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Research Article

Practice of Infopreneurship by Librarians in Public University Libraries in South-South Nigeria

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Abstract

Objective – The aim of this study was to examine the practice of infopreneurship by librarians in public university libraries in South-South Nigeria. The study specifically intended to identify purposes of engaging in infopreneurship, methods of running infopreneurship, forms of infopreneurship practiced, benefits derived from practicing infopreneurship, and challenges encountered in practicing infopreneurship by the librarians.

Methods – The population of the study comprised all 175 librarians in 13 public university libraries in South-South Nigeria, which were purposively chosen for the study. The study employed convenience sampling to engage 102 librarians in the university libraries, who were

involved in one form of infopreneurship or another. The librarians were identified through preliminary investigation, observation, and interaction with the librarians by the researchers. The instrument for data collection was a self-designed online questionnaire titled, "Librarians' Infopreneurship Practice Questionnaire (LIPQ)." The instrument was validated by two experts in the Department of Library and Information Science in Niger Delta University, Bayelsa State, Nigeria. Reliability test was not conducted on the instrument, based on the knowledge that a valid test tends to be reliable. The researchers distributed 128 digital copies of the draft of the validated questionnaire to the librarians through personal WhatsApp accounts of the librarians, WhatsApp groups of the various university libraries and WhatsApp groups of the different state chapters of the Nigerian Library Association to which the librarians belonged. Out of the 128 questionnaires administered, 102 were properly completed by the librarians and returned, producing a response rate of 97.69%. The data collected were analyzed using weighted mean and standard deviation.

Results – The results from data analysis revealed that the librarians' purposes of engaging in infopreneurship were to earn extra income, provide for post-retirement, meet unforeseen demands, and develop themselves. The librarians' methods of running infopreneurship were leveraging, customizing, facilitating access to, and providing instant delivery of information. They used the following forms of infopreneurship: information brokerage, reprographic services, research-aid services, book vending and internet services. Finally, challenges faced by the librarians in practicing infopreneurship were lack of adequate finance, business infrastructure, technical skill, and high rate of presence of non-professional infopreneurs.

Conclusion – The findings in this study demonstrate that librarians under study practice infopreneurship primarily for purposes of making money and self-sustenance. They achieve this by leveraging, customizing, facilitating access to and providing quick delivery of information. With these methods, the librarians engage in information brokerage, reprographic services, internet services, research-aid services and book vending. In return, these information professionals enjoy additional income, financial independence, accumulated knowledge, and enhanced sense of fulfillment. However, the practice of infopreneurship by the librarians is hindered by shortage of sufficient funds, technical know-how, business facilities and high rate of presence of unprofessional infopreneurs in the business.

Introduction

The world economy has shifted from the agricultural age to the industrial age, and currently, to the age often referred to as the information age. The information age is an era in which success, progress and survival at individual, organizational, national, and global levels is mainly based on the generation, access, dissemination and use of information. Traditionally, the agricultural and industrial ages mainly contributed to world and national economies. In recent times, the potentials of information have made it a critical factor that enhances such economies. Presently, in Africa, many economies are of a hybrid nature, whereby traces of the agricultural, industrial and information ages are observed. However, features of the information age seem to be more prominent in the continent. A prominent characteristic of the information age in the continent of Africa is the emergence of a new economy referred to as knowledge economy. The knowledge economy is an economy in which information is treated as a good or commodity. It is an economy which is primarily based on the production, marketing, sale and

utilization of information for the satisfaction of human needs. The knowledge economy has been springing up in many countries of the world, including countries in Africa.

One of the countries in Africa in which the knowledge economy has been growing is Nigeria, comprising six geo-political zones: North-Central, North-West, North-East, South-South, South-East and South-West. The knowledge economy has been growing as an essential part of the Nigerian predominantly-oil and gas-based economy with South-South Nigeria providing a significant support to its economy through the production of oil (My Guide Nigeria, 2017). The development of the economy in the country is as a result of the realization of the economic potentials of information in contemporary times. Such potentials are reflected in the ability of information to be transferred, modified, traded, stored, customized, distributed and replicated (Masron et al., 2017). Thus, information has become an important element of the knowledge economy (Du Toit, 2000). Consequently, individuals, organizations and countries make huge investments in information as a commodity because of their growing recognition that information is useful for their survival (Ocholla, 1999). Its status as an important factor of production in the knowledge economy has provided opportunities for information-based businesses, and by extension, has led to the emergence of the concept of infopreneur (Lose & Khuzwayo, 2022), which was first designed as a trademark by Harold F. Weitzen on January 31, 1984 (Lahm & Stowe, 2011).

An amalgam of "information" and "entrepreneur," (Taylor, 2020), an infopreneur is someone whose main business is to gather and sell information, including online information, by identifying opportunities for creating profit-oriented information-based businesses based on the recognition of knowledge gaps, and by selling customized information products and services to clients (Adetayo & Hamzat, 2021; El-Kalash et al., 2016; Akpena & Duosakeh, 2020). Two types of infopreneurs exist: those who sell the information they have personally collected and those who help others to sell their information (Akpelu, 2019). The activities of infopreneurs have resulted in a new form of business called infopreneurship.

In the context of this study, infopreneurship is defined as the act of running a business in which information is gathered from multiple sources and sold in exchange for money. Kazungu (2021) defined infopreneurship as the ability to organize resources, bear risk and undertake intelligent searches to gather information from different sources, combine it into novel ways, and serve the readers' needs through internet tools as a value-added service for profit. Nweze (2018) opines that infopreneurship involves taking advantage of business opportunities to produce information products and services and to manage information. It is a business that involves the creation, capture, acquisition, processing, sharing and use of information as products and services (Aregbesola, et al., 2019). Infopreneurship is a business model where an individual, or "infopreneur," shares their life experience, knowledge, and passion with others through information products and services that create value and generate income (Ogbonna & Dare, 2019). It could involve selling print information, online information, or both. The types of information sold may include books/e-books, audio products, online courses, coaching, virtual summits, workshops, masterminds (outstanding personal creative works), presentations, videos, in-person seminars, tele-seminars, web seminars, special reports, and workbooks (Chandler, 2007; Ogbonna & Dare, 2019. Although these information products are sold through CD-ROMs, audiotapes, audio CDs, videos, talk shows and conferences, the advent of information and communication technology (ICT) has caused a shift in the method of running infopreneurship from traditional information products and services to ICT-driven electronic information services, where the key players are the Internet and cybercafe (Lahm & Stowe, 2011).

Infopreneurship covers such areas as provision of internet services, e-services and m-services, computer trouble-shooting services, provision of student's essays, term papers, research proposals and research

reports writing services; proofreading and editing, provision of access to e-books, e-publishing, business analysis consultancy, web newsletters and online solutions through recorded videos and referencing (Dewah & Mutula, 2016; Ramugondo, 2021). Infopreneurship is considered an important source of accurate, valuable and reliable information, which helps in saving time and costs related to information seeking among individuals and organizations (Masron, et. al., 2017).

The availability of various forms of ICT, information explosion, and the ever-increasing needs of individuals, organizations and institutions for teaching, learning, research, decision making, planning, and production create increasing infopreneurship opportunities. Onaade (2012) observes that the opaque characteristic of information and the varied information needs of clients gave birth to a complex crop of infopreneurs, who are in such fields as Records and Archives Management, Library and Information Science, Journalism, Media Studies, and Publishing Studies (David & Dube, 2013). In South Africa, these individuals operate from such disciplines as Library and Information Science, ICT/Computer Science, Telecommunications, Printing and Publishing, Records and Archives Management and Mass Communication (David & Dube, 2014).

In Nigeria, individuals from similar disciplines operate infopreneurship. These fields include Library and Information Science, Computer Science, Mass Communication, and others. Infopreneurship is one of the business activities springing up in the economic environment of Nigeria. Several Nigerian government workers and unemployed individuals (graduates and non-graduates) have taken advantage of the opportunities presented by the knowledge economy through the establishment of infopreneurial businesses. A core part of these government employees are librarians in Nigerian universities. Many librarians in these universities have drawn from their wealth of skills and knowledge, as information professionals, to engage in infopreneurship. Akpena and Duosakeh (2020) observe that, with its status as a marketable commodity and high users' demands for information, infopreneurship has become a viable business for information professionals in Nigeria.

Some librarians, particularly those who are widely published, take advantage of their access to closed- and open access journals by collecting journal articles from foreign journals, university library databases, institutional repositories and from reserve units of universities libraries and selling them to undergraduate and postgraduate students for a fee. Sometimes, these librarians gather articles from closed-access journals and sell them to fellow librarians who lack access to those journals but need them to write their research papers. Some have also established computer business centers or cybercafés where they download relevant information for undergraduate and postgraduate students for the execution of their assignments, seminars, projects, and other academic write-ups, in exchange for money. Some librarians are also providing reprographic services such as typing, printing, scanning, photocopying as well as internet services such as browsing, uploading of documents, online examination registration, result checking, e-mailing, etc.

As government employees, most of these infopreneurial librarians have hired people to run the business outlets while they act as business managers or directors. On some occasions, the librarians themselves provide similar services to the clients after working hours. Most of the clients are undergraduate and postgraduate students, teachers, and researchers of tertiary institutions. These clients often use the information for academic purposes. The fair use copyright exception permits use of information for academic purposes, private or personal study, review, or criticism. In most cases, a good number of the information materials with which these information professionals render these services are often freely-available online information resources. The librarians seldom use university library information resources for the provision of these infopreneurial services. Consequently, they are usually free from the copyright

policies implemented by the libraries. With this, infopreneurship has become a means adopted by librarians for sustaining their lives and responding to the deteriorating economy in which they work. Thus, Elumelu (2014) sees infopreneurship as a strategy through which information practitioners control their destiny and tackle the serious risks that mass unemployment poses to the stability of societies and economies.

Statement of the Problem

The increasing daily users' demands for information for such activities as teaching, learning, research, decision making, planning, production, etc. has presented librarians with opportunities for running an abundance of information-based businesses, one of the popular forms of which is infopreneurship. With these opportunities, a number of librarians across the world have drawn from their wealth of experience as information professionals to venture into infopreneurship as a means of complementing their salary and enjoying some level of financial satisfaction. A number of librarians in public university libraries in South-South Nigeria are involved in operating various forms of infopreneurship such as information brokerage, establishment of computer business centers or cybercafés for provision of reprographic services such as typing, printing, scanning, photocopying as well as internet services such as browsing, uploading of documents, online examination registration, result checking, e-mailing, and more. According to Akpena and Duosakeh (2020), the status of information as a factor of production and increased users' need for it has made infopreneurship a viable business for Nigerian information professionals. In recent years, infopreneurship has drawn the attention of researchers in Library and Information Science around the globe. While a growing body of research is available on infopreneurship in South Africa, Botswana, and other African countries (Ivwurie & Ocholla, 2016; Ocholla, 1998; 1999, etc.), very little research has been conducted on this topic in Nigeria. These Nigerian studies (Adetayo & Hamzat, 2021; Akpena & Duosakeh, 2020) have only been executed in South-West and North-East Nigeria respectively. Hence, our study examined the practice of infopreneurship by librarians in public university libraries in South-South Nigeria.

Purpose of the Study

This research set out to investigate the operation of infopreneurship by librarians in public university libraries in South-South Nigeria. Specifically, the study intended to:

1. Identify the aims of engaging in infopreneurship by librarians in public university libraries in South-South Nigeria.
2. Discover the ways of carrying out infopreneurship by librarians in public university libraries in South-South Nigeria.
3. Describe the forms of infopreneurship practiced by librarians in public university libraries in South-South Nigeria.
4. Identify the perceived benefits gained from running infopreneurship by librarians in public university libraries in South-South Nigeria.
5. Identify the obstacles in practicing infopreneurship by librarians in public university libraries in South-South Nigeria.

Research Questions

The following research questions were raised to guide the study:

1. What are the purposes of engaging in infopreneurship by librarians in public university libraries in South-South Nigeria?
2. What are the methods of carrying out infopreneurship by librarians in public university libraries in South-South Nigeria?
3. What are the forms of infopreneurship practiced by librarians in public university libraries in South-South Nigeria?
4. What are the perceived benefits derived from practicing infopreneurship by librarians in public university libraries in South-South Nigeria?
5. What are the challenges in practicing infopreneurship by librarians in public university libraries in South-South Nigeria?

Literature Review

Purposes of Engaging in Infopreneurship by Librarians in University Libraries

Individuals, including librarians in university libraries, have several purposes or reasons for infopreneurship. These purposes have been hinted at by expert observations and revealed by previous studies. For instance, research conducted in Botswana by Ocholla (1998; 1999) reveal several reasons for engaging in infopreneurship, including:

- decline of resources to sustain wage employment in the public and private sector,
- increase in unemployment calling for self-employment,
- dead-end jobs retarding professional and career growth,
- the inability of existing information provision centers to provide information services needed and increased demand for specialized information services,
- the willingness of information consumers to pay for consultancy services and recognition that information is a commodity that can create wealth,
- acceptance that information is power necessary for individuals and firms to stay in the market and to keep the competition off-balance,
- interest in self-employment,
- inadequacy of incomes which force income earners to sell skills and knowledge for additional earnings,
- social change witnessed in the creation of small businesses,
- encouragement by entrepreneurs who buy expertise, hire consultants and avoid obligations for hiring staff on a long-term basis,
- increased need for proper information management, and
- size and complexity of the information industry.

Ivwurie and Ocholla (2016) found that most graduates from Library and Information Science and other related fields in selected cities in Lagos State and Oyo State in Nigeria and Kwazulu Natal in South Africa, who venture into information-based businesses do so for financial reasons and survival. In a subsequent study in Nigeria, Akpena and Duosakeh (2020) found that librarians in Bauchi State, Nigeria, engage in infopreneurship with a view to earning extra income, providing for post-retirement, and responding to identified demands. A fairly recent research study by Adetayo and Hamzat (2021) shows

that gaining leadership experience, self-development, library education and training practice, socialization, and money-making are the objectives of venturing into infopreneurship among library professionals in tertiary institutions in Ede, Osun State, Nigeria.

Methods of Carrying out Infopreneurship by Librarians in University Libraries

Individuals, including librarians in university libraries, run infopreneurship in various ways. Expert opinion and observation provide insight into these methods. Taylor (2020) observes that an infopreneur gleans information from either a variety of sources or from their life experiences and uses it to create a saleable content. This content has value for the intended user. Amin et al. (2011) noted that an infopreneur creates value by gradually processing data into information and knowledge relevant to the user. The value could be a result of the potential of information, such as its ability to fill a gap in a person's knowledge, aid someone's understanding, planning, decision making, or gaining of awareness. Thus, David and Dube (2014) assert that an infopreneur is one who spots opportunities for creating information-based businesses by identifying knowledge gaps and selling target-based information products and services, mainly through the internet. David and Dube further note that infopreneurs take advantage of such attributes as curiosity, enthusiasm, courage, and spirit to conduct intelligent searches on a broad spectrum of information items and evaluate, repackage, and determine the significance, relevance and value of information and information services which they then sell by means of the internet. Coulson-Thomas (2000) observes that the rise in the demand for specialized and repackaged information has driven infopreneurs to devise strategies to enable information users manage the abundance of information sources and resources by evaluating, sifting, screening, and classifying an abundance of information to meet users' needs. Weitzen (1998) provides a comprehensive view of the methods adopted in operating infopreneurship. He identifies six ways in which infopreneurs gainfully operate their business. These six ways, which Shapiro and Varian (1999) claim to be widely accepted by different researchers as the methods of running infopreneurship, include leveraging information, customizing information, facilitating access to information, speeding up the flow of information, repackaging information and providing around-the-clock delivery of information to clients.

Forms of Infopreneurship Practiced by Librarians in University Libraries

There are a number of businesses under the umbrella of infopreneurship which could be described as forms or areas of infopreneurship. Ocholla (1999) sees areas of infopreneurship as projects that individuals who have opted for infopreneurship are likely to embark upon. Scholars and experts' opinions suggest two forms of infopreneurship: those operated in the traditional (print) information environment and those run in the digital information environment. A critical review of literature indicates that the digital forms of infopreneurship far outnumber their traditional counterparts. In a way that leans more on digital forms of infopreneurship, Ocholla (1999) identifies the following areas of infopreneurship: research (exploratory and evaluative) in information and related fields such as user studies and market analysis, compilation of bibliographic lists, provision of current business information, compilation of directories, publishing, translation services, information repackaging, writing, editing and proof reading, collection management, records management and cataloguing. Regarding digital forms of infopreneurship, Jennings (1998) identifies webmasters, cybrarians, web managers, private and public cloud services. In a more comprehensive way, Chandler (2007) identifies sale of electronic books, web newsletters, engagement in electronic publishing, provision of business analysis consultancy, subscription-based access, and online solutions on methods of referencing, research proposal writing, or career options in the field of Library and Information Science through recorded videos or chartrooms/ online conferences through social media such as Facebook and Skype. David and Dube (2014) highlight

other digital forms of infopreneurship to include web designing, software development, provision of print-on-demand services, online publishing, software and hardware installation, library automation, marketing of information products, information repackaging, records management, proofreading and editing, internet service provision, electronic abstracting and indexing and online broadcasting. In a subsequent observation, Ramugondo (2021) identifies others to include internet providers, e-services and m-services, computer troubleshooting services, student's essay, term paper, research proposal and research project writing, proofreading, and editing. Moreso, Adetayo and Hamzat (2021) highlight records management, library automation, data management services such as database creation and management, cloud services, data analysis, content analysis, online teaching services, webinars, workshops, information-based consulting services, knowledge management services and online marketing services.

Similar forms of infopreneurship have been revealed by research findings. From a study conducted in Nigeria and South-Africa, Ivwurie and Ocholla (2016) found that infopreneurship is a growing practice among registered small, medium information-based business owners and Library and Information Science graduates in the two countries. Their study reveals that most of its products and services are driven by information and communication technology, and these include software and hardware installation, tracking services, troubleshooting, web designing, programming, CCTV installation and online televised broadcasting and so on. In a subsequent study executed only in Nigeria by Akpena and Duosakeh (2020), it was shown that book vending, information brokerage, indexing services and digital publishing are the major forms of infopreneurial services provided by librarians in Bauchi State of the country.

Librarians' Perceived Benefits Derived from Practicing Infopreneurship

Individuals, including librarians in university libraries, who engage in the business of infopreneurship derive a number of benefits from it. Chandler (2007) states that the benefits gained from practicing infopreneurship are that it attracts a passive income, requires little capital, offers an entrepreneur the chances of acting as a specialist in the business, is easy to market and can be developed effortlessly. In the same vein, Skrob (2009) opines that infopreneurship facilitates manual business by accelerating the provision of services, gives an easy revenue, has a low entry cost, offers specialized services, presents new items which bring new clients, provides advertising opportunities, develops cross-promotion opportunities, has potential for corporate deals and probable circulation via verbal exchange and next-to-zero interaction with customers or clients. In addition to these core benefits, it has also been hinted that infopreneurship has the potential to provide self-employment for unemployed individuals. For example, Kehinde (2021) asserts that infopreneurship serves as an alternative source of employment to graduates, of which a growing number of Nigerian university graduates, according to Olorunfemi (2021), have been incapable of obtaining full-time employment in their disciplines since the Nigerian economic recession began in 1984. Thus, infopreneurship has been viewed as capable of solving problems of mass youth unemployment (Chux-Nyehe & Nwinyokugi, 2020), a core part of which are the unemployed Nigerian university graduates, comprising 52million (National Bureau of Statistics, 2016). Furthermore, infopreneurship has been conceived to be beneficial to business managers, such as empowering them to be employers as well as developing their intrinsic and extrinsic qualities. In this regard, Amakiri et al (2019) observe that infopreneurship enables managers to become employers of labor and helps them to build such qualities or skills as focus, innovativeness, creative thinking, and strategic planning. A Nigerian study conducted by Adetayo and Hamzat (2021) shows that development of self-confidence, acquisition of knowledge, life enhancement, boosting of sense of fulfillment, financial independence and

recognition are the benefits of infopreneurship gained by library professionals in tertiary institutions in Ede, Osun State, Nigeria.

Librarians' Challenges in Practicing Infopreneurship

Infopreneurship, just like any other business undertaking, is not free of obstacles. Expert observations and findings in previous studies on infopreneurship attest to this. Olien (2013) maintains that not all infopreneurs can create a successful enterprise. This indicates that some infopreneurs are confronted by certain challenges as they attempt the business of infopreneurship. Challenges could be classified into three major groups: personal, regulatory, and societal.

Personal Challenges

Ocholla (1999) observes that the field of infopreneurship suffers from individuals who are not passionate about becoming infopreneurs, adding that if an individual starts an information business and it fails, that individual will just abandon his or her dream of becoming an infopreneur, and decide to seek a formal job. Lack of finance can also be seen as another personal challenge. Samitowska (2011) and Smith and Beasley (2011) observe that lack of finance or access to finance is acknowledged as the greatest challenge to growing infopreneurship. This probably explains why about 72% of Nigerian entrepreneurs experience financial constraint in their attempt to advance and operate their businesses (Mambula, 2002). Hopes of developing a new business in the country are often dashed as a Nigerian bank hardly provides a loan to an upcoming skilled entrepreneur without requesting for collateral or charging a high interest rate (Onwuka et al., 2014). A dearth of business infrastructure is another personal obstacle. The Small Enterprise Development Agency ([SEDA], 2016) observes that a challenge encountered by infopreneurs in developing countries is the lack of business infrastructure. Absence or shortage of skill is a further personal challenge. David and Dube (2014) report that information science graduates lack the business and technical skills required to translate infopreneurial ideas into businesses. Javier et al. (2012) note that shortage of information and communication technology skills among African infopreneurs prevents majority of them from succeeding in their businesses. Furthermore, lack of managerial skill among infopreneurs, has been identified as another obstacle that has a negative effect on the practice of infopreneurship (Agbenyegah, 2013). The lack of identity has been conceived as another barrier. Fisher and Kunaratnam (2007) observe that the absence of a collective name for infopreneurs has adverse effects on their identity such as the reduction of their legitimacy, true value, validation, and sense of belonging and depreciation of their chances of development. In the same vein, Ivwurie and Ocholla (2016) opine that a lack of a universally acceptable name may cause problems in the identification and verification of information-related businesses.

Regulatory Challenges

Auriol (2013) maintains that excessive or inappropriate government regulations significantly hinder infopreneurship. As a result, stringent governmental regulations stagnate the development of infopreneurship (Legas, 2015). These regulations often require registration of a business or company with a constituted authority in a country which is charged with the responsibility for regulating businesses, companies, and other economic activities. In South Africa, the Companies and Intellectual Property Registration Office (CIPRO) is responsible for registering new profit and non-profit businesses. The registration process involves registering the business to give it legal backing and automatically registering it as a taxpayer. In addition, new firms are required to obtain an income tax reference number. A business owner is obliged to complete all forms of registration within 60 days at the beginning of his or

her business (Akinyemi & Adejumo, 2018). These processes tend to frustrate the development of emerging businesses in South Africa. Studies indicate that these regulatory procedures constitute one of the obstacles to start-ups and growth of medium and small-scale enterprises in South Africa (Mbonyane & Ladzani, 2011; Olawale & Garwe, 2010).

A similar scenario is reflected in Nigeria where high bureaucracy has been acknowledged as a factor that largely contributes to main challenges hampering entrepreneurship development. This is attributed to the complexity of the nature of laws regulating private enterprise, especially laws dealing with business registration and taxation in the country (Onwuka et al., 2014). A business owner in Nigeria must abide by a multiplicity of laws, including laws governing social, economic, and environmental issues, occupational health and safety, employment, criminality, as well as laws that are peculiar to one's form of business. A prospective Nigerian entrepreneur is required to get his or her company or business incorporated or registered by the Corporate Affairs Commission **(**CAC), which is the agency charged with incorporation of companies and business registration. It is an independent body responsible for implementing the provisions of the Companies and Allied Matters Act (CAMA), which is the primary law governing companies and businesses in Nigeria (Ndukwe & Allison, 2021). Other obstacles arise from procuring construction or business premises' permit, such as high cost and extended period required to obtain letter of consent/certificate of occupancy, tax clearance costs, poor communication between the planning office and developers, costly application fee, inability of the design plan to satisfy established guidelines or standards, cost of paying professionals, lack of transparency in the approval process and so on **(**Ajibola, 2019).

Within the purview of regulations, Amin et al. (2011) affirm that copyright, intellectual property rights, and privacy constitute obstacles to every information worker. Copyright which empowers the copyright holder to exclusively enjoy moral (citation) and exploitation (financial) rights from an intellectual property tends to militate against the smooth operation of infopreneurship as such right restrains the manipulation of the intellectual property for commercial purposes except with the authorization of the copyright holder. An intending infopreneur may have to enter into an agreement with the copyright holder to be empowered to manipulate the content of an intellectual property for commercial purposes with a view to avoiding infringement of copyright. This may be a content or deposit agreement or license. The processes involved in reaching such an agreement with an author or a publisher, in cases where the right has been ceded to the publisher by an author, can be tedious and frustrating to an aspiring or practicing infopreneur.

Societal Challenges

Legas (2015) and Ngorora and Mago (2013) opine that corruption prevents organizations from lending total support to intending infopreneurs, noting that, sometimes, these infopreneurs are expected to bribe officials to process funding applications. Onwuka and Ile-Chika (2006) identified high corruption in government as one of the problems of entrepreneurship development in Nigeria. Aregbesola et al. (2019) observe that the practice of infopreneurship in Nigeria is challenged by lack of structure in several public and private organizations, absence of coordination from several operators and the activities of fraudsters who take advantage of the internet to deceive people. Similarly, Lose and Khuzwayo (2022) identified other challenges to include the existence of cyber risks, misinformation, legalization, reliability, and credibility issues. On the whole, findings from a study by Ivwurie and Ocholla (2016) indicate that lack of business experience and required mentorship, difficult legal registration process, high cost of office space, unpleasant behavior and poor attitudes of information consumers regarding payment for services, high rate of non-professionals involved in infopreneurship, irregularities in the quality of information

products and services and absence of standardized professional ethics and pricing for information services as some of the barriers to operating infopreneurship in a developing economy.

Methods

For our study, we adopted a descriptive survey research design. The study population comprised 175 librarians in 13 public university libraries in South-South Nigeria. This population was sourced from the university libraries' websites, library annual duty postings and from the information provided by the librarians who participated in the study. We used a purposive sampling technique to select the 13 public university libraries. We employed convenience sampling to choose 102 librarians engaged in infopreneurship; we identified these librarians through our preliminary investigation, observation, and interaction with the respondents. We designed a structured online questionnaire titled "Librarians' Infopreneurship Practice Questionnaire (LIPQ)" (see Appendix A) as our data collection instrument, to make data analysis easy and obtain responses in line with the study's specific objectives. The instrument was validated by two experts in the Department of Library and Information Science in Niger Delta University, Bayelsa State, Nigeria. Reliability testing was not conducted on the instrument based on the strength of the expert notion that a valid test tends to be reliable (Nworgu, 2015).

The questionnaire consisted of two parts: Part A for Demographic information, and Part B with five sections to collect information dealing with purposes of engaging in infopreneurship (Section A), methods of carrying out infopreneurship (Section B), forms of infopreneurship practiced (Section C), perceived benefits of practicing infopreneurship (Section D), and challenges in practicing infopreneurship (Section E). A two-point response category of "Adopted (1)" and "Not Adopted (0)" was used for Section B, whereas a two-point response option of "Practiced (1)" and "Not Practiced (0)" was employed for Section C. A four-point Likert-type response category of "Strongly Agree (4)", "Agree (3)", "Disagree (2)" and "Strongly Disagree (1)" was adopted for Sections A, D and E.

The researchers distributed 128 digital copies of the draft of the questionnaire to librarians in infopreneurship, through librarians' personal WhatsApp accounts, WhatsApp groups of the various university libraries, and WhatsApp groups of the different state chapters of the Nigerian Library Association to which the librarians belonged. WhatsApp is a popular social media platform commonly used for sharing ideas, opinions and information among friends, professional colleagues, business partners, etc. While a librarian could have a personal WhatsApp account for purposes of communicating ideas, opinions and information with other colleagues, various WhatsApp groups are created among librarians for sharing ideas, opinions and information related to librarianship. The WhatsApp groups could be institution-based such as a university library WhatsApp group or job-based such as WhatsApp group of cataloguing and classification librarians. All librarians who participated in the study were instructed to click on links to the online questionnaires sent to them and fill in. Reminders and calls were issued and made to the respondents to fast-track the data collection process. A three-month period was used for data collection. Out of the 128 questionnaires administered, 102 questionnaires were properly completed by the librarians and retrieved, producing a response rate of 97.69%. The distribution of respondents among institutions is shown in Appendix B.

The data collected were analyzed using weighted mean and standard deviation. A mean of 0.50 was arrived at for sections that adopted a two-response category while a mean of 2.50 was obtained for sections that employed a four-point response category. Thus, these means were adopted as criteria points for acceptance or rejection. The decision rule applied for interpretation of results from data analysis for sections that adopted a two-response category was that any questionnaire item with a weighted mean of

0.50 and above was regarded as Adopted/Practiced while an item with a weighted mean below 0.50 was considered as Not Adopted/Not Practiced. For sections that employed a four-point response category, the decision rule was that an item with a weighted mean equal to or above 2.50 was regarded as "Agreed," while any item with a weighted mean less than 2.50 was regarded as "Disagreed."

Results

This section presents the results of data analysis in tables in line with the research questions earlier formulated to guide the study.

Research Question 1: What are the purposes of engaging in infopreneurship by librarians in public university libraries in South-South Nigeria?

Table 1 shows that the purposes of engaging in infopreneurship by librarians in public university libraries in South-South Nigeria are to earn extra income, provide for post-retirement, meet unforeseen demands, and develop themselves. However, they do not engage in infopreneurship with the aim of socializing and gaining business experience.

Table 1
Mean Ratings of Responses on Purposes of Engaging in Infopreneurship by Librarians in Public University Libraries in South-South Nigeria

Purposes of Engaging in Infopreneurship	Mean (X)	Standard Deviation (SD)	Remarks
To earn extra income	3.50	1.81	Agreed
To provide for post-retirement	3.22	1.20	Agreed
Self-development	2.50	0.82	Agreed
Socialization	2.42	0.60	Disagreed
To meet unforeseen demands	2.53	0.70	Agreed
To gain business experience	2.35	0.78	Disagreed
Grand Mean and Standard Deviation	2.75	0.99	Agreed

Research Question 2: What are the methods of carrying out infopreneurship by librarians in public university libraries in South-South Nigeria?

Table 2 shows that the methods of carrying out infopreneurship by librarians in public university libraries in South-South Nigeria are: leveraging, customizing, facilitating access to, and rendering round-the-clock delivery of information. The librarians do not adopt information repackaging as a method.

Table 2
Mean Ratings of Responses on Methods of Carrying out Infopreneurship by Librarians in Public University Libraries in South-South Nigeria

Methods of Carrying out Infopreneurship	Mean (X)	Standard Deviation (SD)	Remarks
Leveraging information	0.50	0.04	Adopted
Customizing information	0.70	0.01	Adopted
Facilitating access to information	0.55	0.21	Adopted
Speeding up the flow of information	0.59	0.10	Adopted
Repackaging information	0.48	0.05	Not Adopted
Round-the-clock delivery of information	0.51	0.01	Adopted
Grand Mean and Standard Deviation	0.56	0.07	Adopted

Research Question 3: What are the forms of infopreneurship practiced by librarians in public university libraries in South-South Nigeria?

Table 3 reveals that the forms of infopreneurship practiced by librarians in public university libraries in South-South Nigeria are: information brokerage, reprographic services, research-aid services, book vending, and internet services. Information consultancy, abstracting/indexing, publishing, translation services, information repackaging, website creation/design, bibliography/directory compilation, publishing, records management, cataloguing, computer troubleshooting services and library automation are not forms of infopreneurship practiced by the librarians.

Table 3
Mean Ratings of Responses on Forms of Infopreneurship Practiced by Librarians in Public University Libraries in South-South Nigeria

Forms of Infopreneurship	Mean (X)	Standard Deviation (SD)	Remarks
Information brokerage	0.51	0.03	Practiced
Reprographic Services	0.55	0.11	Practiced
Information consultancy	0.49	0.02	Not Practiced
Abstracting and indexing services	0.48	0.05	Not Practiced
Publishing	0.42	0.05	Not Practiced
Translation services	0.13	0.07	Not Practiced
Information repackaging	0.05	0.02	Not Practiced
Research-aid services	0.53	0.11	Practiced
Website creation/design	0.49	0.10	Not Practiced
Book vending	0.57	0.09	Practiced
Bibliographic/directory compilation	0.34	0.08	Not Practiced
Records management	0.31	0.09	Not Practiced
Cataloguing	0.43	0.07	Not Practiced
Internet services	0.57	0.20	Practiced
Computer troubleshooting services	0.27	0.06	Not Practiced
Library automation	0.40	0.05	Not Practiced
Grand Mean and Standard Deviation	0.41	0.06	Not Practiced

Research Question 4: What are the perceived benefits derived from practicing infopreneurship by librarians in public university libraries in South-South Nigeria?

Table 4 indicates that the perceived benefits derived from practicing infopreneurship by librarians in public university libraries in South-South Nigeria are enjoyment of extra income and financial independence, development of one's knowledge, and enhancement of one's sense of fulfillment. However, the practice of infopreneurship does not boost their self-confidence.

Table 4
Mean Ratings of Responses on Perceived Benefits Derived from Practicing Infopreneurship by Librarians in Public University Libraries in South-South Nigeria

Benefits of Practicing Infopreneurship	Mean (X)	Standard Deviation (SD)	Remarks
It gives an extra revenue	3.17	1.10	Agreed
It boosts self-confidence	2.49	0.89	Disagreed
It builds one's knowledge	2.51	0.77	Agreed
Boosts one's sense of fulfillment	2.50	0.57	Agreed
It brings financial independence	3.00	1.00	Agreed
Grand Mean and Standard Deviation	2.73	0.87	Agreed

Research Question 5: What are the challenges in practicing infopreneurship by librarians in public university libraries in South-South Nigeria?

Table 5 reveals that the challenges in practicing infopreneurship by librarians in public university libraries in South-South Nigeria are lack of adequate finance, business infrastructure, technical skill, and high rate of non-professional infopreneurs. However, they are not faced by such challenges as lack of passion/will, business experience, legal bottlenecks, activities of fraudsters and reluctance of clients to pay for services.

Table 5
Mean Ratings of Responses on Challenges in Practicing Infopreneurship by Librarians in Public University Libraries in South-South Nigeria

Challenges	Mean (X)	Standard Deviation (SD)	Remarks
Lack of passion/will	2.24	0.11	Disagreed
Lack of business experience	2.49	0.45	Disagreed
Lack of technical skill	2.56	0.98	Agreed
Legal bottlenecks	2.41	0.97	Disagreed
Activity of fraudsters	2.45	0.56	Disagreed
Lack of adequate finance	3.49	1.33	Agreed
Lack of business infrastructure	2.56	1.24	Agreed
High rate of non-professional infopreneurs	2.78	0.79	Agreed
Reluctance of clients to pay for services	2.37	1.07	Disagreed
Grand Mean and Standard Deviation	2.59	0.83	Agreed

Discussion

This study shows that librarians in public university libraries in South-South Nigeria engage in infopreneurship in order to make additional revenue, provide for life after retirement, meet unexpected needs, and to achieve self-development. This is in line with findings by Akpena and Duosakeh (2020), which indicate librarians engage in infopreneurship to make extra income, secure life after retirement, and meet identified demands. It also agrees with that of Adetayo and Hamzat (2021) which reveals that the reason library professionals involve themselves in infopreneurship is to make money. However, our findings contradict that of Adetayo and Hamzat (2021) which identifies socialization as one of the purposes. That socialization is not one of the reasons librarians engage in infopreneurship in our study could be because financial wellbeing is at the center of running the business. Most of these librarians face financial pressure, consequently, they appear driven by the basic need to improve their finances and not necessarily to socialize with other individuals.

The research indicates that librarians in infopreneurship leverage, customize, accelerate information flow, ease information access, and deliver information without delay, but they do not repackage information. This result is partially consistent with Weitzen (1998) who posits that individuals run infopreneurship by leveraging, customizing, and repackaging information, facilitating information access, and delivering immediate information. However, the finding that librarians in our study do not repackage information disagrees with Weitzen who considers repackaging information as one of the operational methods of infopreneurs. The outcome that the librarians in our study do not repackage information may be because their information users consume mostly academic-based information, which is usually written in English

and often does not need to be put in another form such as an annotated, translated, or abridged version. South-South Nigeria is an Anglophone region, so most information providers, including libraries and information centers, supply information materials mainly in English and this seems to be the reason these infopreneurial librarians do not engage in information repackaging. The result is also consistent with the observation of Coulson-Thomas (2000) that the rise in users' need for expert and repackaged information causes infopreneurs to evaluate, sift, screen, and classify information to satisfy those demands. This outcome of the study could have turned out this way because many of these infopreneurs operate on university campus where students need information mainly for academic activities such as writing assignments, seminars, projects, theses, and dissertations, etc. Thus, the librarians seem particularly interested in gathering or leveraging information and tailoring it to meet the specific needs of students through customization and supplying it through such means as social media and email to ensure quick delivery.

The research also reveals that infopreneurship enables the librarians to generate supplementary income, be financially independent, amass knowledge and be fulfilled. The result is in line with Chandler (2007) and Skrob (2009) who observe that infopreneurship offers its operator an easy or passive income. It also agrees with the outcome of the study by Adetayo and Hamzat (2021) which indicates that infopreneurship helps library professionals, who engage in it, to acquire knowledge, enjoy financial independence and increase their sense of fulfillment. The outcome is also in consonance with the finding of the study by Ivwurie and Ocholla (2016) which suggests that most Library and Information Science graduates in Lagos, Nigeria and Kwazulu Natal, South Africa, partake in information-based businesses for money making and survival.

The investigation also finds that librarians operate infopreneurship by brokering information, providing reprographic services, internet services, research-aid services, and vending books. The finding tallies with that of Akpena and Duosakeh (2020) which indicates that librarians in Bauchi State of Nigeria run infopreneurship mainly by selling books, brokering information, indexing information resources and publishing online. The result, however, runs contrary to this finding which nullifies the practice of publishing by the librarians under study. Probably due to lack of finance required to acquire publishing facilities and ICT incompetence, many infopreneurial librarians resort to reprographic services such as typing, photocopying, and printing and have not expanded their businesses to include publishing, either manual or digital. Furthermore, the fact that students on university campuses particularly need academic-based information could have contributed to this finding.

Finally, absence of sufficient funds, skill, business facilities and high presence of unprofessional infopreneurs in the business make it difficult for the librarians to engage in infopreneurship. The finding is consistent with Samitowska (2011) and Smith and Beasley (2011) who observe that a dearth of funds constitutes the greatest obstacle to developing infopreneurship. It also agrees with the assertion of Javier et al. (2012) that shortage of ICT skills among African infopreneurs makes them unsuccessful as infopreneurs. It is also in agreement with Small Enterprise Development Agency ([SEDA], 2016) which notes that infopreneurs in developing countries are confronted by lack of infrastructure as they attempt infopreneurship. It is also consistent with Javier et al. (2012) who observe that weak ICT skills among African infopreneurs contribute to their failure in infopreneurship.

Suggestions for Further Research

Based on the knowledge gained from the findings of the study and from extensive literature review, the authors identified some gaps in literature that need to be filled. We hope that these can be addressed by conducting a study on the practice of infopreneurship by librarians in polytechnic libraries in South-South Nigeria. In addition, research should be executed on the infopreneurial attitudes and skills among librarians in public university libraries in South-South Nigeria. Furthermore, an investigation should be carried out on the strategies adopted by librarians in overcoming challenges in operating infopreneurship in South-South Nigeria.

Conclusion

This study investigated the practice of infopreneurship by librarians in public university libraries in South-South Nigeria. It has shown that these librarians engage in infopreneurship with a view to earning extra income, providing for post-retirement, meeting unforeseen demands, and developing themselves. They carry out the business by leveraging, customizing, facilitating access to and providing quick delivery of information. They operate this business through such ways as information brokerage, reprographic services, research-aid services, and book vending. While running this business, the librarians gain such benefits as extra income, financial independence, accumulation of knowledge and promotion of sense of fulfillment. Despite these benefits, a number of obstacles frustrate the practice of infopreneurship by the librarians, including lack of adequate finance, technical skill, business infrastructure and high rate of presence of non-professional infopreneurs. In the light of the findings of the study, it is recommended that librarians should access small and medium enterprise loans from government to boost the capital of their infopreneurial businesses. Practicing and would-be infopreneurs should undergo digital training to equip themselves with the technical competence required to successfully operate infopreneurship in the current digital information environment.

Author Contributions

Jerry Eyerinmene Friday: Conceptualization (lead), Methodology, Data analysis, Writing – original draft (lead), Writing – review & editing (equal) **Oyinkepreye Sawyer-George:** Conceptualization (supporting), Methodology (supporting), Writing – review & editing (equal)

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Appendix A
Questionnaire: Librarians' Infopreneurship Practice Questionnaire (LIPQ)

Please complete the following information about your background and current employment as a librarian and tick √ as appropriate.

PART A: Demographic Information of Librarians

1. Name of University**:**
2. Status of University: Federal University State University

PART B

Section A: Purposes of Engaging in Infopreneurship by Librarians in Public University Libraries in South-South Nigeria

Items 1-6 show probable purposes of engaging in infopreneurship. Indicate your purpose using the following options: SD (Strongly Agree=4), A (Agree=3), D (Disagree=2) and SD (Strongly Disagree=1).

S/N	Item	SA (4)	A (3)	D (2)	SD (1)
1.	To earn extra income				
2.	To provide for post-retirement				
1.	Self-development				
2.	Socialization				
3.	To meet unforeseen demands				
4.	To gain business experience				

Section B: Methods of Carrying out Infopreneurship by Librarians in Public University Libraries in South-South Nigeria

Items 1-6 show methods of carrying out infopreneurship. Please indicate the method you adopt using the two options: Adopted (1) and Not Adopted (0).

S/N	Item	Adopted (1)	Not Adopted (0)
1.	Leveraging information		
2.	Customizing information		
3.	Facilitating access to information		
4.	Speeding up the flow of information		
5.	Repackaging information		
6.	Round-the-clock delivery of information		

Section C: Forms of Infopreneurship Practiced by Librarians in Public University Libraries in South-South Nigeria

Items 1-16 show various forms of practicing Infopreneurship. Please indicate the form you practice using the two options: Practiced (1) and Not Practiced (0).

S/N	Item	Practiced (1)	Not Practiced (0)
1.	Information brokerage		
2.	Reprographic Services		
3.	Information consultancy		
4.	Abstracting and indexing services		
5.	Publishing		
6.	Translation services		
7.	Information repackaging		
8.	Research-aid services		
9.	Website creation/design		
10.	Book vending		
11.	Bibliographic/directory compilation		
12.	Records management		
13.	Cataloguing		
14.	Internet services		
15.	Computer troubleshooting services		
16.	Library automation		

Section D: Perceived Benefits from Practicing Infopreneurship by Librarians in Public University Libraries in South-South Nigeria

Items 1-5 show likely benefits derivable from running infopreneurship. Please indicate the benefit (s) you gain from operating infopreneurship using the following options: SD (Strongly Agree=4), A (Agree=3), D (Disagree=2) and SD (Strongly Disagree=1).

S/N	Item	SA (4)	A (3)	D (2)	SD (1)
1.	It gives an extra revenue				
2.	It boosts self-confidence				
3.	It builds one's knowledge				
4.	Boosts one's sense of fulfillment				
5.	It brings financial independence				

Section E: Challenges in Practicing Infopreneurship by Librarians in Public University Libraries in South-South Nigeria

Items 1-9 reflect possible challenges individuals encounter in operating infopreneurship. Kindly indicate the challenge (s) you are faced with by using the following options: SD (Strongly Agree=4), A (Agree=3), D (Disagree=2) and SD (Strongly Disagree=1).

S/N	Item	SD (4)	A (3)	D (2)	SD (1)
1.	Lack of passion/will				
2.	Lack of business experience				
3.	Lack of technical skill				
4.	Legal bottlenecks				
5.	Activity of fraudsters				
6.	Lack of adequate finance				
7.	Lack of business infrastructure				
8.	High rate of non-professional infopreneurs				
9.	Reluctance of clients to pay for services				

Many thanks for your time and input in making this survey a successful one.

Appendix B
Distribution of Respondents of the Study

Names of Institutions of Librarians	**Respondents**
Federal University Otuoke	8
Niger Delta University	9
University of Portharcourt	9
Rivers State University	7
Ignatius Ajuru University of Education	7
Federal University of Petroleum Resources	8
Delta State University	6
University of Benin	9
Ambrose Ali University	8
University of Calabar	10
Cross Rivers State University of Technology	6
University of Uyo	10
Akwa-Ibom State University	5
Total	102