in educational institutions. This business can go a long way in supporting LIS graduates to be self-employed, employ others, and also attend to their basic or domestic needs.

5. Book Publishing Industry

Publishing and printing are a business and has the characteristics of all businesses. The basic objective of the publishing and printing industry is to produce printed books for education, which can change an individual's social outlook, as publishing is also considered a service to society. The primary objective of the publisher is to exist for the benefit of society, rather than for the benefit of their stakeholders.

Hence, looking at the above, the LIS professionals may think and look at it as an opportunity to take up a career in the publishing and printing business. Initially based on the investment capacity, aspirants may explore a publishing venture as a "sole proprietorship" or "partnership."

Librapreneurs may also subcontract various business processes, such as printing, binding, editing, proofreading, layout design, and sales (to distributors), which will help in developing micro entrepreneurs.

6. Newspaper Dealership

A newspaper is usually an everyday publication. It contains news, opinions, advertisements, notices, and information of all kinds. It also publishes all matters of general interest. It keeps people aware of the current events in the world. It publishes views about national and international issues. In fact, a newspaper is an encyclopaedia, a storehouse of knowledge and information at the cheapest price. Thus, a newspaper piques the interest of every section of people and is an attraction for every kind of reader. It is also a viable business opportunity that a Librapreneur can explore and make the necessary initiatives to start this business.

7. Binding Workshop

Book-binding unit is a service unit in which books, copies, files, register, office records, etc. are bound on job-work basis. The binding work can be acquired from various printing presses, schools, colleges, banks and other offices. If the librapreneur does quality work, then this unit will get work on a continuous basis and can run successfully in various cities.

8. Digital Book/Periodical Publishing

A digital book or periodical provides the opportunity for online browsing and reading, which is easier than reading a traditional book or periodical. Starting a digital book or magazine is very cost-effective as well as profitable. If you are interested in starting your own business, then starting a digital book or magazine is a good idea. A digital book or periodical is also eco-friendly since this business will not produce any harmful waste. A digital book or periodical will not require a printer, ink, or paper; therefore, you will be able to save money. If you want to make your digital book or periodical profitable, you may offer subscriptions to your customers. You may also provide advertising space in your book or periodical in order to earn extra income. You may place affiliated ads in your digital book or periodical in order to increase revenue.

9. Indexing and Abstracting Services

Indexing and abstracting services is an entrepreneurial opportunity that LIS professionals can venture into as a business enterprise. As an Indexing and Abstracting Services Specialist, your role involves organizing and summarizing information to improve accessibility. You will create subject indexes and abstracts for various materials, adhering to established standards, analysing content, and collaborating with experts. Your work will also involve crafting concise, informative abstracts. Database management is crucial, requiring input of indexing and abstracting information into systems. Your commitment to high-quality, consistent abstracts, along with editing and proofreading skills, will contribute to efficient information retrieval within the system.

10. Library Software Developing Industry

A library software industry can start with utter knowledge of library operations and software development and how to sell them to different companies on a contract basis. In this world, people depend entirely on technology, either in their personal lives or for business purposes. The tasks that are part of any business are also conducted with the help of computers and software, which makes them hassle-free. Your business plan should include the need for equipment, expenses, and proficient employees. Before venturing into this project, it is better to study and evaluate the present library software available on the market and also look into the open-source software.

11. Writing Biographies

A Biography Writer is responsible for creating compelling, engaging life stories that capture the essence of individuals. This involves extensive research, interviews, and information gathering. The writing should not only chronicle chronological events but also delve into personality, achievements, challenges, and impact on their fields. Attention to detail and collaboration with editors, fact-checkers, and subjects are essential for accuracy. The goal is to present a vivid, captivating account that resonates with readers, demonstrating strong storytelling skills, empathy, and passion for bringing stories to life. Librapreneurs who has writing skills may explore the business opportunity of writing biographies of others.

12. Library equipment business

This involves the production, sales, and repair of library equipment for processing, displaying, and storing information materials in libraries and information centres. Equipment includes circulation counters, shelves, trolleys, catalogue cabinets, book display racks, filling cabinets, issuing strays, metal library ladders, book pockets, conference tables, study carrels, newspaper/magazine racks, dictionary stands, and stylus pen. A graduate librarian can start a small store or shop with a small take-off fund, conducting market surveys to determine local needs and wants.

13. Content creator

A content creator in the library and information field is responsible for creating engaging and informative content across various platforms to enhance library visibility and promote resources and services. They collaborate with librarians and information specialists to understand the institution's goals and tailor content to meet community needs. This role involves researching and curating relevant information, creating compelling narratives, and utilizing multimedia elements. The content creator may also contribute to marketing materials, newsletters, and social media campaigns to foster community engagement. Keeping abreast of emerging trends and technologies is essential for this position, ensuring content strategies adapt to user needs. Overall, the content creator contributes significantly to building a dynamic and accessible information environment within the library.

14. Data Scientist

In the library and information field, a data scientist plays a pivotal role in leveraging data analytics and technology to extract meaningful insights, enhance decision-making processes, and optimize the utilization of resources. The data scientist contributes to the development of predictive models, helping libraries anticipate user preferences, optimize collection development, and tailor services to meet evolving demands. Additionally, they may play a role in designing and implementing data governance policies, ensuring the ethical and responsible use of data while complying with privacy regulations. With a keen understanding of both library operations and advanced data analytics techniques, the data scientist empowers libraries to harness the full potential

of their information resources, ultimately enhancing the user experience and advancing the institution's mission in the digital age.

15. Data base developer

In the library and information science field, a database developer assumes a critical role in managing and optimizing information systems to facilitate efficient data storage, retrieval, and organization within library databases. The database developer designs, implements, and maintains database structures that accommodate the diverse needs of library users. This involves understanding the requirements of the library's collection, cataloging systems, and user interfaces to ensure seamless integration of information resources.

A database developer creates and modifies database tables, queries, and scripts, using technical skills to improve system performance and resolve data issues. They work with library staff to improve accessibility, user experience, and operational efficiency. They stay updated with emerging technologies and industry best practices, focusing on data integrity, security, and scalability to shape the library's digital landscape.

16. Researcher

In the field of library and information science, researchers play an important role in knowledge advancement, evidence-based practice support, and academic environment enhancement. They look into a variety of sources, do in-depth assessments of the literature, and keep up with emerging trends and technology. They work together to develop research topics, create methods, and carry out projects alongside librarians and information specialists. Researchers employ both qualitative and quantitative techniques in the collection, analysis, and interpretation of data. Through their academic publications and talks, they help enhance the prestige of the library by encouraging a culture of quality, creativity, and curiosity among the local population.

17. Web designer

A web designer is a professional who designs and builds websites. They can work for corporations across industries, web design agencies, or as self-employed individuals. As a Library Web Designer, you will be responsible for creating,

designing, and maintaining the library's digital interfaces, including the official website and other online platforms.

18. Book Trading

ICT has made it possible for online publishing, online book stores, online publishers and union catalogues. With these, a librarian can at the comfort of his office build contacts with the publishers (local and international) and connect with libraries that need supplies of information resources online. A librarian can also open book shops or stores through within the tertiary institution environs.

19. Classifier

A classifier in library and information science is responsible for organizing and categorizing diverse information resources within a library's collection. They implement classification systems like Dewey decimal classification or Library of Congress Classification, assigning unique identifiers to each item, enabling efficient material arrangement and easy access for users. Classifiers work closely with cataloguers and librarians to ensure accurate categorization, adhering to standardized rules. Their work requires meticulous attention to detail, a comprehensive understanding of information organization principles, and adaptability to emerging technologies. Classifiers are essential for creating an organized and accessible environment that enhances the user experience and facilitates information resource utilization.

20. Cataloguer

The cataloguer is to create bibliographic records for each item in the library's collection, incorporating details such as title, author, publication information, and subject headings. Using standardized cataloguing rules and systems such as MARC (machine-readable cataloguing), cataloguers ensure consistency and accuracy in the representation of materials. They may also assign classification numbers in collaboration with classifiers to place items in the correct location on library shelves. Their work is fundamental to the overall functioning of the library, ensuring that users can easily locate and access the wealth of information available in the library's collection.

21. Archivist

Archivists are information experts who are specifically trained to keep source data and assist people in obtaining it. An archivist handles paper documents, photos, videos, and computer data. The scope of a career as an archivist is booming. They can work for commercial business groups, libraries, educational institutes, religious authorities, museums, hospitals, historical conservatories, and non-profit organizations and earn a good living. PhD archivists are given higher-ranking positions in educational institutes with faculty status. Those who begin their careers in small-scale industries can eventually achieve long-term job stability as well as high levels of professional and personal fulfilment.

22. Translator

The translator will be responsible for the accurate translation of documents and emails, as well as attending meetings in which live translations are needed. To be successful as a translator, you should be able to think quickly and have a firm understanding of the field in which you will be translating. An excellent translator should be able to translate information that is contextually accurate.

Translator Responsibilities:

Provide accurate translations of texts.

Attend meetings to translate discussions.

Continually take language fluency assessments to certify fluency.

Liaise with colleagues to ensure that translations are true to the original meaning.

23. LMS software expert

A LMS specialist is a professional who designs, implements, and manages a company's or organization's learning management system. It is possible for LMS specialists to work in a variety of industries, including education, healthcare, and corporate training. They should have a solid understanding of instructional design, e-learning technologies, and learning management systems, as well as excellent communication and project management skills.

24. Career counsellor

A career counsellor is a professional who helps people choose a career and achieve their vocational goals. Counsellor's help clients enter the workforce, change careers, and look for employment opportunities. People who work in this field are employed in settings including schools, government agencies, private businesses, and community agencies.

25. Online bookstore

If you're passionate about books and want to start a business selling them, an online bookstore is a great option. Not only can you reach a wider audience than a brick-and-mortar store, but you'll also have lower running costs.

26. Library website developer

A library website development process involves a combination of technological expertise and understanding of library services and user needs. It starts with a needs assessment, followed by planning and design stages to enhance accessibility and user experience. The development phase involves coding and programming, focusing on creating a responsive, user-friendly website. Accessibility features are prioritized, and interactive features like search and event calendars are added. Regular updates, security measures, and continuous monitoring are essential for ongoing maintenance. Effective communication between library staff and web developers is crucial for the final product to align with the library's mission and serve the community's diverse needs.

27. Language bibliographer

A language bibliographer is a library professional responsible for managing and curating materials related to a specific language or set of languages. Their goal is to ensure the library's holdings are comprehensive, relevant, and aligned with user needs. They collaborate with staff and users to assess needs, catalogue materials, maintain collections, and support users. They stay updated on language trends, manage budgets, and contribute to the library's mission of providing diverse information resources.

28. Digital literacy expert

Digital literacy experts in library science are developing training programs and workshops to equip users with digital competencies, such as using online databases and critically evaluating content. They contribute to information literacy initiatives, fostering critical thinking and ethical engagement with digital information. They integrate technology into library services, bridging the digital divide, managing digital collections, advocating for online safety and cyber security education, and regularly assessing their impact in an evolving digital environment.

29. Data creator

A data creator in the library manages information resources to optimize accessibility and retrieval for users. They maintain accurate records of collections, including books, periodicals, multimedia, and digital assets. They use cataloguing standards like Dewey decimal classification or Library of Congress Classification to assign metadata to each resource. They may also contribute to digitization initiatives, transforming physical materials into digital formats. Their work requires attention to detail, a thorough understanding of cataloguing principles, and collaboration with librarians, supporting the library's mission to provide efficient information services.

30. Professional peer viewer

A professional peer viewer is crucial in the library field, ensuring the quality and accuracy of scholarly content and resources. They meticulously evaluate academic materials, such as research articles, journals, and publications, to maintain high standards of reliability and credibility. Peer viewers assess research methodologies, clarity of writing, and academic standards before recommending materials for inclusion. They often collaborate with subject-matter experts and researchers to verify the content's scholarly merit. They may also organize workshops or training sessions to educate library staff on best practices in peer review and scholarly evaluation.

3.8 SKILLS TO BE ACQUIRED BY LIBRARY AND INFORMATION SCIENCE STUDENTS AND GRADUATES TO ENGAGE IN ENTREPRENEURSHIP

- **Information Technology Skills:**

These include networking, library automation and digitization, web-based services, reprography, micrographs, facsimile, video text, database creation and management systems including CDS, ISIS, LIBSYS, content development, desktop publishing, internet, presentation, hardware/software skills and relational databases including the ability to create data structures which facilitate the indexing and retrieval of information and thesaurus development.

- **Information Literacy Skills:**

These have to do with the ability to locate information efficiently and effectively, evaluate information critically and competently and using information accurately and creatively. Also included here is the economics and marketing of information products and services, information resource management, information processing and organizing, e-mail, multimedia perspectives and video conferencing.

- **Managerial Skills:**

These are the business management skills such as marketing, financing, accounting, control, planning and goal setting, decision making, human relations and managing growth. These are essential in launching and growing a new venture.

- **Personal entrepreneurial skills:**

These include inner control/discipline, risk taking, innovativeness, change orientation and ability to manage change, persistence, and visionary leadership.

- **Technical Skills:**

Written and oral communication, interpersonal, monitoring environment, the ability to organize, and network building. These skills are necessary for successful venture and they should be given attention by students to enable them succeeding in venturing.

- **Personality and Individual skill:**

Impressive personality and individual skill help to develop entrepreneurship. These qualities are inevitable for entrepreneurs since they have to work with officers, engineers, labourers, customers, investors, Govt. officers, etc.

- **Communication**

Communication of an entrepreneur must be to the point, crisp and convincing. Communication ability is the secret of the success of most entrepreneurs.

- **Decision-making**

It means the ability to choose the correct alternative from a number of alternatives. An entrepreneur should have the ability to analyse the various aspects of the business to arrive at a decision.

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CHAPTER IV

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ENTREPRENEURSHIP OPPORTUNITIES FOR LIBRARY AND INFORMATION SCIENCE AT NATIONAL AND INTERNATIONAL LEVEL.

4.1 INTRODUCTION

Entrepreneurship Opportunities for Library and Information Science (LIS) professionals at national and international levels signify a growing trend towards innovation and value creation beyond traditional library roles.

4.1.1 ENTREPRENEURSHIP OPPORTUNITIES FOR LIBRARY AND INFORMATION SCIENCE AT INTERNATIONAL LEVELS.

4.1.1.1 USA

1. The purpose of this article was to provide practical guidance for business librarians in academic and public libraries for understanding essential concepts of licensing electronic resources, applying them in entrepreneurial contexts and managing compliance risk for electronic resources used by entrepreneurs. In addition to business librarians, the article may be of interest to other library staff, electronic resources and licensing specialists, small business development centres (SBDCs) counsellors, database publishers, end users and anyone else interested in the topic. This article is an outcome of the Reference and User Services Association's Business Reference and Services Section (BRASS) preconference "How Business Librarians Support Entrepreneurs", which took place on June 27, 2014, at the American Library Association (ALA) Annual Conference in Las Vegas. Observations presented in this paper about issues facing librarians are based on the results of the preconference presurvey gauging registrants' awareness of licensing concepts and existing concerns about acceptable uses of licensed databases in entrepreneurial contexts, as well as personal and professional experiences and anecdotal evidence from BRASS events. This paper should not be construed as legal advice, but rather a

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practitioner's perspective for helping business librarians understand and manage licensing compliance risks for entrepreneurial uses of library databases. **(Aagaard & Arguello, 2015)**

2. This paper examines the entrepreneurship resources patrons can access on the websites of the largest 46 US public libraries to assess their current support for entrepreneur-patrons. A website analysis was conducted using a standardized checklist assessment of each library website. The findings reveal that public libraries often have print and electronic resources, meeting spaces, and programming that could be useful to entrepreneur-patrons, but these resources are sometimes difficult to discover on library websites. Libraries have strong partnering relationships with other government and nonprofit organizations, but they may wish to expand these partnerships further. **(Faulkner, Entrepreneurship resources in US public libraries: website analysis, 2018)**

The paper highlights the need for libraries to provide networking opportunities, support intellectual property research, classroom instruction, and individual consultations. The current entrepreneurial environment is active, with startups moving quickly to reach their paydays. Macdonald (2015) explores public libraries' support for entrepreneurs through dedicated business centers, while Louise Mort Feldmann's survey study found that SBDC offices are more likely to be hosted on college or university campuses but work with public librarians. Assessment of libraries' websites in relation to their ability to support entrepreneurship is a little explored area, with articles mainly focusing on business research and assistance rather than entrepreneurial resources.

4.1.1.2 Pakistan

The study investigates the issue of unemployment among Library and Information Science (LIS) graduates in Pakistan. The research suggests that entrepreneurship can be a viable solution for these graduates to become self-reliant and job creators. The study identified various entrepreneurial opportunities for LIS graduates, including archival services, consultancy,

digitization services, editing services, library automation, marketing and advertising, and website development. A model of an entrepreneur librarian was developed, who not only becomes self-employed but also creates job opportunities for others in the field. Interviews with senior university librarians validated the model and highlighted the importance of skills like communication, technical knowledge, and business acumen. The findings suggest revising the LIS curriculum to include practical training and entrepreneurship-focused content. The study also mentions government initiatives like the "Kamyab Jawan" program, which provides business loans to young entrepreneurs, including LIS graduates. The study advocates for promoting entrepreneurship among LIS graduates to combat unemployment and empower individuals to create their own job opportunities. **(Butt & Pervaiz, 2022)**

4.1.1.3 California

This study analyzed the impact of library information literacy training on entrepreneurship competition scores at the University of California, Irvine. The study found that teams who received information literacy training had higher Concept Paper and evidence question scores compared to those who did not receive training. The results are valuable for librarians looking to partner with entrepreneurship competitions and for educators seeking to enhance entrepreneurship competitions with research and information literacy training. The study also highlighted the effectiveness of embedded librarianship, both in-person and virtually, in improving teams' performance. Despite some limitations, the findings contribute to the literature on the value of information literacy in entrepreneurship research. **(Heimann, 2023)**

4.1.1.4 Netherland

The research highlights the need for librarians to become cultural entrepreneurs in order to keep libraries thriving in the age of the Internet. The concept of the creative class, developed by Richard Florida, has been embraced by policymakers worldwide. Libraries are facing challenges such as declining book

borrowing and competition from the Internet. Cities are promoting themselves as centers of creativity, and libraries are merging with other cultural organizations to create new cultural centers. The creative industry is seen as a key driver of economic growth, and librarians have the opportunity to engage in cultural entrepreneurship by promoting their libraries and providing new services to attract and retain users. Strategies for success include locating libraries in strategic areas, forming alliances with other cultural providers, refurbishing libraries, promoting e-culture participation, and developing personal skills such as communication, networking, and economic awareness. The experience economy and the need for libraries to create engaging experiences for users are also discussed, with examples of successful cultural entrepreneurship in libraries around the world. **(Nijboer, 2006)**

4.1.1.5 Canada

The environmental scan of 17 Canadian university entrepreneurship research guides revealed that while librarians prioritize industry and market research, there are discrepancies in the subjects emphasized online. The online guides often lack instructional content, despite research strategies being a high priority. Additionally, there is room for improvement in the coverage of sustainability, equity, diversity, inclusion, and Indigenous resources. The use of proprietary databases is common, but open access resources are also prevalent. Collaboration with entrepreneurship centers and business schools could be improved, and there is a need for more interdisciplinary content. The findings suggest that entrepreneurship librarians have opportunities to enhance their online presence and better support users. **(A. Whealtey & S. Armstrong, 2021)**

4.1.1.6 Hong Kong

This systematic review examines the learning outcomes in entrepreneurship education in higher education settings, focusing on the impact on individuals, institutions, and society. The review, based on 133 peer-reviewed articles published between 2000 and 2020, offers a framework for identifying current

classifications of learning outcomes in entrepreneurship education. Globalization and the knowledge-based economy have led to a growing focus on innovation and entrepreneurship to drive economic growth and increase job opportunities. However, there is a lack of consensus on what entrepreneurship means, what entrepreneurship education consists of, and how it can be taught and assessed. Learning outcomes, which are crucial for qualification validity, are divided into three domains: cognitive, affective, and psychomotor. Cognitive outcomes are measurable through knowledge and understanding gains, while affective and behavioural outcomes are more difficult to measure. There is no consensus on what learning objectives should be included in entrepreneurship education, with various perspectives suggesting different levels of outcomes. **(Hannah Y. H. Wong & Cecilia K. Y. Chan)**

4.1.1.7 China

The study explores the use of big data technology in service innovation and entrepreneurship education in university libraries and archives. The authors suggest that universities should utilize big data to enhance the effectiveness of these educations and foster the development of more innovative and entrepreneurial talents. The research interests include cryptography, information security, privacy preserving for blockchain, public key encryption, proxy re-encryption, identity-based encryption, and techniques for resistance to CCA attacks. The authors also propose the establishment of new archives using big data for innovation and entrepreneurship education, ultimately improving the quality of these educations. The study emphasizes the importance of incorporating big data technology in these educations to enhance their effectiveness and foster the development of more innovative and entrepreneurial talents. The authors argue that innovation and entrepreneurship education is a multidisciplinary approach that requires attention to the role of multidisciplinary collaboration. By increasing the participation of university libraries and archives in service innovation, China can improve its economic structure and foster a more innovative and entrepreneurial-focused society. **(Honghui Fan, Chunpeng Ge , & Xiufang Qian and Huamei Shi)**

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4.1.1.8 Nigeria

1. This paper explores the potential of entrepreneurial librarianship in Nigeria, highlighting the role of librarians as entrepreneurs who can provide innovative information services and products. It emphasizes the need for proper training and education to stimulate entrepreneurial spirit and innovation in the competitive information resource delivery environment. Key business prospects in entrepreneurial librarianship are presented, and the paper aims to raise a generation of LIS graduates who can create a living based on their skills, knowledge, talents, and passion related to librarianship. Entrepreneurial education emphasizes the entrepreneurial perspective, which can be learned through theoretical and practical training, co-curricular activities, and engagement with successful entrepreneurs. The paper also highlights the growth of entrepreneurship programs in business curricula and its applicability in interdisciplinary contexts across various academic departments, including librarianship. The increasing demand for information services in Nigeria is a result of the expanding "tradeable information sector."

2. The study explores entrepreneurship development in university libraries in the South-South Zone of Nigeria, focusing on reskilling, opportunities, and challenges faced by library and information science practitioners. The research involved 150 LIS professionals from government-owned universities in the region. The findings showed that despite having necessary skills, LIS practitioners in the South-South Zone have a low perception of entrepreneurship development. The benefits of entrepreneurship include control and flexibility of one's time. The study concluded that there is no significant relationship between LIS practitioners' professional characteristics and their perception of entrepreneurship development. The researchers recommend that LIS schools and professional associations organize orientation programs on entrepreneurship development to re-write the perception of library staff towards entrepreneurship. Entrepreneurship in LIS is crucial for personal and national development, as it involves the creative capacity of individuals to create goods and services through imagination and practical application. **(Ogochukwu T. Emiri & Daniel Emojorho, 2020)**

3. The study examines the awareness and competency levesl of undergraduates in the Library and Information Science (LIS) profession at the University of Nigeria, Nsukka. The research focuses on the 240 final year students, who have spent more years in the system and are on the way to the labour market. The study used a descriptive survey research design and analyzed the data using a questionnaire and content analysis of the LIS curriculum. The findings revealed that most courses preparing students for entrepreneurship and marketing opportunities in LIS are available in the LIS curriculum. The students have high awareness and positive perception of various entrepreneurship opportunities in the profession. However, they also possess high competence in undertaking entrepreneurship opportunities in LIS, except in some ICT-based opportunities. The study recommends adding more ICT courses into the curriculum, such as database management, web publishing, software technology, library application packages, introduction to internet and virtual library and data communications, and urgent curriculum review. The study highlights the importance of library and information science education in enhancing employment opportunities and promoting the development of professional and technical skills.

4. This paper explores the entrepreneurial opportunities in librarianship, highlighting the role of librarians in providing innovative information services and products. It emphasizes the importance of training and education in fostering entrepreneurial spirit and innovation in information resource use and development. The paper also highlights the entrepreneurial development process, including selecting potential targets, identifying local talents and markets, choosing the right location, and developing the entrepreneurship program. The information age has led to unemployment crises, making it crucial for librarians to foster entrepreneurial thinking among graduates of Library Information Science (LIS) to cater to their needs. Entrepreneurship education is a crucial aspect of business curricula, focusing on creativity, innovation, risk-taking, planning, and managing projects. It is essential for individuals to take risks and establish business enterprises. To develop entrepreneurship opportunities, it is crucial to have a clear view of the program's objective and

plan, and select potential targets with a decent educational background and motivation to succeed in the entrepreneurial world.

5. This paper reviews the concept of entrepreneurship education in Nigeria and its historical development. It emphasizes the importance of information business in modern library and information science programs, highlighting its relevance to individuals and the nation's development agenda. The paper also examines emerging trends in the library and information business environment and the challenges and implications of these trends. It recommends that library schools evaluate their programs and reposition themselves better, collaborating with reputable industries to design well-conceived curriculums and programs. Entrepreneurship is essential for industrial development worldwide, but in developing countries like Nigeria, it is often neglected. The paper aims to provide functional education for youth, provide adequate training for creative and innovative business opportunities, serve as a catalyst for economic growth, reduce poverty, create employment, reduce rural-urban migration, instil perseverance, and create a smooth transition to the modern industrial economy.

6. This paper explores the challenges faced by librarians in entrepreneurship, particularly in the field of library and information science in Nigeria. It highlights the need for entrepreneurship education and the challenges faced by librarians, such as economic meltdown, government policies, fear of competition, lack of entrepreneurial spirit, and excessive workload. The researchers suggest that the government should create policies favourable to small-scale businesses to encourage entrepreneurship, and librarians trained in librarianship should develop the spirit to venture into entrepreneurship areas. The paper concludes that competition brings about growth and development in the business world, and up-coming librarians should not be afraid to delve into business ventures. The National Universities Commission and National Board for Technical Education have mandated the introduction of entrepreneurial education in higher institutions to produce graduates who can create jobs and become self-reliance without relying on the government.

7. The study examines the impact of entrepreneurship education on career intentions among 500 students from two Nigerian universities. The research, which used a structured questionnaire, found that exposure to entrepreneurship education influences tertiary school students' career intentions. The soaring unemployment rate in Nigeria has led to a focus on self-employment and small enterprise initiatives as alternative employment channels. However, the training provided to tertiary students has not fully equipped them with desirable skills and competencies required for job creation and self-employment. The Federal Government has directed all tertiary education regulatory agencies to establish mechanisms for the introduction, development, and sustenance of entrepreneurial culture among Nigerian youths. The National Universities Commission (NUC) organized a workshop on entrepreneurship for Nigerian universities in 2004, producing a draft curriculum on entrepreneurial studies. The study highlights the importance of entrepreneurship education in Nigeria, as it can stimulate entrepreneurial drive and potentially reduce chronic unemployment among graduates.

4.1.2 ENTREPRENEURSHIP OPPORTUNITIES FOR LIBRARY AND INFORMATION SCIENCE AT NATIONAL LEVEL.

4.1.2.1 ASSAM

The paper explores the prospects of entrepreneurship in the Library and Information Science (LIS) profession in India, focusing on internet-based technologies. The authors, Badan Barman and Kankana Baishya, have been working on internet-based technologies for the last decade, highlighting the growing market in India where LIS professionals can become self-employed. Entrepreneurship in LIS is considered a new concept, but the rise of internet users in India provides a favorable environment for practicing it. LIS professionals possess skills such as managing information organizations, harnessing technology to deliver services, compiling search strategies, formatting citations, continuously learning and unlearning, providing the right information, and guiding others on information literacy. Entrepreneurship in LIS is essential for shaping professional status and self-satisfaction, as many new librarians do not receive remuneration up to the mark. By embracing entrepreneurship and adopting emerging technologies, librarians can create a more fulfilling and rewarding career. **(Badan Barman & Kankana Baishya, 2015)**

4.1.2.2 Indore

The increasing job opportunities in the library and information science field necessitate exploring entrepreneurial opportunities for budding professionals. This paper highlights the importance of introducing entrepreneurship as an elective subject in the curriculum to retain and contribute to the country's economy. Entrepreneurship is gaining popularity due to the economic slowdown and plays a significant role in alleviating poverty, unemployment, and underemployment. LIS graduates with a desire to make their profession a hobby, build an enterprise, be independent, and face challenges may choose entrepreneurship as a career. Successful Librarians and Information Managers can explore various entrepreneurial opportunities in the book publishing industry, such as book distribution agencies, subscription agencies, and online bookstores. The Indian publishing market is dynamic and has an estimated size

of Rs. 10,000 crores. **(Batthini, Entrepreneurial Opportunities for Library and Information Science Professionals, 2020)**

4.1.2.3 ASSAM

The paper explores the potential of the Internet for Library and Information Science professionals, particularly those who cannot secure a job in the field. It reveals hidden earning data and information from websites that are hard for the general public to find and explore. A content-rich website is created using Google Classic Sites, and 3 display and 1 link ad units are inserted between the content of each page through Google AdSense. The tracking code of Google Analytics is also inserted into each page to know its level of use. After eleven years of launching the site, careful and systematic implementation of Google AdSense and Google Analytics is collected and analyzed. The results show that a website with monthly page views of 344331 can generate around $307 by using Google AdSense on their website. This data suggests that Google AdSense can be a good source of revenue for Library and Information Science graduates and post-graduates, allowing them to earn their livelihood at their own pace. Other alternative solutions to earn revenue by displaying different kinds of advertisements on their websites are not explored. The paper highlights the potential for Library and Information Science professionals to become entrepreneurs by utilizing the opportunities provided by the Internet. **(BARMAN)**

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CHAPTER V
DATA ANALYSIS AND
INTERPRETATION

CHAPTER V

DATA ANALYSES AND INTERPRETATION

5.1. DATA ANALYSIS

This chapter deals with the analysis and interpretation parts. The objectives of this questionnaire to know about the entrepreneurial opportunities for library and information science degree holders. The data acquired from Goa University and IGUNO students is based on responses from 203. Data analysis is carried out in accordance with the objectives of this study. The data is represented using appropriate charts, tables, and graphs.

5.1.1 Details of distributed questionnaires
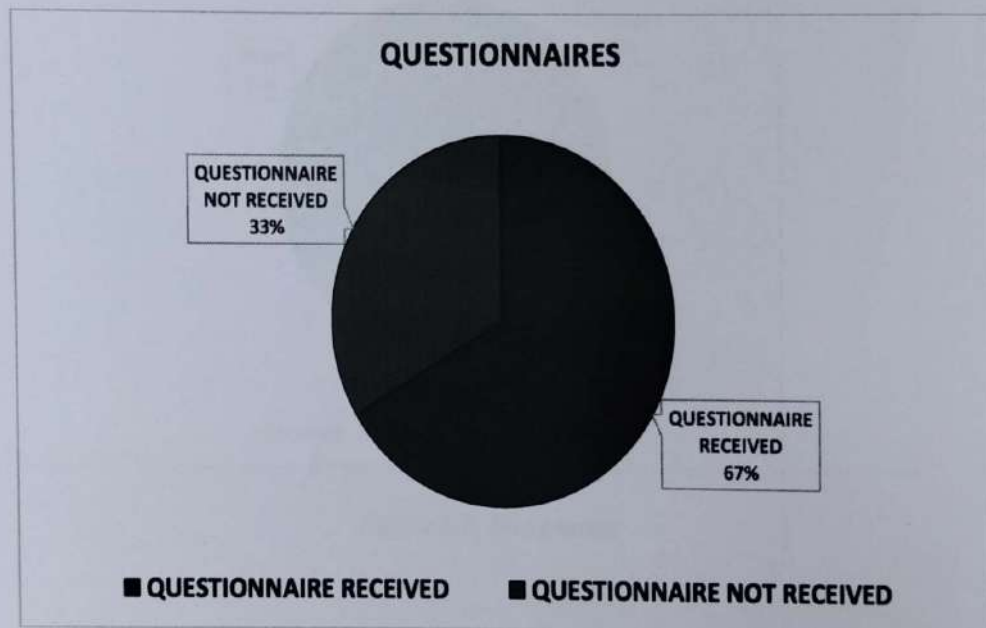
Figure 5.1: Details of distributed questionnaires

The above figure shows that 203 questionnaires were distributed, out of which 135 were received.

5.1.2 Designation

Designation	Respondents	Percentage
Faculty	1	0.74%
Student	36	26.47%
Staff	53	38.97%
Other	46	33.82%
Total	**135**	**100%**

Table 5.1: Designation
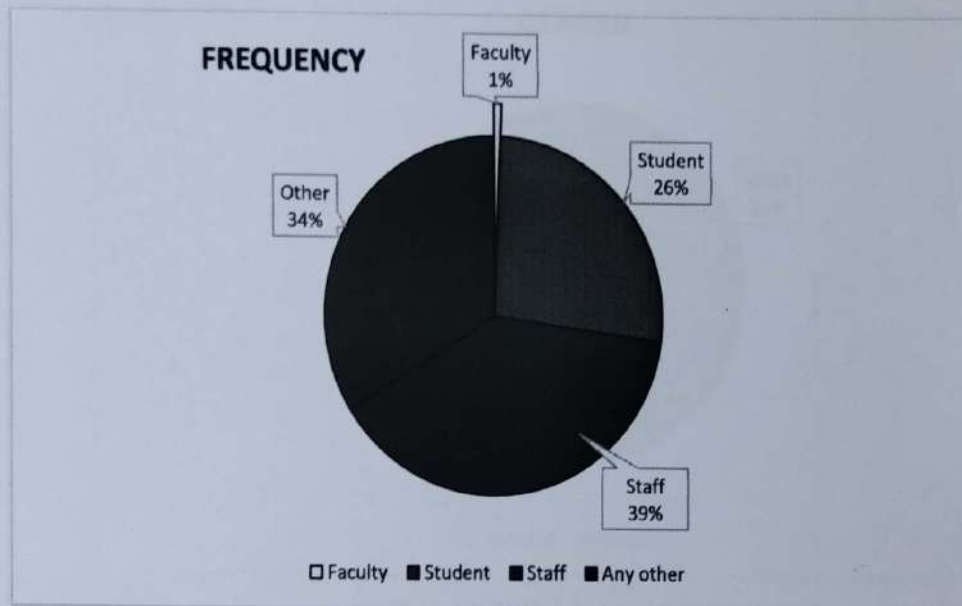
Figure 5.2: Designation

As above, figure 5.2 shows the designation in the library and information science fields. As can be seen very clearly, the majority of 53 (38.97%) respondents are from staff. There have been 46 (33.82%) respondents in the "other" category generally; this category includes designations that aren't specifically included in the designated categories (faculty, student, staff). Students represent a larger proportion of the

responses, with 36 (26.47%). lastly, only 1 (0.74%) is a faculty member from the above designations.

5.1.3 Gender

Gender	Respondents	Percentage
Male	49	36%
Female	86	64%
Total	**135**	**100%**

Table 5.2: Gender
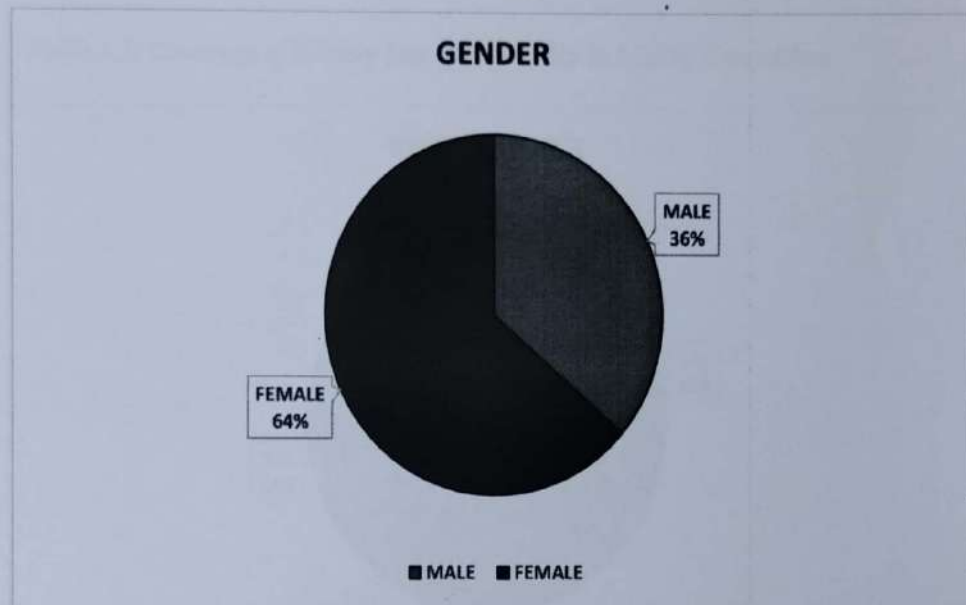
Figure 5.3: Gender

The survey was conducted by taking 135 students as a sample size to complete my research work. The figure indicates the gender of the students. It could be noted that out of the total 135 students, the majority of respondents were female (64%), and the rest (36%) were males.

5.1.4 Coverage of Library Entrepreneurship in MLISC Curriculum

The purpose of this question is to ascertain whether the MLIS curriculum includes content on library entrepreneurship, which is vital for preparing students to adapt to changing roles, optimize resources, and explore diverse career opportunities.

	Respondents	Percentage
Yes	58	42.96%
No	77	57.03%
Total	**135**	**100%**

Table 5.3: Coverage of Library Entrepreneurship in MLISC Curriculum
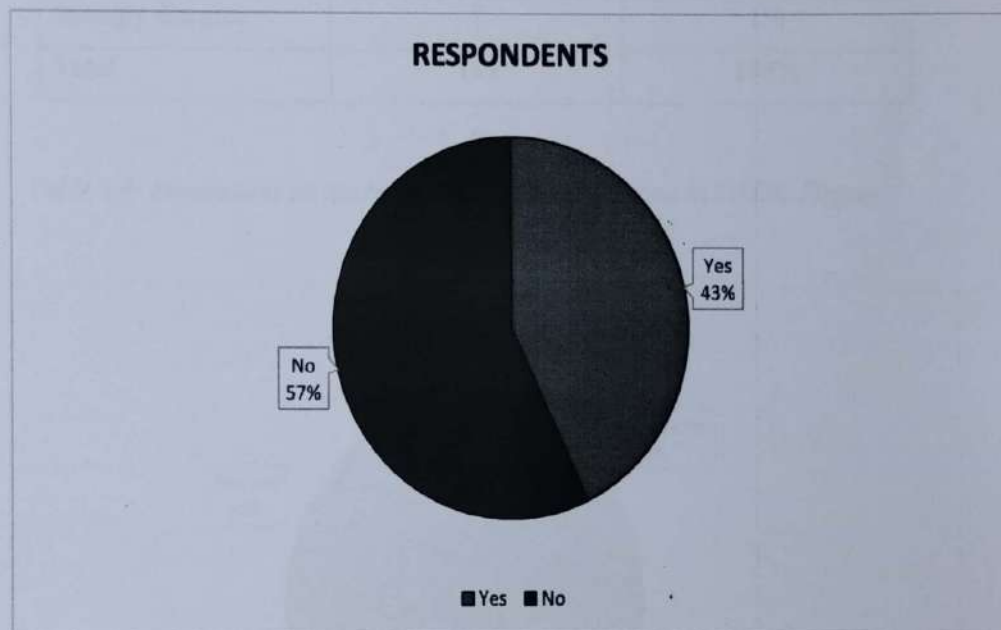
Figure 5.4: Coverage of Library Entrepreneurship in MLISC Curriculum

From the responses of 135 participants, it is evident that a majority of 77 students (57.03%) indicated that the MLIS curriculum does not cover library entrepreneurship, while 58 students (42.96%) said that it does include content on this topic.

5.1.5 Perceptions on the Need for Additional Courses in MLISC Degree Programs.

The purpose of this question is to explore whether there is a need for additional courses or papers to be offered within the MLIS degree program. This inquiry aims to identify potential areas of improvement in the curriculum to better equip students with the skills and knowledge necessary for success in the fields of library and information science.

Need for Additional Courses	Respondents	Percentage
Strongly agree	26	19%
Agree	75	56%
Neutral	30	22%
Disagree	3	2%
Strongly disagree	1	1%
Total	**135**	**100%**

Table 5.4: Perceptions on the Need for Additional Courses in MLISC Degree Programs.
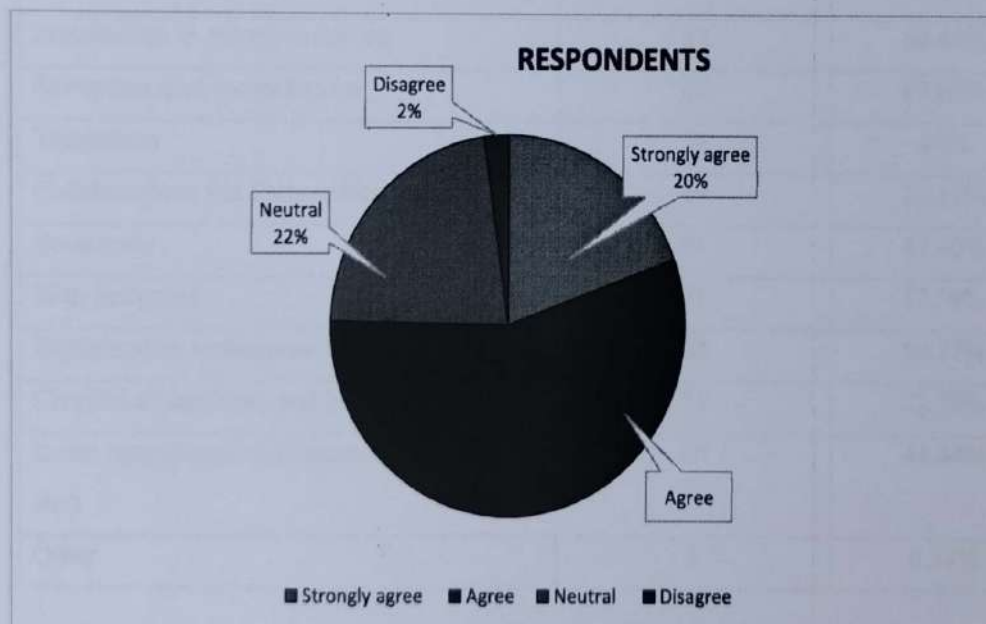
Figure 5.5: Perceptions on the Need for Additional Courses in MLISC Degree Programs.

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As can be seen in the above figure, only 26 respondents (19%) strongly believe that there is a perceived need for additional courses or papers to be offered within the MLIS degree program. Which succeeded by 75 respondents (56%) who expressed a belief in the necessity of additional courses or papers within MLIS degree programs. This indicates a perceived need for enhancement or expansion of the curriculum to better equip students with the skills and knowledge relevant to the fields of library and information science. While a portion of respondents (22%) remain neutral on this matter, very few (only 3%) express disagreements. Overall, the data suggests a consensus that there is room for improvement in the MLIS curriculum to meet the evolving demands of the profession.

5.1.6 An elective paper in LIS curriculum

The purpose of this question is to identify the relevant entities that should be considered if entrepreneurship is introduced as an elective paper in the LIS (Library and Information Science) curriculum.

Elective Papers	Respondents	Percentage
Introduction to entrepreneurship	87	64.44%
Entrepreneurial competencies	67	49.62%
Translation	54	40%
Collaborations and Partnerships	69	51.11%
Book trade	64	47.40%
Web designing	71	52.59%
Digitalization techniques/ methods	68	50.37%
Creation of databases and bibliographies	71	52.59%
Event management (conferences, symposium, etc.)	60	44.44%
Other	1	0.74%

Table 5.5: An elective paper in LIS curriculum

RESPONDENTS

ELECTIVE PAPERS	PERCENTAGE
Other	1
Event management (conferences,...	60
Creation of databases and bibliographies	71
Digitalization techniques/ methods	68
Web designing	71
Book trade	64
Collaborations and Partnerships	69
Translation	54
Entrepreneurial competencies	67
Introduction to entrepreneurship	87
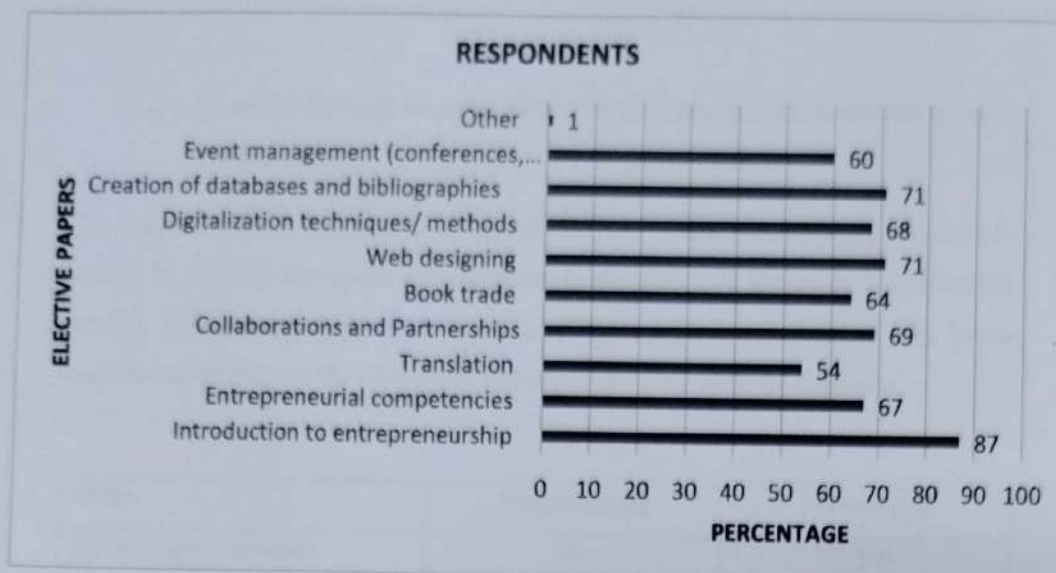
Figure 5.6: An elective paper in LIS curriculum

Based on the responses, 64.44% of respondents chose "Introduction to Entrepreneurship" as their most favoured option. Indicating a strong interest in foundational knowledge in this area other popular choices include web designing (52.59%), creation of databases and bibliographies (52.59%), and entrepreneurial competencies (49.62%). Translation (40%), book trade (47.40%), digitalization techniques/methods (50.37%), and collaborations/partnerships (51.11%) also received significant attention. Event management (44.44%) was chosen by a moderate percentage of respondents. Only 0.74% of respondents selected "Other" as their choice. The majority of respondents favoured Introduction to entrepreneurship, indicating a strong interest in foundational knowledge in this area. Additionally, skills related to web designing, creation of databases and bibliographies, and entrepreneurial competencies were also highly valued. This suggests that students are interested not only in the theoretical aspects of entrepreneurship but also in practical skills that can be applied within the LIS field. Other areas such as digitalization techniques/methods, book trade, and collaborations/partnerships also received notable attention.

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5.1.7 Essential Entrepreneurial Skills for Library and Information Science Professionals.

The purpose of this question is to identify the key skills necessary for individuals aiming to become successful entrepreneurs in the fields of library and information science. By understanding these essential skills, aspiring entrepreneurs can better prepare themselves for the challenges and opportunities within the industry.

Skills	Respondents	Percentage
Knowledge of metrics	59	43.70%
Vocabulary control	81	60%
Knowledge of Artificial intelligence	87	64%
Knowledge of latest publication	88	65.18%
Expertise in ICT	88	65.18%
Book trade	52	38.51
Other	2	1.48%

Table 5.6: Essential Entrepreneurial Skills for Library and Information Science Professionals.

RESPONDENTS
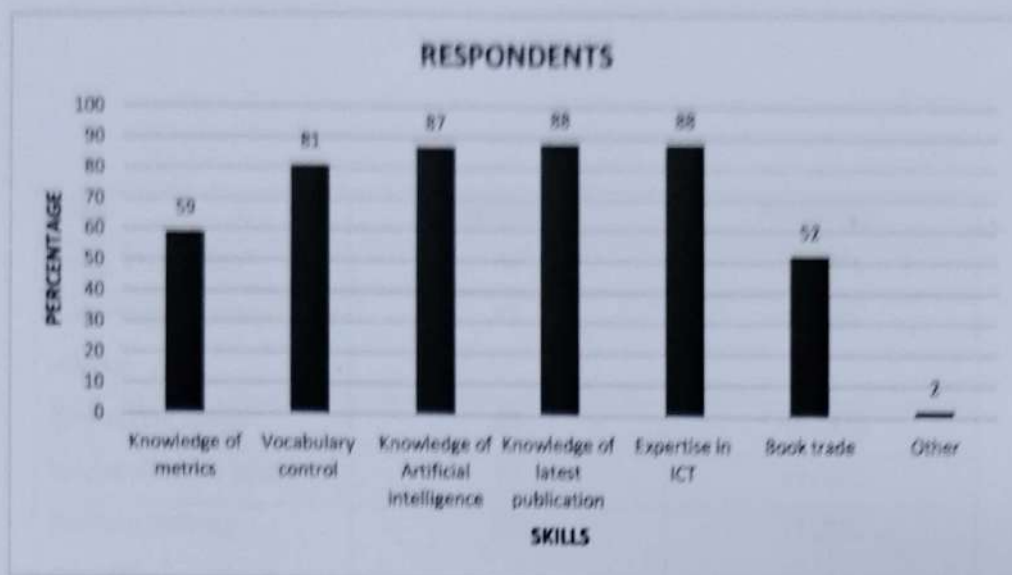
Figure 5.7: Essential Entrepreneurial Skills for Library and Information Science Professionals.

The survey data offers a comprehensive insight into the essential entrepreneurial skills required for success in the fields of library and information science (LIS). The findings highlight 60% of respondents emphasizing the importance of vocabulary control, As highlighted by 64% of respondents, understanding AI technologies is increasingly essential in LIS entrepreneurship. Similarly, 65.18% of respondents emphasized the significance of expertise in ICT. A majority (65.18%) of respondents stressed the importance of staying updated with the latest publications. Forty-three percent of respondents highlighted the importance of knowledge of metrics. This includes understanding assessment tools, performance indicators, and metrics for evaluating the impact and effectiveness of information services and resources. While slightly less emphasized, 38.51% of respondents recognized the significance of knowledge of the book trade.

5.1.8 LIS Skills Necessary for Self-Employment among Students.

The purpose of this question is to identify the specific skills in library and information science (LIS) that students possess, which are essential for self-employment. By identifying these abilities, students may successfully use them to further freelance work or entrepreneurial endeavours in the fields of library and information science, improving their employability and career prospects.

Skills	Respondents	Percentage
Being Tech savvy	48	35.55%
Knowledge about the subject	93	68.88%
Risk-taking ability	65	48.14%
Independent job seeker	67	49.62%
Problem-Solving approach	102	75.55%
Networking and Collaboration	77	57.03%
Other	1	0.74%

Table 5.7: LIS Skills Necessary for Self-Employment among Students.
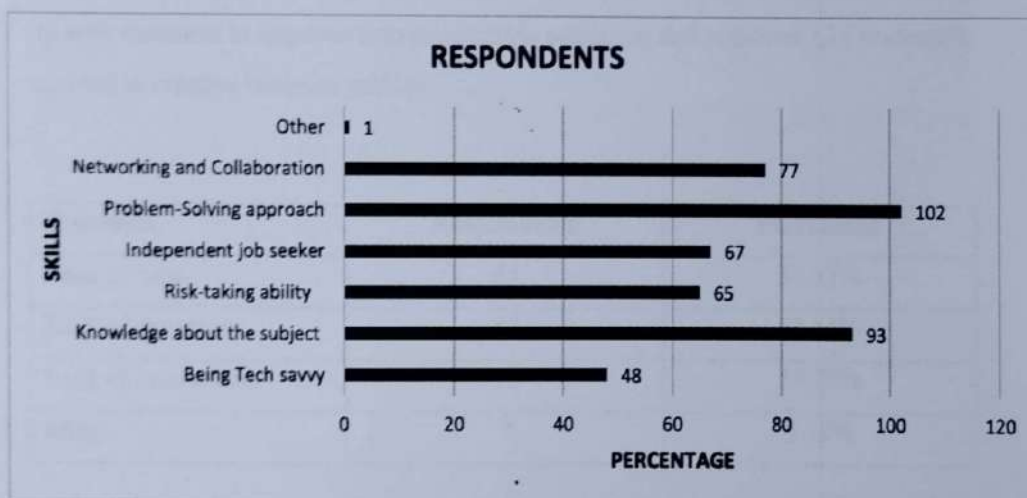
Figure 5.8: LIS Skills Necessary for Self-Employment among Students.

According to the survey majority of respondents (68.88%) highlighted the importance of having a strong foundation in the subject matter of LIS. A significant majority (75.55%) emphasized the importance of a problem-solving approach. This skill is indispensable for self-employed individuals as they often encounter unique challenges and scenarios in their work. More than half of the respondents (57.03%) identified networking and collaboration skills as essential. While slightly less emphasized compared to other skills, being tech-savvy (35.55%) remains crucial for self-employment in LIS. Approximately half of the respondents (48.14% and 49.62%, respectively) highlighted the importance of risk-taking ability and being an independent job seeker.

5.1.9 Challenges in Acquiring Entrepreneurship Skills for LIS Students.

The purpose of this question is to identify obstacles hindering LIS students from acquiring entrepreneurial skills to improve educational support and enhance students' readiness for entrepreneurship. By recognizing these problems, educators must come up with measures to improve entrepreneurship education and empower LIS students to succeed in creative business entities.

Problems	Respondents	Percentage
Lack of time	45	33.33%
Lack of expertise	87	64.44%
Lack of motivation	78	57.77%
other	7	5.18%

Table 5.8: Challenges in Acquiring Entrepreneurship Skills for LIS Students.
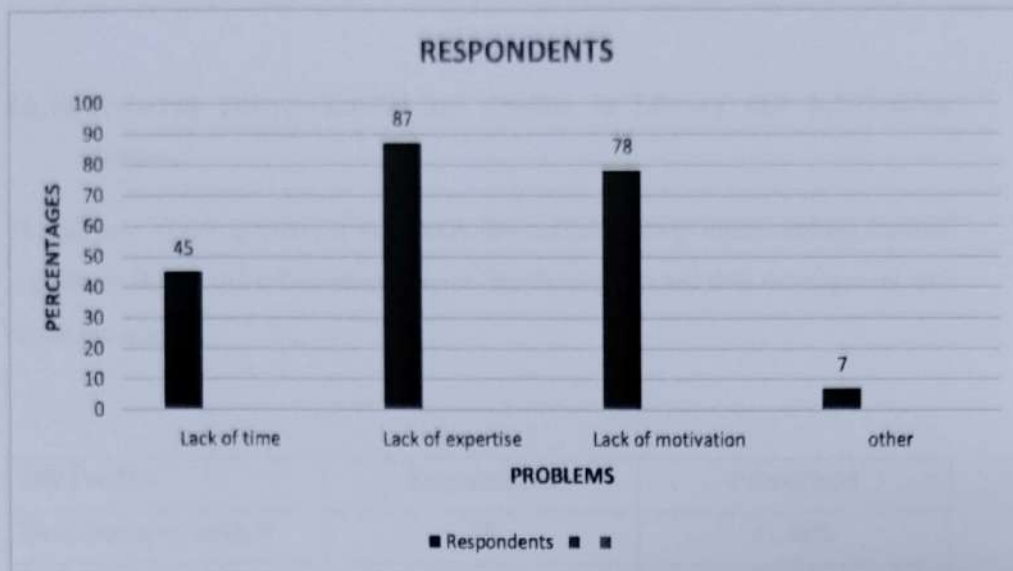
Figure 5.9: Challenges in Acquiring Entrepreneurship Skills for LIS Students.

As can be seen in the above figure, only 45 respondents (33.33%) suggest that a considerable portion of LIS students struggle to allocate sufficient time to develop entrepreneurship skills amidst their academic commitments and other obligations, which is followed by 87 respondents (64.3%) citing a lack of expertise, which indicates a significant obstacle to acquiring entrepreneurship skills among LIS students. 78 respondents, (57.77%) Lack of motivation poses another significant challenge, suggesting that many LIS students may struggle to find the drive or enthusiasm to pursue entrepreneurship. 7 respondents (5.18%) have suggested another option.

5.1.10. Preferred Entrepreneurial Job Profiles in Library and Information Science.

The purpose of this question is to Identify desired job roles to inform entrepreneurial pursuits in library and information science, facilitating focused skill development and career planning.

Job Profiles	Respondents	Percentage
Documentation analyst	58	42.96%
Technology consultant	31	22.96%
Critical reviewer	28	20.74%
Library website developer	69	51.11%
Indexing and abstracting developer	33	24.44%
Matric analyst	19	14.07%
Consultancy	22	16.29%
Data Creator	34	25.18%
Information Architect	28	20.74%
Knowledge Organization	56	41.48%
Researcher	56	41.48%
Data Scientist	37	27.40%
Other	1	0.74%

Table 5.9: Preferred Entrepreneurial Job Profiles in Library and Information Science.

RESPONDENTS

Job Profile	Value
Other	1
	37
Researcher	56
	56
Information Architect	28
	34
Consultancy	22
	19
Indexing and abstracting developer	33
	69
Critical reviewer	28
	31
Documentation analyst	58
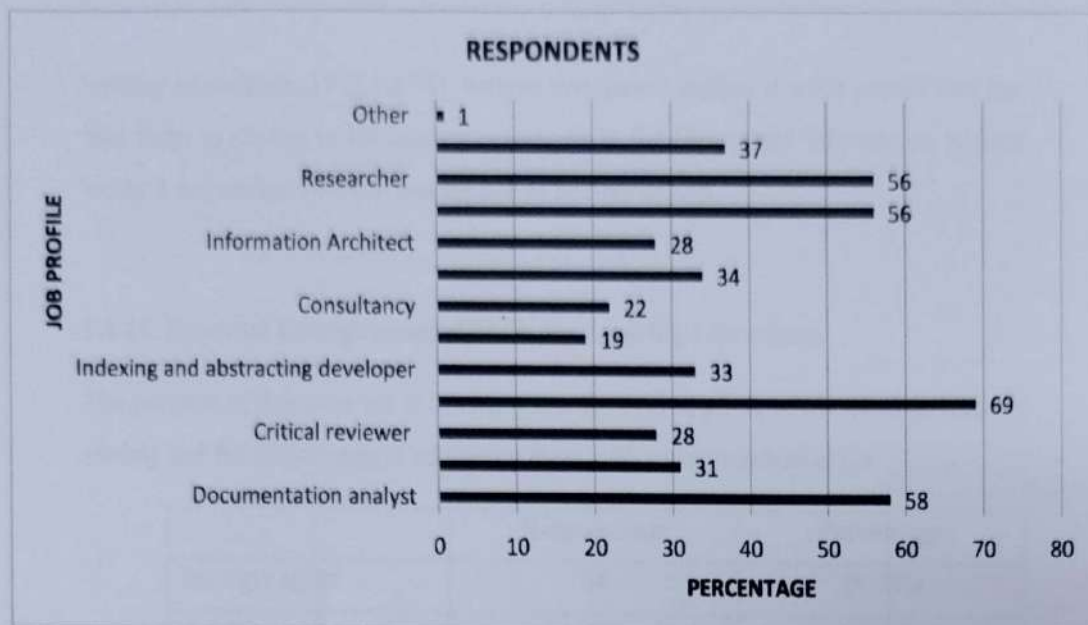
Figure 5.10: Preferred Entrepreneurial Job Profiles in Library and Information Science.

From the above diagram, it is evident that the majority of 69 respondents (51.11%) expressed interest in a library website developer. The most notable finding is the high level of interest in the role of a documentation analyst, with 58 (42.96%) of respondents expressing a preference for this profile. Roles such as knowledge organization specialist and researcher also garnered significant interest, with 56 (41.48%) of respondents expressing a preference for each. Furthermore, specialized roles like data scientist and technology consultant are also notable, with 37 (27.40%) and 31 (22.96%) of respondents interested in these profiles, respectively. However, it is clear that critical reviewers and information architects, with 28 (20.74%) agree with the avenues for a job profile. Out of the respondents surveyed, 34 (25.18%) believe that Data Creator Avenue can be a job profile. According to the findings, 22 (16.29%) of participants indicated a desire to work as consultants in the field of library and information science (LIS) entrepreneurship. This data indicates that a significant percentage of students who aspire to pursue entrepreneurial ventures in the fields of library and information science are interested in offering consultancy services. The data indicates that 33 (24.44%) of respondents expressed interest in the role of indexing and abstracting developers within the realm of library and information science (LIS) entrepreneurship. A very small

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number of students, 19 (14.07%), believe that matric analyst is a job profile that can lead them to choose to become entrepreneurs in the library and information science fields. 1 respondent (0.74%) has suggested another option.

5.1.11. Essential Entrepreneurial Skills for Aspiring Librarians.

The purpose of this question is to emphasize the evolving role of librarians in modern society and the importance of equipping them with entrepreneurial skills.

	Respondents	Percentage
Strongly agree	34	25.18%
Agree	92	68.14%
Disagree	4	2.96%
Strongly disagree	0	0%
Not required	5	3.70%
Total	135	100%

Table 5.10: Essential Entrepreneurial Skills for Aspiring Librarians.
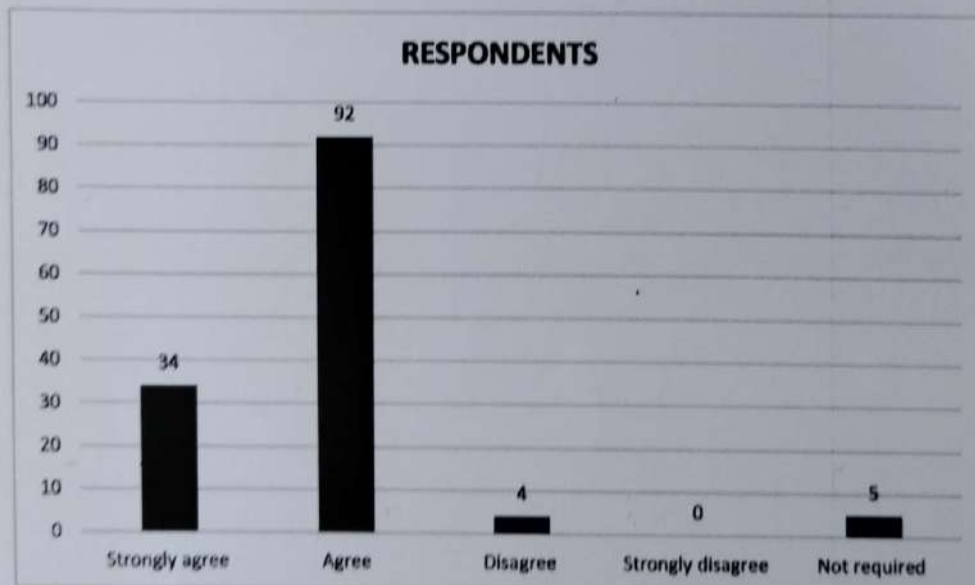
Figure 5.11: Essential Entrepreneurial Skills for Aspiring Librarians.

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The data provided presents responses from a survey regarding the importance of equipping aspiring librarians with entrepreneurial skills. The majority of respondents, comprising 93.32% (strongly agree + agree), are in favor of the notion that aspiring librarians should possess entrepreneurial skills. This indicates a strong consensus among the participants regarding the importance of blending entrepreneurial skills with the traditional role of librarians. Only a small percentage (2.96%) of respondents disagree that entrepreneurial skills are essential for aspiring librarians. Interestingly, there were no respondents who strongly disagreed with the proposition. This absence suggests a high level of consensus among the students, with none vehemently opposed to the idea of integrating entrepreneurial skills into librarian training. A small fraction (3.70%) of respondents indicated that they believe entrepreneurial skills are not necessary for aspiring librarians.

5.1.12. Anticipated Impact of Library Entrepreneurship Initiatives on the Future of LIS Professions.

This question was asked to understand how to assess the effectiveness and potential impact of initiatives in library entrepreneurship on the future of the library and information science (LIS) professions. By understanding which initiatives will be beneficial, libraries and LIS professionals can allocate resources effectively and focus on areas that will contribute to future success.

	Respondents	Percentage
Creation of better market	42	31.11%
Creation of expertise	79	58.51%
More avenues for professionalism and employment	51	37.77%
Less Competition among library professions	31	22.96%
Creation of a knowledge-based society	81	60%
Dependency for jobs in LIS field will reduce	4	2.96%
More availability of expert services for librarians	6	4.44%
Other	1	0.74%

Table 5.11: Anticipated Impact of Library Entrepreneurship Initiatives on the Future of LIS Professions.

RESPONDENTS

Category	Value
Other	1
More availability of expert services for librarians	6
Dependency for jobs in LIS field will reduce	4
Creation of a knowledge-based society	81
Less Competition among library professions	31
More avenues for professionalism and employment	51
Creation of expertise	79
Creation of better market	42

PERCENTAGES
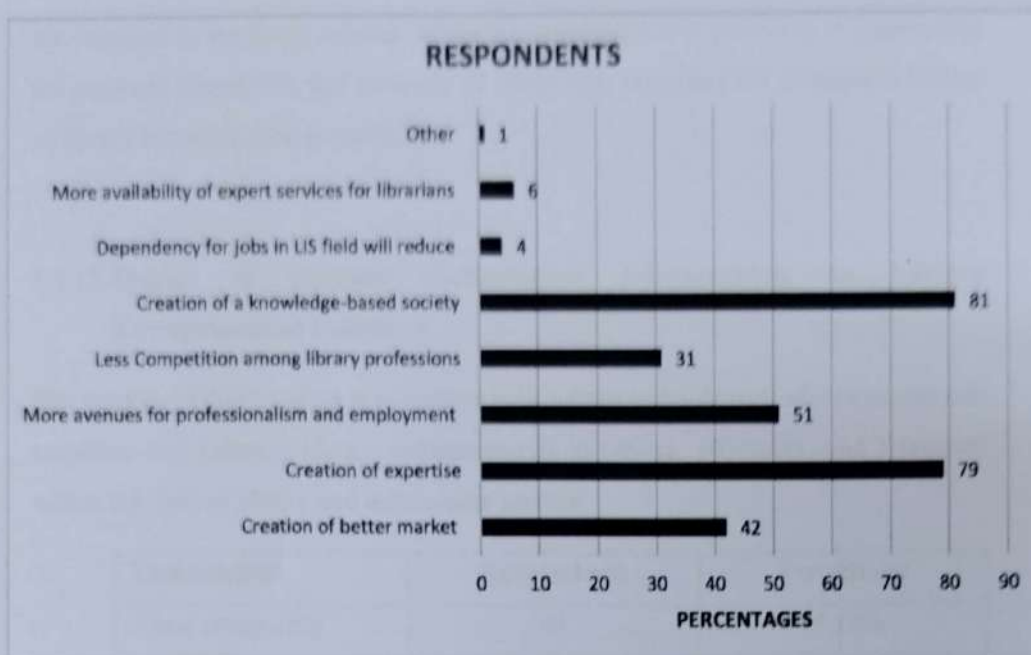
Figure 5.12: Anticipated Impact of Library Entrepreneurship Initiatives on the Future of LIS Professions.

As can be seen in the above table 5.11, Nearly a third of (42, 31.11%) respondents believe that library entrepreneurship initiatives will lead to the creation of a better market. The majority of (79, 58.51%) respondents (over half) see library entrepreneurship initiatives as a means to cultivate expertise within the field. This indicates an expectation that such initiatives will foster the development of specialized skills and knowledge among LIS professionals. A significant portion of (51, 37.77%) respondents foresee library entrepreneurship initiatives opening up more avenues for professionalism and employment within the LIS field. A notable but smaller proportion of (31, 22.96%) respondents believe that library entrepreneurship initiatives will result in reduced competition among library professions. The majority of (81, 60%) respondents see library entrepreneurship initiatives as contributing to the creation of a knowledge-based society. A small percentage of (4, 2.96%) respondents believe that library entrepreneurship initiatives will lead to a reduction in dependency for jobs in the LIS field. Another small segment of (6, 4.44%) respondents anticipates that library entrepreneurship initiatives will result in increased availability of expert services for librarians. A minimal percentage of (1, 0.74%) respondents provided other perspectives

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not captured by the listed options. While this response is less prevalent, it underscores the potential complexity and diversity of viewpoints regarding the anticipated impact of library entrepreneurship initiatives.

5.1.13. Impact of Current Technological Advancements on Library Entrepreneurial Initiatives.

The purpose of this question is to explore how current technological advancements can empower and enhance library entrepreneurial initiatives, efficiency, and relevance within the field of library and information science.

Technologies	Respondents	Percentage
Cloud computing	61	45.18%
Artificial intelligence	92	68.14%
Robotics	38	28.14%
Information retrieval	84	62.22%
Matric analyses	31	22.96%
Creator of digital content	65	48.14%
Other	2	1.48%

Table 5.12: Impact of Current Technological Advancements on Library Entrepreneurial Initiatives.
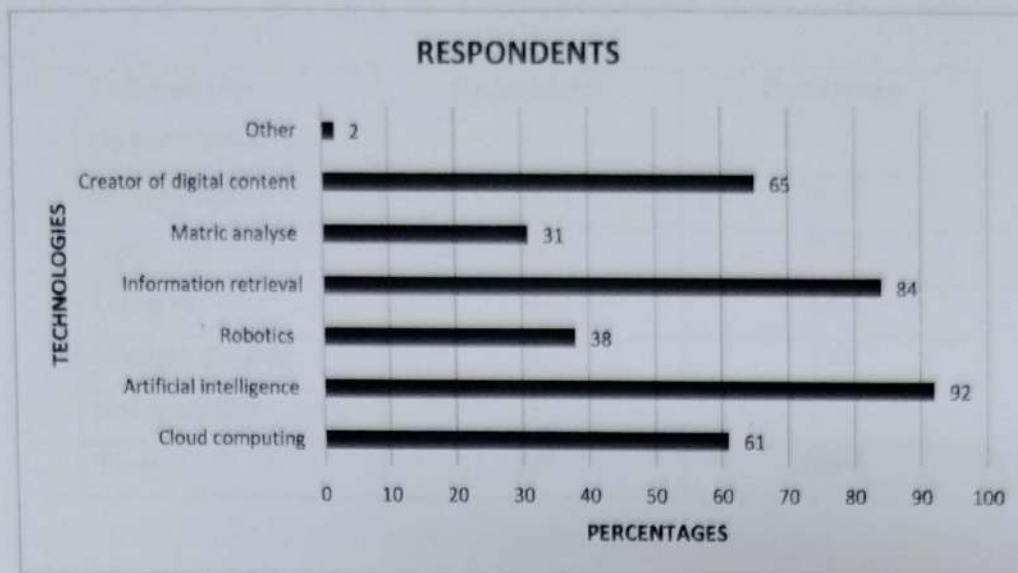
Figure 5.13: Impact of Current Technological Advancements on Library Entrepreneurial Initiatives.

As can be seen in the above table 5.12, 92 (45.18%) respondents expressed enthusiasm about artificial intelligence (AI), suggesting a high level of interest based on the statistics. A large majority of respondents (62.22%) felt interested in information retrieval, which is a basic component of organizing and gaining access to data. Nearly half of the 65 (48.14%) respondents showed interest in being creators of digital content. On the other hand, 61 (45.18%) of the respondents in the survey think cloud computing is a current technological advancement for library entrepreneurs. As for the two other options, robotics with 38 (28.14%) and matric analysis with 31 (22.96%) respondents are interested in this specified technology. 2 respondents (1.48%) have suggested another option.

5.1.14. Collaborative Opportunities for Library Entrepreneurs with Other Industries.

This question was asked to evaluate the upcoming possibility of collaboration between library entrepreneurs and other industries. Collaboration with other industries has the potential to promote innovation, create new opportunities, and provide mutual benefits. Understanding attitudes towards cooperation can help impact strategies for networking, partnership development, and multidisciplinary activities in the library entrepreneurial ecosystem.

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Collaborative Opportunities	Respondents	Percentage
Strongly agree	25	18.52
Agree	94	69.63
Disagree	9	6.67
Strongly disagree	2	1.48
Not applicable	5	3.70
Total	135	100%

Table 5.13: Collaborative Opportunities for Library Entrepreneurs with Other Industries.
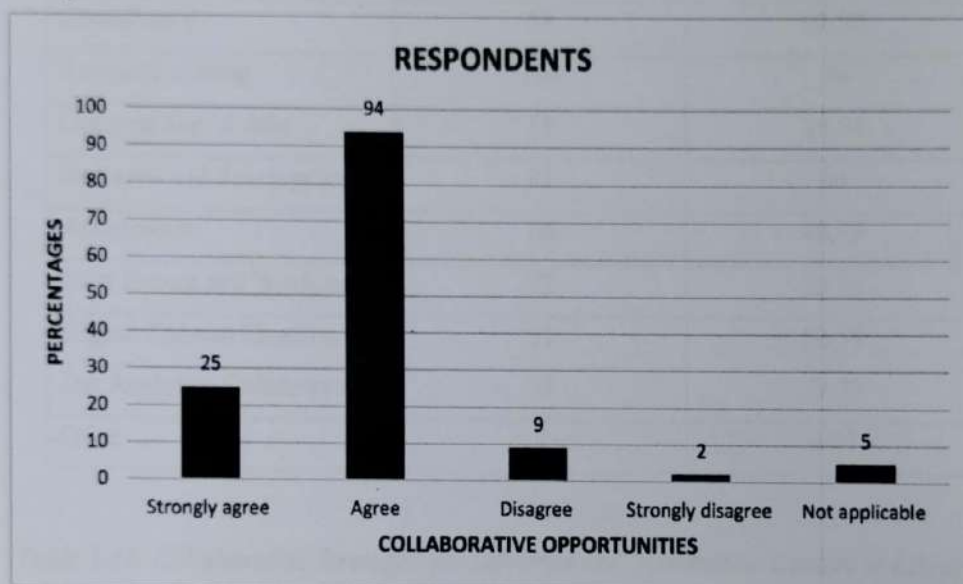
Figure 5.14: Collaborative Opportunities for Library Entrepreneurs with Other Industries.

Figure 5.14 above, shows that the majority of 94 (69.63) respondents agree that there are collaborative opportunities for library entrepreneurs with other industries. Whereas, 25 (18.52%) of respondents strongly agree that there are collaborative opportunities for library entrepreneurs with other industries. 9 (6.67%) of respondents disagree with the idea of collaboration between library entrepreneurs and other industries, suggesting a minority view. A small proportion, 2 (1.48%), strongly disagree, indicating a strong

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disapproval of collaboration is not viable, 3.70% of respondents found the question was not applicable to them, indicating a lack of knowledge or experience or a lack of relevance to their role or context.

5.1.15. Collaborative Strategies for Libraries and Information Centers in Library Entrepreneurship.

This question was asked to explore potential avenues for collaboration between libraries and other information centres with library entrepreneurship initiatives.

	Respondents	Percentage
Consultancy	58	62.96
Resource sharing	108	80
Out sourcing of data	52	38.51
Research and development	81	60
Automation	66	48.88
Joint Events and Workshops	72	53.33
Digital Content Creation	71	52.59
Dat Analytics Collaboration	72	53.33
Other	1	0.74

Table 5.14: Collaborative Strategies for Libraries and Information Centers in Library Entrepreneurship.

RESPONDENTS

Other	1	
Digital Content Creation	72	
	71	
	72	
Automation	66	
	81	
Out sourcing of data	52	
	108	
Consultancy	58	

PERCENTAGES

■ Respondents
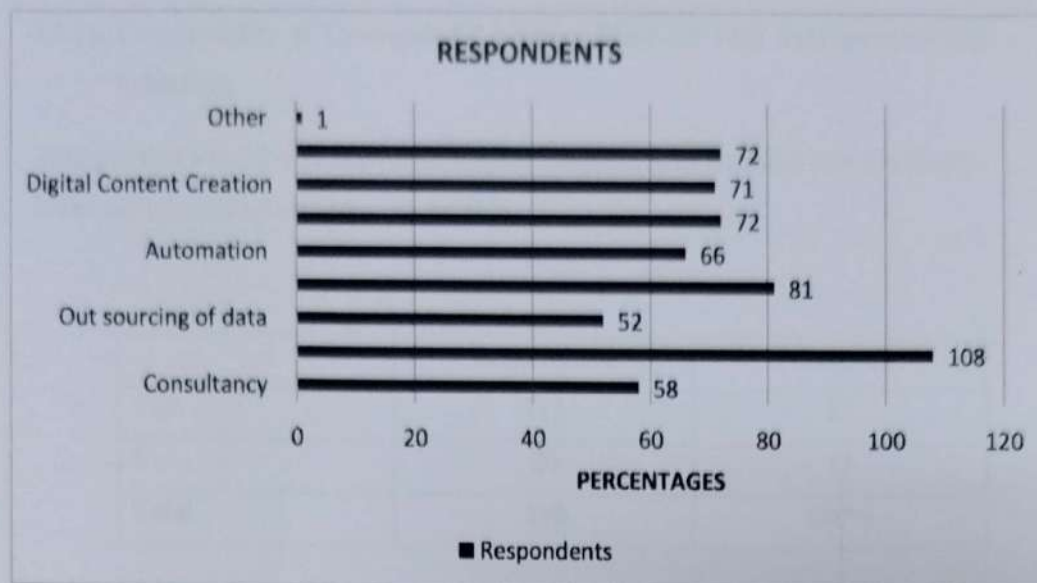
5.15: Collaborative Strategies for Libraries and Information Centers in Library Entrepreneurship.

The students were asked in the question above: in what way can libraries and other information centers collaborate with library entrepreneurship? Figure 5.15 shows the responses that were given. It appears that 108 (80%) of students selected resource sharing. This highlights the importance of collaboration and knowledge exchange among professionals to leverage resources effectively and achieve common goals. On the other hand, outsourcing of data, while still attracting interest from a significant portion (38.51%) of respondents, was comparatively less favored. 81 (60%) of respondents indicated interest in research and development choices, which have also been highly valued. Joint events and workshops with 72 (53.33%), as well as digital content creation with 71 (52.59%) and data analytics collaboration with 72 (53.33%), also received considerable attention, with over half of respondents expressing interest in each category. A considerable percentage of respondents (62.96%) indicated interest in consulting, which makes it a popular choice. 1 respondent (0.74%) has suggested another option.

5.1.16. Compatibility of Conventional Library Mind-set with Entrepreneurship Initiatives.

This question was asked to determine whether common librarian mind-sets and library-based entrepreneurial activities are suitable.

	Respondents	Percentage
Yes	115	85
No	20	15
Total	**135**	**100%**

Total 5.14: Compatibility of Conventional Library Mind-set with Entrepreneurship Initiatives.
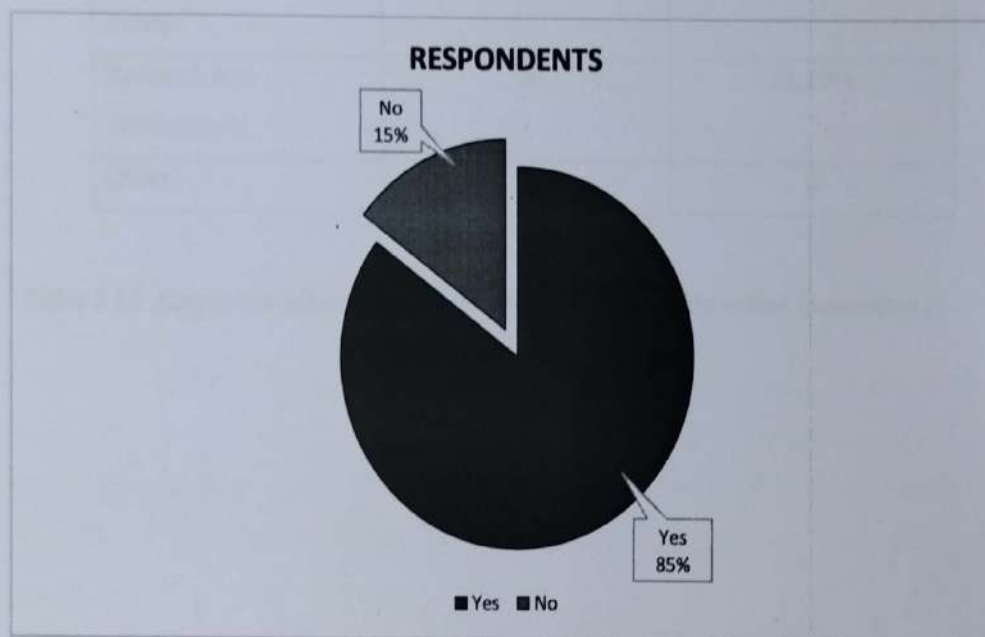
Figure 5.15: Compatibility of Conventional Library Mind-set with Entrepreneurship Initiatives.

As can be seen in Figure The majority of respondents (85%) believe that conventional library mindsets are compatible with entrepreneurship initiatives. A minority of

respondents (15%) believe that conventional library mindsets are not compatible with entrepreneurship initiatives.

5.1.17. Supportive Measures for Library Entrepreneurship within Conventional Library Mind-sets.

The purpose of asking about steps or initiatives to support library entrepreneurship is to identify actionable strategies that can empower libraries to embrace entrepreneurial practices and adapt to the changing needs of their communities.

	Respondents	Percentage
Change in management	42	31.11%
Up gradation in library profession	98	72.59%
Involvement of new avenue	57	42.22%
Research and development	76	56.29%
Other	0	0

Table 5.15: Supportive Measures for Library Entrepreneurship within Conventional Library Mind-sets.

RESPONDENTS
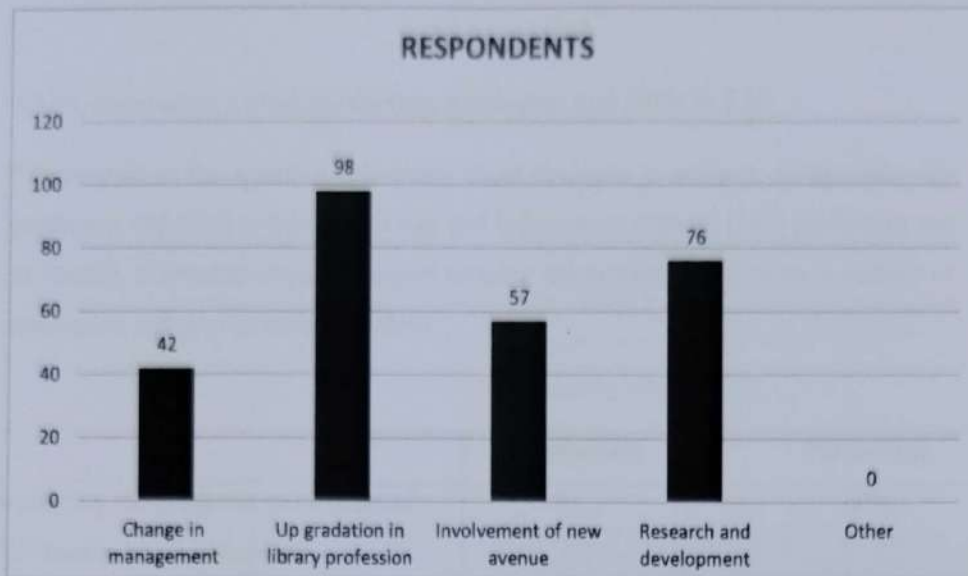
Figure 5.16: Supportive Measures for Library Entrepreneurship within Conventional Library Mind-sets.

As seen in the above figure, the responses reflect a variety of actionable strategies aimed at empowering libraries to embrace entrepreneurial practices and address the evolving needs of their communities. It seems a third of 42 respondents (31.11%) identified a change in management as a critical step in promoting library entrepreneurship. A significant majority of 98 respondents (72.59%) emphasized the importance of upgrading the library profession to support entrepreneurship initiatives. Over forty percent of the 57 respondents (42.22%) highlighted the importance of exploring new avenues to support library entrepreneurship. By embracing new avenues for collaboration and growth, libraries can expand their impact and relevance in a rapidly changing landscape. A majority of 76 responders (56.29%) highlighted the importance of research and development in promoting library entrepreneurship.

5.1.18. Enhancing Entrepreneurship Awareness and Skills in LIS.

The purpose of this question is to know about strategies to enhance entrepreneurship awareness and skills within the Library and Information Science (LIS) profession and to identify actionable steps to support aspiring entrepreneurs and foster a culture of innovation and growth within the field.

	Respondents	Percentage
Restructuring the academic curriculum of LIS profession to accommodate entrepreneurship courses.	81	60%
Financial institutions, NGOs, & private sector organizations should offer free entrepreneurship training to students.	63	61.48%
The students industrial work scheme should be revitalized to include entrepreneurship issues.	33	24.44%
Government should provide loans to graduate are worthy to be entrepreneurs.	48	35.55%
Students must avail themselves to training opportunities in the environment.	71	52.59%
Students must maintain state- of –the art in the business through participation at seminars, workshops, journals & trade books.	67	49.62
Students must recognize changes in their environment & be able to identify business opportunities.	69	51.11%
Other	0	0

Table 5.16: Enhancing Entrepreneurship Awareness and Skills in LIS.

RESPONDENTS

Other	0
Students must recognize changes in their...	69
Students must maintain state- of –the art in the...	67
Students must avail themselves to training...	71
Government should provide loans to graduate are...	48
The students industrial work scheme should be...	33
Financial institutions, NGOs, & private sector...	63
Restructuring the academic curriculum of LIS...	81

AWARENESS AND SKILLS (vertical axis label)

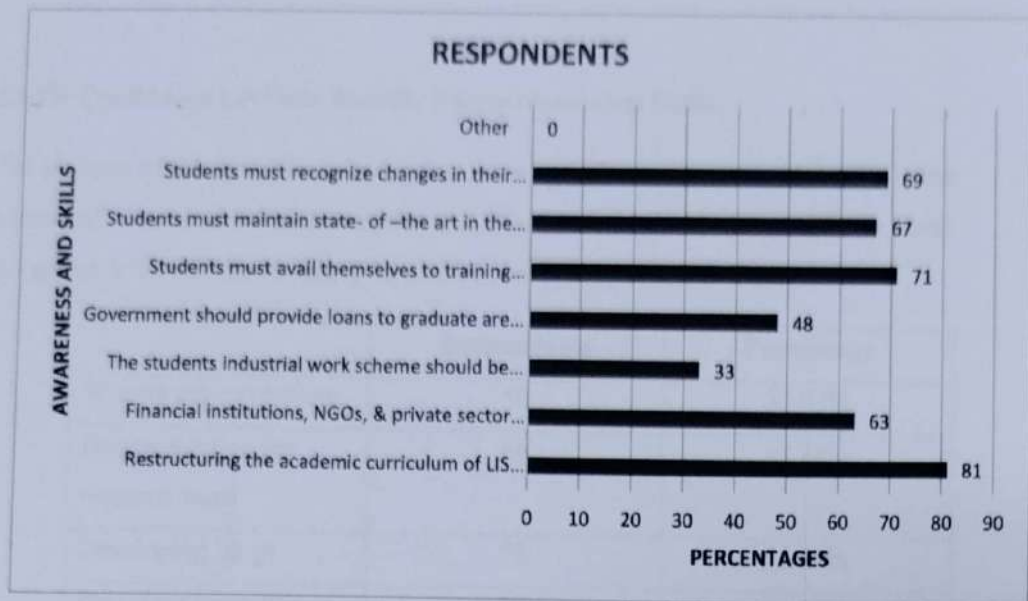**PERCENTAGES** (horizontal axis label: 0 10 20 30 40 50 60 70 80 90)

Figure 5.17: Enhancing Entrepreneurship Awareness and Skills in LIS.

In figure 5.17, we can see that restructuring the academic curriculum of the LIS profession to accommodate entrepreneurship courses the majority of 81 (60%) respondents support the idea of revising the LIS curriculum to include entrepreneurship courses. Furthermore, 61.48% of respondents support the idea of financial institutions, NGOs, and private sector organizations offering free entrepreneurship training to students. While opinions vary, there is also support for other initiatives to promote entrepreneurship education. For instance, 24.44% of respondents suggest revitalizing the students' industrial work scheme to include entrepreneurship issues. 35.55% of respondents advocate for government support in the form of loans for graduates aspiring to become entrepreneurs. Moreover, the data reveals a proactive stance among students, with 52.59% emphasizing the importance of availing themselves of training opportunities in the environment. A similar percentage of 51.11% of respondents emphasizes the importance of students being aware of environmental changes and adept at identifying business opportunities. A small number of students (49.62%) selected Students must maintain state-of-the-art business skills through participation in seminars, workshops, journals, and trade books.

5.1.19. Confidence Levels in Specific Entrepreneurship Skills.

The purpose of this question is to inquire about specific entrepreneurship skills in the context of library and information science (LIS) to assess individuals' confidence levels in various areas relevant to entrepreneurial endeavours within the field.

	Respondents	Percentage
Writing critical review	50	37.03%
Documentation for research word	66	48.88%
Developing blogs	70	51.85%
Providing consultancy	37	27.40%
Engaging outsource work	37	27.40%
Working in book publishing industry	48	35.55%
Working in journal publishing industry	38	28.14%
Working as translator	43	31.85%
Providing expertise for government and other agencies	36	26.66%
Designing of new DDC number	35	25.92%
Website management	3	2.22%
Other	0	0

Table 5.17: Confidence Levels in Specific Entrepreneurship Skills.

RESPONDENTS

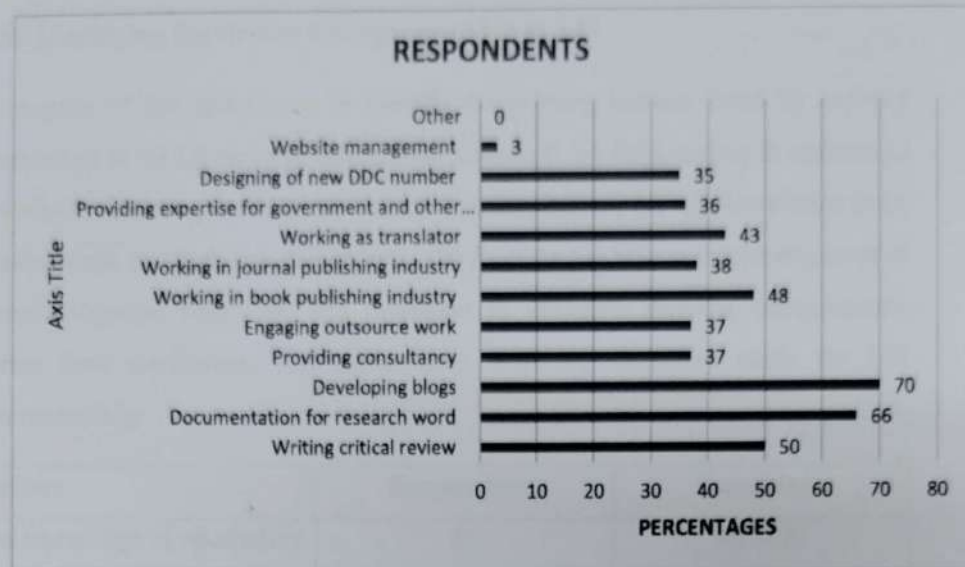| Category	Value
Other	0
Website management	3
Designing of new DDC number	35
Providing expertise for government and other...	36
Working as translator	43
Working in journal publishing industry	38
Working in book publishing industry	48
Engaging outsource work	37
Providing consultancy	37
Developing blogs	70
Documentation for research word	66
Writing critical review	50

PERCENTAGES

Figure 5.18: Confidence Levels in Specific Entrepreneurship Skills.

The data provided appears to be the results of a survey where respondents were asked about various activities related to data analysis and publishing. The activities with the highest percentage of respondents are developing blogs and documentation for research words, with 51.85% and 48.88%, respectively. This suggests that a majority of the respondents are involved in creating and organizing content related to data analysis. The next highest percentage is for working in the journal publishing industry, with 28.14%. The respondents have selected 3.55% to work in the book publishing industry. The data also shows that a significant number of respondents are involved in providing consultancy, engaging outsource work, and providing expertise for government and other agencies, indicating that a portion of the respondents are also involved in providing services related to data analysis and publishing.

5.1.20. Identifying Barriers to Entrepreneurship in LIS

The purpose of this question is to identify the primary barriers faced by aspiring entrepreneurs in the Library and Information Science (LIS) field, aiming to understand the obstacles hindering their entrepreneurial pursuits. Barriers include knowledge gaps, industry trends, and high-risk perceptions. The findings can inform the development of targeted programs, resources, and initiatives to empower aspiring entrepreneurs, enhance their confidence, and equip them with the necessary skills for LIS entrepreneurship.

Barriers	Respondents	Percentage
Less knowledge of vocabulary	55	40.74%
Less knowledge of latest trends in library science	78	57.77%
high risk factor	38	28.14%
Willingness to accept challenges	61	45.18%
Low level of confidence in technology	64	47.40%
Other	1	0.74%

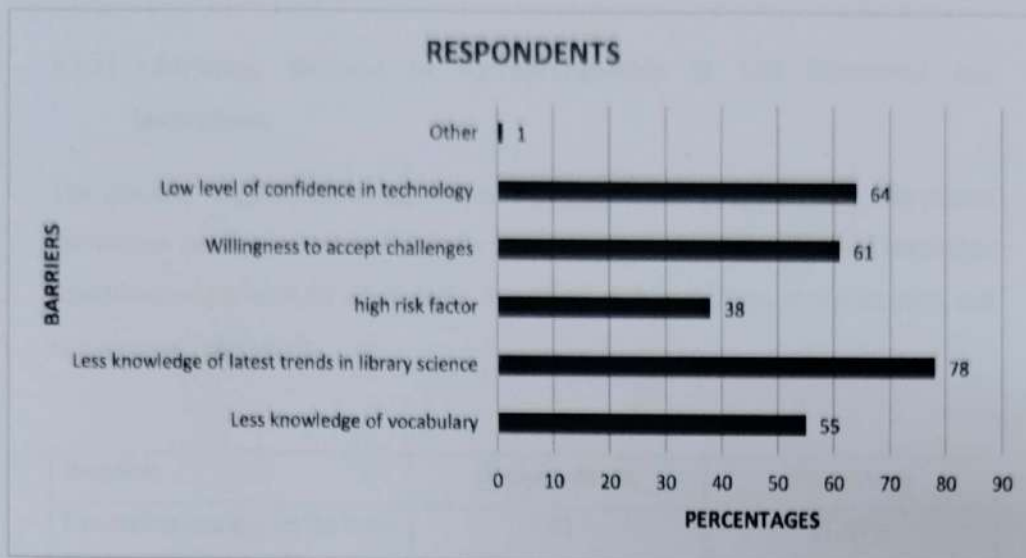*Table 5.17: Identifying Barriers to Entrepreneurship in LIS*

RESPONDENTS

Figure 5.19: Identifying Barriers to Entrepreneurship in LIS

As can be seen in the above figure, the data offers valuable insights into the primary barriers faced by individuals aspiring to become entrepreneurs in the library and information science (LIS) fields. Among the 55 respondents, 40.74% suggest that a significant portion of respondents feel hindered by a lack of familiarity with the specialized terminology and language used within the LIS field. A significant number of respondents, 57.77%, lack knowledge about the latest trends in library science, which is crucial for aspiring entrepreneurs to identify opportunities and remain competitive. Entrepreneurship in the LIS area is viewed as a high-risk element by 28.14% of respondents, and the study found that 45.18% of respondents, 61 of whom are willing to accept challenges, The majority of respondents, 47.40%, lack confidence in technology in the category Other, which includes 0.74% of respondents.

5.1.21. Addressing Barriers to Entrepreneurship in LIS Education and Institutions.

The question suggests exploring proactive strategies and initiatives that educational institutions can implement to dismantle barriers, ensuring a supportive and accessible educational experience for all students, regardless of their abilities, thus promoting and empowering individuals.

Barriers	Respondents	Percentage
Consistent reading on the topic	70	51.85%
Passion for technology	41	30.37%
By fondness for reading	37	27.40%
Job enthusiasm	59	43.70%
Preparing students for facing challenges	80	59.25%
Other	1	0.74%

Table 5.19: Addressing Barriers to Entrepreneurship in LIS Education and Institutions.
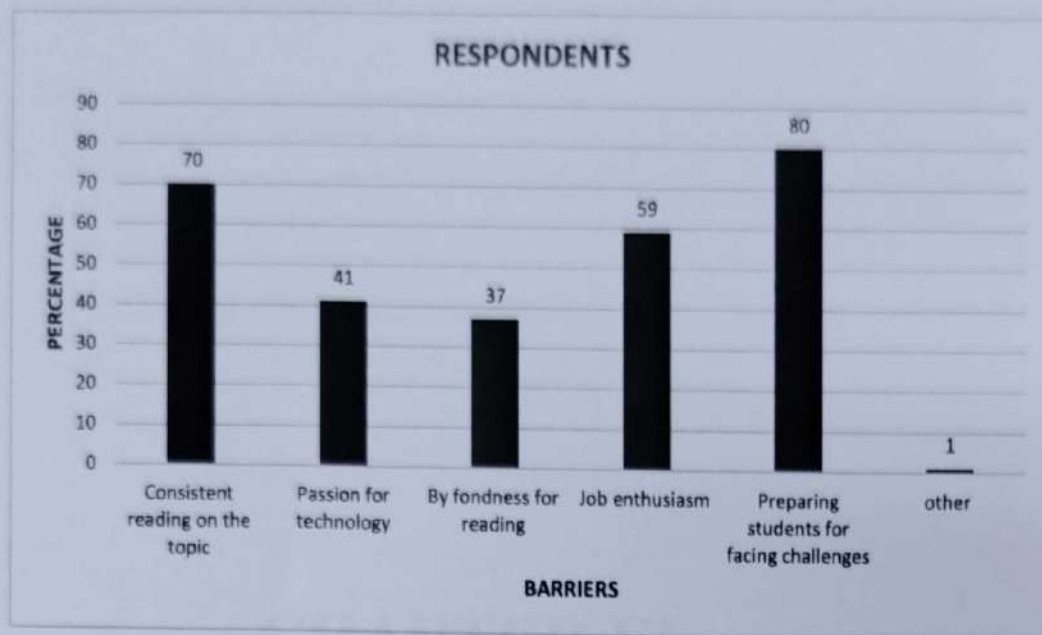
RESPONDENTS

Figure 5.20: Addressing Barriers to Entrepreneurship in LIS Education and Institutions.

The above graph shows (70 respondents, 51.85%) that a majority of respondents believe that consistent reading on the topic of entrepreneurship in LIS education is crucial. Following closely behind is the significance of preparing students for facing challenges, with 59.25% of respondents highlighting its importance. Job enthusiasm was also cited by a substantial percentage of respondents (43.70%), indicating that fostering motivation and passion for their work is crucial in cultivating an entrepreneurial spirit among LIS students. The survey found that enthusiasm for reading (27.40%) and technology (30.37%) are both seen as important factors in developing entrepreneurship in LIS education. The "other" category, which represents just 0.74% of respondents, shows the presence of additional elements or perspectives that may impact the development of entrepreneurship in LIS education, institutions, and studies.

CHAPTER VI

FINDINGS, HYPOTHESES TESTING, SUGGESTIONS AND CONCLUSION

Chapter VI

FINDINGS, HYPOTHESIS TESTINGS, SUGGESTIONS AND CONCLUSION

This chapter details the majority findings of the study's hypothesis testing and provides suggestions and conclusions drawn from the present study.

6.1. FINDINGS:

The following findings are reported after due analysis of the data collected from the students of goa university and IGONU on the topic related to entrepreneurship opportunities for library and information science degree holders.

1. The study indicates that the majority of 77 students (57.03%) indicate that the MLIS curriculum does not cover library entrepreneurship. However, only 58 students (42.96%) of respondents said that it does include information on this subject.

2. The data shows that only 19% of respondents strongly believe there's a need for additional courses or papers in the MLIS degree program, while 56% believe it's necessary. This suggests a need for curriculum enhancement to better equip students with relevant skills in library and information science.

3. The majority of respondents preferred "Introduction to Entrepreneurship" as their preferred option, indicating a strong interest in foundational knowledge. Other popular choices included web designing, database creation, and entrepreneurial competencies. Translation, book trade, digitalization techniques, and collaborations/partnerships also received significant attention. Event management was chosen by a moderate percentage. Only 0.74% chose "Other".

4. The survey data reveals that 60% of respondents prioritize vocabulary control, 64% understand AI technologies, 65.18% have expertise in ICT, 65.18% stay updated with publications, 43% understand metrics, and 38.51% recognize the importance of knowledge of the book trade for success in library and information science entrepreneurship.

5. The survey revealed that a strong foundation in LIS, problem-solving skills (75.55%), networking and collaboration skills (57.03%), tech-savvy (35.55%), risk-taking ability (48.14%), and independence (44.62%) are crucial for self-employed individuals in LIS, with networking and collaboration skills being more important.

6. LIS students face challenges in developing entrepreneurship skills due to academic commitments, lack of expertise, lack of motivation, and other options, with only 33.33% stating they struggle to allocate time for entrepreneurship development, and 64.3% citing expertise.

7. The majority of respondents (51.11%) expressed interest in library website developers, with documentation analysts being the most preferred. Other roles like knowledge organization specialist, researcher, data scientist, and technology consultant were also highly sought after. Students (16.29%) expressed interest in consulting in library and information science entrepreneurship.

8. A survey showed a strong consensus among respondents (93.32%) that aspiring librarians should possess entrepreneurial skills. Only 2.96% disagreed, suggesting a high level of consensus. No respondents strongly disagreed, suggesting no vehement opposition to integrating entrepreneurial skills into librarian training. However, 3.70% believed entrepreneurial skills were not necessary for aspiring librarians.

9. Library entrepreneurship initiatives aim to improve market conditions, enhance expertise, and increase professional opportunities in the LIS field. However, some respondents believe they will reduce competition, promote knowledge-based society, and decrease job dependency.

10. The survey revealed a high interest in artificial intelligence (AI), with 92 respondents (45.18%) expressing enthusiasm. Most (62.22%) were interested in information retrieval, while 48.14% were interested in digital content creation. Cloud computing was considered a technological advancement for library entrepreneurs, while robotics and matric analysis were the most popular options.

11. The majority of respondents (69.63%) believe library entrepreneurs can collaborate with other industries, with 18.52% strongly agreeing. However, 6.67% disagree, 1.48% strongly disagree, and 3.70% find the question unapplicable due to lack of knowledge or context.

12. A student survey revealed that 80% prefer resource sharing for library entrepreneurship collaboration, 60% prefer research and development, and 62.96% express interest in consulting.

13. The survey reveals that a majority of respondents (31.11%) believe a change in management is crucial for promoting library entrepreneurship. A majority (72.59%) emphasize upgrading the library profession to support entrepreneurship initiatives. Over 40% of respondents (42.22%) suggest exploring new avenues for collaboration and growth.

14. The majority of respondents (60%) support revising the LIS curriculum to include entrepreneurship courses, with 61.48% supporting free training from financial institutions, NGOs, and private sector organizations. Students prioritize environmental training and business awareness, while 49.62% believe in maintaining current skills through seminars and workshops.

15. A survey revealed that 51.85% of respondents are involved in developing blogs and research documentation, followed by 28.14% in the journal publishing industry and 3.55% in the book publishing industry. Additionally, a significant number of respondents provide consultancy, outsourcing work, and expertise for government agencies.

16. The data shows that 40.74% of respondents struggle with specialized terminology, 57.77% lack knowledge about latest trends, and 28.14% view entrepreneurship as high-risk.

17. The majority of respondents (51.85%) believe consistent reading on entrepreneurship in LIS education is crucial, with 59.25% preparing students for challenges. Job enthusiasm and enthusiasm for reading and technology are key factors in entrepreneurship development.

6.2. TESTING OF HYPOTHESES

- **Hypothesis 1: The concept of entrepreneurship among LIS in its infancy stage.**

Testing: The above hypothesis is found to be correct as in figure 5.11 It can be clearly seen that 68.14% of the respondents feels that the concept and skills of entrepreneurship among LIS in its infancy stage.

- **Hypothesis 2: Conventional library mind-set supports the library entrepreneurship initiative.**

Testing: From figure 5.15 reveals that 115 (85%) respondents agree with the Compatibility of Conventional Library Mind-set with Entrepreneurship Initiatives. The data from figure 5.16 reveals the various steps or initiatives that can be taken to support library entrepreneurship. Therefore, the hypothesis "Conventional library mind-set supports the library entrepreneurship initiative." is proven to be correct and therefore accepted.

6.3. SUGGESTIONS

1. Library entrepreneurship involves learning new skills and strategies to survive in the field of library & information science. It should be made a complementary subject and can be a good career option if implemented well. However, it is not practical for LIS students or professionals, as they may face challenges in implementing this new concept.

2. Library entrepreneurship is a great opportunity for librarians to create new markets and find solutions to problems faced by library users. It requires thorough experience and study of market situations and the opportunities within the markets.

3. Library entrepreneurship should be included in the LIS curriculum so that every student can understand it better and effectively. As it will helps library professionals to develop and learn new things, think creatively, problem solve skills, risk-taking, facing challenges, and decision-making.

4. Training and re-training programmes should be arranged for all Library and Information Science educators to improve on their effective skills in entrepreneurship education.

5. There should be inter-disciplinary collaboration in teaching and learning entrepreneurship.

6. Conferences, seminars, workshops, symposia and short courses on entrepreneurship education should be periodically arranged for lecturers and

students as this will help them to update their knowledge and skills in entrepreneurship.

7. The duration and intensity of entrepreneurship education should be increased beyond a semester's course to realize the maximum impact on university students.

8. Entrepreneurship education should not only be offered at the university level but should be established and made compulsory at all other levels of education.

9. Access to finance by micro, small, and medium enterprises must be well liberalized by the government. There should be unhindered access to microcredit for young graduates.

10. Entrepreneurship education should be practical-oriented so as to sustain student's interest.

11. Librarians can become entrepreneurs by promoting entrepreneurial courses and practical ICT training in the curriculum, using systematic reviews as a resource to gather knowledge, and partly giving their work to entrepreneurs like translation. Libraries can also provide information on their services on websites, learn about different technology use in libraries for advancement, and anticipate various user needs. A well-equipped and functional ICT laboratory should be built for the department. The laboratory should have constant power supply, internet service, and some ICT associated technologies that will aid practicals.

6.4 CONCLUSION

This study aims to address the unemployment issue in the domain of library and information sciences. Many LIS graduates wait for years for a relevant job and some of them also accept low-ranked/paid irrelevant jobs. Without a proper job, it is very difficult to make both ends meet in this time of high inflation and dearness.

This study offers an alternate model of entrepreneurial pathways for the LIS graduates to become self-employed. The findings from the analysis of data collected from students of Goa University and IGONU underscore the importance of addressing gaps in the MLIS curriculum to better equip students for entrepreneurship within the Library and Information Science field. The study examines entrepreneurship in Library and Information Science (LIS) by identifying key factors, opportunities, and skills for aspiring entrepreneurs. It aims to understand the awareness and viability of entrepreneurship prospects among LIS students and the specific competencies required for success.

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ANNEXURE

Entrepreneurship Opportunities for Library and Information Science Degree Holder: - An Analytical Study.

I am Miss Pooja Bhandari, student at Goa University pursuing a degree in Masters of Library and Information Science. As a part of my coursework, I have undertaken minor research on the topic entitled **"Entrepreneurship Opportunities for Library and Information Science Degree Holder: - An Analytical Study"** under the guidance of Mr. Rohan Parab, Assistant Professor, Library and information science program. In this regard, I have to collect primary data through survey method. I assure you that your response will be treated with secrecy and be used for academic purpose only.

Thank you for taking the time to answer these questions.

The Concept Entrepreneurship

Entrepreneurship is defined as the process of acquiring the knowledge and skills required to be self-sufficient, and self-employed without having to work in a white-collar job. Entrepreneurship is the ability of an individual to transform ideas into action. It includes creativity, initiative, invention, and risk-taking, as well as the capacity to organize and manage projects to achieve goals.

Entrepreneurship is becoming an increasingly popular alternative career choice in the current economic scenario. With reference to library entrepreneurs, all the LIS degree holders won't become library professionals immediately. Therefore, there is an urgent need to ascertain other viable options that can be considered by the them to become self-sufficient through entrepreneurship.

Each subject has its own set of opportunities for success. Similarly, library and information science aspirants can now have a new choice that allows them to be both experts and entrepreneurs.

QUESTIONS

1. Your Name:

2. Institution Name:

3. Email:

4. Your Designation:
   - Faculty
   - Student
   - Staff
   - Other

5. Experience in this field.

6. Gender:
   - Male
   - Female

7. What is your opinion about library entrepreneurship?

8. Did your academic syllabus cover library entrepreneurship knowledge during your MLISC course?
   - Yes
   - No

9. Do you feel additional paper or course should be offered during MLISC degree?
   - Strongly agree
   - Agree
   - Neutral
   - Disagree
   - Strongly disagree

10. If entrepreneurship is introduced as an elective paper in LIS curriculum, then which of the following entities should be considered according to you?
   - Introduction to entrepreneurship
   - Entrepreneurial competencies
   - Translation
   - Collaborations and Partnerships
   - Book trade
   - Web designing
   - Digitalization techniques/methods
   - Creation of databases and bibliographies
   - Event management (conferences, symposium, etc.)
   - Other (please specify):_____

11. According to you which of the following skills are essential to become entrepreneur in library and information science?
   - Knowledge of metrics
   - Vocabulary control
   - Knowledge of Artificial Intelligence
   - Knowledge of latest publications
   - Expertise in ICT
   - Book trade
   - Other (please specify):_____

12. What are the necessary elements for self-employment for LIS students?
   - Being Tech savvy
   - Knowledge about the subject
   - Risk-taking ability
   - Independent job seeker
   - Problem-Solving approach
   - Networking and Collaboration
   - Other (please specify): _____

13. What are the problems associated with acquisition of entrepreneurship skills by LIS student?
   - Lack of time
   - Lack of expertise
   - Lack of motivation
   - Other (please specify): _____

14. From the following avenues which job profile would you choose to become an entrepreneur in library and information science field?
    - Documentation analyst
    - Technology consultant
    - Critical reviewer
    - Library website developer
    - Indexing and abstracting developer
    - Matric analyst
    - Consultancy
    - Data Creator
    - Information Architect
    - Knowledge Organization
    - Researcher
    - Data Scientist
    - Other (please specify): _____

15. Library entrepreneurial skills are a must among budding librarians
    - Strongly agree
    - Agree
    - Disagree
    - Strongly disagree
    - Not required

16. How would you determine that the initiatives taken for library entrepreneurship which will help the library and information science professions in the near future?
    - Creation of better market
    - Creation of expertise
    - More avenues for professionalism and employment
    - Less Competition among library professions
    - Creation of a knowledge-based society
    - Dependency for jobs in LIS field will reduce
    - More availability of expert services for librarians
    - Other (please specify): _____

17. Do you think current technological advancements will help library's entrepreneurial initiatives?
   - Cloud computing
   - Artificial intelligence
   - Robotics
   - Information retrieval
   - Matric analyse
   - Creator of digital content
   - Other (please specify): _____

18. The library entrepreneur can collaborate with other industry:
   - Strongly agree
   - Agree
   - Disagree
   - Strongly disagree
   - Not applicable

19. In what way can libraries and other information centres collaborate with library entrepreneurship?
   - Consultancy
   - Resource sharing
   - Out sourcing of data
   - Research and development
   - Automation
   - Joint Events and Workshops
   - Digital Content Creation
   - Data Analytics Collaboration
   - Other (please specify):_____

20. Does the conventional library mindset support the library entrepreneurship initiative?
   - Yes
   - No

21. If yes, what are the steps or initiatives that can be taken to support library entrepreneurship?
   - Change in management
   - Up gradation in library profession
   - Involvement of new avenues
   - Research and development
   - Other (please specify): _____

22. What can be the best strategies to enhance entrepreneurship awareness and skills in LIS professionals?
   - Restructuring the academic curriculum of LIS profession to accommodate entrepreneurship courses.
   - Financial institutions, NGOs, & private sector organizations should offer free entrepreneurship training to students.
   - The students industrial work scheme should be revitalized to include entrepreneurship issues.
   - Government should provide loans to graduate are worthy to be entrepreneurs.
   - Students must avail themselves to training opportunities in the environment.
   - Students must maintain state- of –the art in the business through participation at seminars, workshops, journals & trade books.
   - Students must recognize changes in their environment & be able to identify business opportunities.
   - Other (please specify): _____

23. Which specific entrepreneurship skills do you feel most confident in?
   - Writing critical review
   - Documentation for research work
   - Developing blogs
   - Providing consultancy
   - Engaging in outsourcing work
   - Working in book publishing industry
   - Working in journal publishing industry
   - Working as translator
   - Providing expertise for government and other agencies
   - Designing of new DDC number
   - Website management
   - Other (please specify): _____

24. Identify the primary barriers or challenges that you face in becoming an entrepreneur in the LIS field?
   - Less knowledge of vocabulary
   - Less knowledge of latest trends in library science
   - High risk factor
   - Willingness to accept challenges
   - Low level of confidence in technology
   - Other (please specify): _____

25. How do you think the following barriers can be addressed at the educational or institutional level?
   - Consistent reading on the topic
   - Passion for technology
   - By fondness for reading
   - Job enthusiasm
   - Preparing students for facing challenges
   - Other (please specify): _____

26. How can entrepreneurship contribute to the advancement of information services in libraries?