



LIBRARIANS' DIGITAL SKILLS: A PRECURSOR FOR EFFECTIVE INFORMATION SERVICE DELIVERY IN FEDERAL UNIVERSITY LIBRARIES IN SOUTH-SOUTH, NIGERIA

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Abstract

The landscape of information service delivery in university libraries is continually in transition as a result of information technology thereby requiring the digital upskill of librarians in providing effective and efficient information service delivery. It therefore becomes necessary to look at the digital skills of librarians in improving information service delivery. The study determined the influence of librarians' digital skills (computer skills, online communication skills and social media management skill) on information service delivery in federal university libraries in South-South, Nigeria. In pursuant of this, three objectives with corresponding research questions and hypotheses were raised to guide the study. Descriptive survey design was adopted for the study. The population and sample size of the study comprised 105 academic librarians in all the federal university libraries in South-South Nigeria using the total enumeration sampling technique. An instrument titled: "Librarians' Digital Library Skills and Information Service Delivery Questionnaire, face validated by three lecturers with a reliability coefficient of 0.86 obtained using Cronbach Alpha reliability statistics was used to collect data for the study. Mean and Standard Deviation were used to answer the research questions while dependent t-test was used in testing the hypotheses at .05 level of significance. The findings of the study showed that computer skills, online communication skills and social media management skills have significant influence on information service delivery. Based on the findings of the study, it is concluded that librarians' digital skills influence information service delivery in federal university libraries in South-South, Nigeria with particular reference to computer skills, online communication skills and social media management skills. Consequently, it is recommended among others that university library management should organize training and re-training of librarians through workshop and seminar to improve the levels of computer skills of librarians so as to enhance information service delivery also, library management should incorporate more social media platforms for service delivery by librarians to enable the provision of round the clock library services to library users and that librarians should be trained on social media management skills.

Keywords: Digital Skills, Computer Skills, Online Communication Skills, Social Media Management Skills, Information Service Delivery

Introduction

Universities all over the world are institutions bestowed with the mandate of developing high level manpower that stands as a precursor to national development. The development of high level manpower is based on the inculcation of both physical and intellectual skills through teaching, learning, research and community service that would enable individuals to develop into useful members of the community and contribute meaningfully to the socio-economic, socio-



cultural and socio-political development of the country. University library is an important infrastructure in the university system whose mandate is to support the teaching, learning, research and community service of its parent institution.

According to Nnadozie and Onah (2016), university libraries acquire, process, manage and disseminate information resources through which their parent institutions conduct research and produce high-level manpower which can deliver a qualitative and effective service to its users. Similarly, Akpan-Atata *et al.* (2015) state that university libraries support teaching, learning and research activities of their parent institutions through the provision of information resources and services that are in consonance and consistent with the institution's mission and vision. The provision of information resources and services are subsumed under the service of librarians which are the medium through which university libraries can achieve their mandate. As Amusa *et al.*, (2013) opined, librarians are the wheelers and dealers of all functions and services in the library, as they acquire skills and training in collection development, organizing information resources, user education and services through which information services are delivered to the community of users. The provision of effective information service is the primary mission of a library as the profession of librarianship is service-oriented. Information services delivery is referred as constituents of activities and facilities targeted at providing information in various formats so as to satisfy the broad and varying information needs of library users so as to help users accomplish the task of decision making or reduction of the level of uncertainty. These information services include; online reference, circulation services, current awareness services, inter-library loan services, selective dissemination of information (SDI), user education, literature searching, online database services, resource sharing, information repackaging, email alerts, instant messaging, online reservation of books, amongst others.

It is recognised that the integration of Information and Communication Technology in information service delivery has transformed the method in which librarians render the above mentioned information services as librarians are now facilitators of round the clock access to information resources within and outside the walls of the library (Agbo, 2015). This is premised on the fact that the present dispensation is marked as an era where information is increasingly in digital form which necessitates the need for librarians to be proactive in integrating information technology in information delivery and in teaching patrons how to use them (Johnson, (2015). In the view of Nwankwo (2020), the present dispensation of a digital society demands that information is managed, accessed and used remotely. This means that librarians must be digital literates in integrating information technology in their work for effective and efficient information service delivery. To this end, Ukwuoma, *et al.* (2021) asserted that the presence of information resources in digital form as a result of the impact of information technology in university libraries require that librarians possess digital skills in the management of digital information resources. This becomes expedient because creating access and utilization of digital information resources requires librarians knowledge and skills in digital information service delivery.

Digital skills also known as digital literacy skills are simply skills that enable individuals to operate effectively in information retrieval task in technology-oriented environments. According to Chan, *et al.* (2017), digital literacy is the ability to understand and use information in multiple formats as it encompasses critical thinking skills as well as information and communication technology skills in the areas of having the ability to read and interpret the meaning of a digital text, symbols and graphs. In addition, digital skills is the ability to use digital technology, communication tools or networks to locate, evaluate, use and create information. In the view of this, Emiri (2015) maintained that digital literacy skill is the ability to effectively and critically navigate, evaluate and create information using a range of digital technologies. It requires that an individual must recognize, manipulate and transform digital media, distribute pervasively, and easily adapt them to new forms. Essentially, digital literacy is the ability to use technology competently, interpret and understand digital content and assess its credibility, create, research,



and communicate with appropriate tools (Emiri, 2015). digital skills are creating metadata, tag, Photoshop, installation and managing library software, creation of institutional repositories, managing library consortium, library networking, barcode and radio-frequency identification (RFID) technology, and website design (Seena and Pillai, 2014). Librarians need to master these skills, because it will enable them to manage library technology infrastructures and online resources. There are variety of digital skills needed by librarians for effective information service delivery but this study is hinged on computer skills, online communication skill and social media management skills.

Computer skill is an important digital literacy skill that enhances librarian's information service delivery. According to Emiri (2015), computer skill is a front burner for digital skills which are based on the ability to effectively use computing devices such as smartphones, tablets, iPhones, laptops, iPad and desktop PCs for communication, collaboration, knowledge creation, transmission and storage. In the view of Mbajiorgu, *et al.* (2021), computer skills is found in the use of various computer hardware/software, cataloguing and indexing of digital resources, use of various software packages, networking of information centers, developing institutional repositories, word processing skills as well as information retrieval techniques. Similarly, Ezeonwurie (2017) assert that computer skills are word processing software skills, electronic spreadsheet skills, database management system skill, PowerPoint presentation skills, desktop publishing skills and Internet application skills. The four distinct areas of computer skills for librarians are in the ability to independently operate a computer system, ability to use software for preparing and presenting work, an ability to use the internet and its various features as communication device, and ability to access and use information from the World Wide Web (WWW). Also, Omehia *et al.* (2021) opine that computers skills are of immense importance to librarians in the discharge of information service because it is essential for information acquisition, organization, retrieval and dissemination. Possession of computer skills can enhances online communication skills.

Online communication skills are important skills in information service delivery in the present era of information technology. It is observed that communication play a very vital role in information service delivery as the library and information professionals act as mediator between information users and information resources and as such the services offered by universities libraries are dependent upon communication. According to Gonzalez, *et al.* (2013), communication is the process of sending and receiving messages through verbal or nonverbal means-speech (oral communication), writing (written communication), signs, signals, or behaviour. Communication is also the transfer of information from a source to a receiver. In the view of Owoeye and Dahunsi (2014), internal personal communication is an effective for information service delivery because it is used for achieving individual and organizational goals by facilitating the sharing of information, experience and knowledge, transmission of ideas, decisions and information. Furthermore, communication is used to provide all categories of library personnel with unity of direction, a sense of shared expectations, feelings and attitudes that are essential ingredients for sustaining group effort and attainment of library goals. With the advent of information technology and the Internet, communication have taken a new dimension replacing the old dimensions of complaint boxes, notice boards and news bulletins which were used for information dissemination with library users.

A vital digital skill needed for effective information service delivery is social media management skill. According to Ansari and Hasan (2016), social media is an internet or mobile-based social space where people can connect, communicate, create and share content with others. In a similar vein, Aghadiuno (2019) assert that social networking sites is a necessity for libraries and can be applied to creating webpage content, establishing user friendly interfaces for interaction as well as creating online database management so as to effectively deliver information to library users. In order for social media to achieve the desired result, there is need for social media



management skills. According to Jindal (2023), social media management skills are the abilities an individual uses to create effective social media strategies. These abilities are based on creativity, communication, design, engagement skills, copywriting, analytics, and public speaking as well as understanding behavior psychology. These skills are essential in making social media more entertaining and engaging towards the satisfaction of the intended audience. The need for social media management skills is based on the fact that social media enables communication, social interaction and collaboration, creation and exchange of the information and without social media management skills, the adoption of social media for information service delivery cannot be a success.

This follows the view of Pleasant (2023) that the use of social media platform for information and exchange of ideas, entertainment and source of education requires creativity, planning, visual design, content writing, customer service and analytics which can be provided by effective social media management skills. Social media can be used for receiving/answering users' queries, announcing arrival of new information materials, communicating with library users, current awareness services, selective dissemination of information, user education, receiving feedback/suggestion from users of the library, Frequently Asked Questions (FAQs) and links to electronic information resources are among the information services that can be delivered via social media when librarians are armed with social media management skills. In order to make substantial contributions in promoting information service delivery in the present dispensation, librarians must understand and exploit digital marketing skill in promoting and delivering of information service to library clientele.

From the foregoing, it could be seen that digital skills are a necessity for effective and efficient information service delivery in the present dispensation of information technology. A most important factor for improved information service delivery is the competence of librarian and library personnel because the capability and skills of librarians to use technology to create, navigate, disseminate, evaluate and store information is described as digital literacy skills. In view of this, information service cannot be effectively and efficiently delivered without the competence and capacity of librarians. This study examine or investigate digital skills and how these skills have impacted on the information service delivery in federal university libraries in South-South, Nigeria.

Statement of the Problem

The advent of information technology has impacted greatly on the provision of information resources and service of university libraries, they are engaged in the acquisition and management of electronic information resources through the use of information technology gadgets. The use of information technology gadgets requires that librarians must possess digital library skills which are very important for a successful discharge of information service for improved academic and intellectual outcomes. The enormous advances in technological innovations around the world has made the adoption of ICT for information service delivery in the university libraries a necessity. It has been reported that university libraries are making efforts at providing information technology gadgets for use in information service delivery in the library. However, information service delivery is seen as being defective in most university libraries. Some of the information technology gadgets like computers are merely gathering dusts on librarians' desk thereby raising concerns about either the functionality of the gadgets or the skills of librarians in the use of information technology gadgets. Considering the defective information service delivery earlier observed, the study intended to determine the influence of digital library skills on information service delivery in federal university libraries in South-South, Nigeria.



Objective of the Study

The specific objectives were to:

1. Determine the influence of librarians' computer skills on information service delivery in federal university libraries in South-South, Nigeria.
2. Examine the influence of librarians' online communication skills on information service delivery in federal university libraries in South-South, Nigeria.
3. iii Verify the influence of librarians' social media management skills on information service delivery in federal university libraries in South-South, Nigeria.

Research Questions

The following research questions were raised to direct the study:

1. What is the influence of librarians' computer skills on information service delivery in federal university libraries in South-South, Nigeria?
2. What is the influence of librarians' online communication skills on information service delivery in federal university libraries in South-South, Nigeria?
3. What is the influence of librarians' social media management skills on information service delivery in federal university libraries in South-South, Nigeria?

Research Hypotheses

The following hypotheses were formulated to guide the study:

1. There is no significant influence of librarians' computer skills on information service delivery in federal university libraries in South-South, Nigeria.
2. There is no significant influence of librarians' online communication skills on information service delivery in federal university libraries in South-South, Nigeria.
3. iii There is no significant influence of librarians' social media management skills on information service delivery in federal university libraries in South-South, Nigeria.

Literature Review

Concept of Digital Skills

The concept of digital skill have a wide range of definitions, as such it does not possess a universally accepted single definition. Buckingham (cited in Osinulu, 2021) defines digital skill as a set of skills and knowledge that enables' individuals to effectively carry out information retrieval task in a technology dominated environment. Digital skill also known as digital literacy skill refers to the degree of mastering and use of a wide range of social, cognitive, and technological competencies. These competencies are not restricted only to the ability to effectively operate computers and navigate the internet but include the ability to manage and deal with huge volumes of information, evaluate its reliability and critically assess them (Mohammed *et al.* 2020).

According to Khan and Waheed (2015), digital literacy is defined as possessing the ability and technical know-how to perform and utilise information resources in a digital world which involves the ability to interpret and understand digital media like sound, images, and text as well as generate new information from these resources. In the report of Joint Information Systems Committee (2014), the phrase, digital literacy exceeds the normal information technology skills that explains a richer set of digital practices, identities and behaviours. Consequently, digital literacy is defined as a set of professional and academic practices triggered by the changes in modern technologies. Similarly, Anyim (2018) defines digital literacy as a group of life skills that



are essential to possess for full inclusion and participation in our media-driven, information-rich society. These skills have to do with the ability to search, organise, understand, evaluate and use digital information and also the ability to assess the impact of these technologies and management of them. In the view of Okeji *et al.* (2020), digital literacy can be regarded as an umbrella framework of skills, knowledge and ethics. Furthermore, digital literacy has to do with the ability to understand information and perform tasks digitally, in a digital environment and these skills is premised on: using a computer to find, manipulate, and communicate information; being able to identify information in different types of formats and media (such as films, databases, the internet and so on); critically evaluating information and media sources for accuracy, reliability and credibility; using digital tools and information ethically and safely.

According to Hague and Williamson (cited in Fakunle *et al.*, 2022), digital literacy is a combination of technical procedural, cognitive and emotional-social skills, for example, using a computer involves procedural skills (file-management), and cognitive skills (intuitively reading the visual messages in graphic user interfaces). In a similar vein, Organization for Economic Co-operation and Development (2016), digital literacy skills is grouped into three: the ability to use technologies in daily work processes (access to information online), ability to produce ICT products and services (such as programming, developing applications and managing networks); and competence to process complex information to communicate with team and users/patrons to solve problems. Also, Emiri (2015) opines that digital literacy skill is in three levels of digital competence, digital usage and digital transformation. Digital skills encompasses photo-visual literacy (ability to read and deduce information from visuals), reproduction literacy (ability to use digital technology to create a new piece of work or combine existing pieces of work together to make it your own), branching literacy (ability to successfully navigate in the non-linear medium of digital space), information literacy (ability to search, locate, assess and critically evaluate information found on the web), and socio-emotional literacy (the social and emotional aspects of being present online, whether it may be through socializing, and collaborating, or simply consuming content) (Emiri, 2015).

In the same vein, Ofilli (2017) assert that a digital literate person should have the knowledge and skills to use traditional computers, such as desktop PCs and laptops - computer literacy, objectively analyze facts to form accurate judgment, critical thinking, engage in online communities meetings and social networks while in obedience to behavioral protocols, possess the capability to find, capture, disseminate and evaluate information. Furthermore, a digital literate person should have the capability to understand the emerging societal issues caused by the evolution of digital technologies, possess critical thinking skills, possess a range of digital skills, know the basic principles of computing devices, and possess adequate skills in handling computer networks and the internet. In a similar vein, Fakunle *et al.* (2022) describe a digitally literate person as someone with the ability to identify, access, manage, integrate, evaluate, analyse and synthesize digital resources.

Essentially, the capability of individuals to use technology to create, navigate, disseminate, evaluate and store information is basically described as digital literacy. It has to do with skills, knowledge, and behaviors that involve effective and efficient use of digital devices like smartphones, tablets, iphones, laptops, ipads and desktop PCs for purposes of collaboration, communication, expression, advocacy and even decision making. It is just a set of necessary competencies needed for adequate participation in a society that is knowledge based.

Concept of Information Service Delivery

Information service delivery in the library are processes and activities that are deployed to deliver information services and resources to library users Lawal (2022), information service are introduced by a library or information centre to meet the specific needs of some target group. Basically all library services are information service but the increasing application of electronic or



digital technology in rendering information services has given rise to the concept of electronic or digital information service delivery (Chatterjee, 2017).

Information service delivery in the library involves the capability and capacity to provide unhindered access to essential resources for economic, social, political and cultural advancement of a nation. Information service is usually given in response to actual demands received from the users after the librarian has ascertained the need of the users. Also, Issa, *et al* (2013) opine that information service delivery are library services that are aimed towards providing users with the right information needed to answer their queries and to help them accomplish the task of for decision making or reduction of the level of uncertainty.

Information service delivery as asserted by Alabi *et al.* (2012) and Anaeme and Okoye (2017) is the library's way of supporting organisations and institutions by facilitating access to extensive range of information resources and this can only be achieved through the professional competence of librarians whose duty it is to stand in the gap. This is so because the librarian is a specialist in information service delivery with expertise in acquisition, processing, preservation and dissemination of information sources, for authenticity, objectivity, authority and currency and their role in the organization and management of information resources are fundamental to the success of their parent organization and for national development. In the view of Alabi and Sani (2013), information service delivery is the platform for rendering various types of library service like reference and information service, document delivery services, online reservation of books, current awareness service, selective dissemination of information (SDI) services, inter-library loan service, online database services, resource sharing, information repackaging, email alerts and instant messaging, which are carried out to satisfy the information need of library users. In essence, information service delivery has to do with provision of information resources that meet the needs and aspirations of citizens, decision-makers and life-long learners and this is the goal of the library and information science profession.

According to Eje and Dushu (2018), information service delivery deals with the way information practitioners relate and behave towards the users, colleagues, organisations and the society as it relates to information handling. In the view of International Federation of Library Institutions and Associations as reported by Eje and Dushu (2018), information service delivery is the process in library and information centres that contributes effectively to the development and maintenance of intellectual freedom, safeguarding democratic values and universal civil rights and encourage social inclusion irrespective of age, gender, economic or employment status, literacy or technical skills, cultural or ethnic origin, religious or political beliefs, sexual orientation or physical and mental ability. Information service delivery has been redefined with the advent and impact of information technology as CD-ROM databases; electronic document delivery, automated cataloguing, circulation systems and online information retrieval (OPAC) have become the order of the day. In a similar vein, Eguavoen (2022) states that the advent of the internet, digitization and the ability to access library and research materials from remote locations have also created dramatic changes to information service delivery in 21st century.

The advent of information technology has greatly impacted on library resources and services from the traditional approach to information delivery to a modern approach requiring the use of innovative technologies such as computers, scanners, internet facilities, CD-ROM database, online databases, mobile phones/application, social networking sites, electronic information resources and services and so on. There are a whole lot of information resources and services that can be delivered via social networking sites as well as mobile phones/application (Jharotia, 2018). Delivering these services require knowledge and expertise in the use of information technology apparatuses. Furthermore, the efficiency and relevance of any library and information centre is dependent on the effective delivery of qualitative information service to library users. In order to achieve improved information service delivery, there must be prevalence of relevant and current



information resources, adequate physical infrastructure as well as professional trained staff who are information technology complaint. According to Ekere *et al.*, (2019), improving information service delivery requires librarians to work on their competency skills, knowledge and attitude that would enable them to provide appropriate information service delivery.

According to Tennant (cited in Boffano, 2019), information service delivery requires that librarians must have the capacity to learn constantly and quickly; flexibility; innate skepticism; propensity to take risks; abiding public service perspective; good interpersonal skills; skill at enabling and fostering change; and capacity for and desire to work independently. In relation to information technology, Obiamalu and Anike (2018) asserted that librarians can deliver information service with adequate basic knowledge of computers and their capabilities; Competency with search engines; internet facilities; e-mail; internet navigator tools, web browsers and web file formats; database software; internet development and management know-how. Also, Krishnan (cited in Lawal, 2022) stated that information service delivery require skills such as communication and collaboration, creativity and innovation, critical thinking and problem solving, media literacy, ICT literacy, flexibility and adaptability. The aforementioned skills are the necessary digital skills needed by librarians in current dispensation.

Computer Skills and Information Service Delivery

According to Computerized Manufacturing Automation (cited in Anyaoku, 2012), computer literacy skill is defined as the knowledge and ability to use computers and related technology efficiently, with a range of skills covering levels from elementary use to programming and advanced problem solving. In a similar vein, Obaje (2014) viewed computer literacy as the ability to navigate and use computer operating systems, such as Windows XP or Windows 7, word processing and spreadsheet programs and email programs among others. It begins with familiarity with computer components-the computer itself, monitor, mouse and printer. Also, the American Library Association (cited in Ugboma and Omosor, 2015) opined that computer literacy has the ability to locate, evaluate and effectively use it. Furthermore, Alavi *et al.* (2016) maintained that computer literacy the ability to use computers at an adequate level for creation, communication and collaboration in a literate society. In essence, computer literacy is the ability to access, evaluate, organize and use computer in order to learn, solve problems, and make decisions in formal and informal learning context, at work, home and in educational setting.

In view of this, Inyang and Mngutayo (2018) noted that computer literacy is identified as one of the basic skills and competences librarians need for software application and use in information service delivery in the current dispensation of information technology. In the view of Anyaoku (2012), computer literacy skills are essential skills for library and information professional in the present information technology dispensation for effective information service delivery. This skill becomes expedient because of the impact of information technology which brought about electronic information resources and the promotion of remote access to information resources. Furthermore, the author states that computer skills are categorised into two broad classes. The first being the skills required to use computer and information technological tools such as software application programs e.g. word processing tools, graphic design tools, presentation software, web page development, scanning techniques, database creation and maintenance, software installation skills and knowledge of hardware basics and troubleshooting. The second category includes skills for using the Internet and computer communication networks such as skills to search, and retrieve data effectively on the web environment, networking skills, and Web 2.0 skills.

In the view of Ademodi and Adepoju (cited in Inyang and Mngutayo, 2018) asserted that computer literacy skills involve the following:

- Understanding basic computer hardware components and terminology



- Understanding the concepts and basic functions of a common computer operating system
- Starting up, logging on, and shutting down a computer system properly
- Using a mouse pointing device and keyboard Using Help and know how to troubleshoot routine problems
- Identifying and using icons (folders, files, applications, and shortcuts/aliases)
- Minimizing, maximizing and moving windows
- Identifying common types of file extensions (e.g. doc, docx, pdf, html, jpg, gif, xls, ppt, pptx, rtf, txt, exe)
- Checking how much space is left on a drive or other storage device
- Back up files
- Down loadings and installing software on a hard disk
- Understanding and managing the file structure of a computer
- Checking for and installing operating system updates as well as how they work and knowledge of their use.

Tedd (2019) noted that computers are used in libraries all over the world to provide access to a range of electronic information resources and to manage materials (books, journals, videos, and other media) held in particular collections. In the opinion of Cockrare (2013), computer provides some advantages to libraries by allowing easy integration of various activities, facilitates co-operation and the formation of library networks, help to avoid duplication of effects within a library and between libraries in a network eliminate some uninteresting and respective task thereby increasing efficiency in service delivery. In a similar vein, Merina (2013) asserts that computer help librarians to accomplish special tasks involving editing, organizing and disseminating text. From the foregoing, it could be seen that computer plays important role in information service delivery in libraries. However, computers cannot improve service delivery without librarians having basic computer skills.

Waghchoure (2016), Agim and Enuma (2019) and Akintola (2021) reported that librarians and library personnel are acquiring computer skills in the areas of word processing, printing, editing, retrievals, presentation packages (power point presentation), scanning and uploading, computer accessories navigation as well as use of computer in indexing, cataloguing, classification and circulation processes in the library. These skills have significant influence on the job performance of librarians as it relates to information service delivery.

Online Communication Skill and Information Service Delivery

The word ‘communication’ comes from the Latin word ‘*communicare*’ meaning “making common or imparting”. It is the transmission of information, ideas, attitudes, or emotion from one person or group to another; more briefly, it is social interaction through messages (Aliu and Eneh, 2011). Communication is an essential tool for developing profitable and beneficial customer relationship in every organization. It is regarded as very essential and critical to human existence. According to Agyeiwaa and Arboh (2022), effective communication is vital for encouraging and leading personnel to accomplish corporate goals as well as contribute immensely to team and organizational effectiveness. In the view of Parimita *et al.*, (2020), communication skill is employees’ skill to deliver a message to others in order to inform and wholly change attitude, opinion, or behaviour, either directly by words or indirectly. Also, Rowley cited in (Parimita *et al.*, 2020) stated that communication skill is the ability to deliver messages that support goal accomplishment but maintain social acceptance as well. Furthermore, Soyinka (2020) opines that communication functions as a means of bringing change in an organization as leaders and employees are able to transmit information to the rest of the team and hence ensure cohesion, cooperation and compliance.

According to Musheke and Phiri (2021), effective communication helps group members to build trust and respect, foster learning and accomplish goals as it provides the platform upon which



this diverse group of people will be able to understand issues and make decisions towards a common goal. Communication skill is a very fundamental social process which ensures the delivery of messages to others in order to inform or change attitude, opinion, and behaviour and promote the attainment of positive results (Paramita *et al.*, 2020). Essentially, communication is the process of sending or receiving messages containing thoughts, ideas, opinions, feelings and information so as to enhance cooperation and promotion through understanding among participants in the process. It provides skills for information delivery, problem solving and feedback.

With reference to librarians and libraries, information service delivery is premised greatly on effective and efficient communication. According to Afkhami *et al.* (2019), the main mission of library is to serve people and the quality of their relationship with their clients is one of the factors that can be useful in advancing this mission. It is recognised that librarians cannot be effective in their performance of information service delivery without having sufficient knowledge in communication. In the view of Karimi *et al.* (2021), information service delivery issues have been attributed to the lack of appropriate communication between librarians and library patrons resulting in misunderstanding. In order to address this issue, librarians are required to possess communication skills that are necessary for improved information service delivery ranging from interpersonal relationship skill and use of effective communication channels.

The growth of information technology and internet has revolutionised communication beyond traditional method of paper memos and other forms of writing pasted on a bulletin board to include online communication. Online communication refers to exchanging information and ideas through electronic communication technologies, such as the internet, social media platforms, and messaging apps. According to Warschauer (2001), online communication refers to reading, writing, and communication via networked computers. It encompasses synchronous computer-mediated communication (whereby people communicate in real time via chat or discussion software, with all participants at their computers at the same time); asynchronous computer-mediated communication (whereby people communicate in a delayed fashion by computer, using programs such as e-mail); and the reading and writing of online documents via the World Wide Web.

In a similar vein, Balvin and Conley (2014) asserted that online communication is computer-mediated communication such as email, instant messaging, and conferencing platforms (googlemeets, zoom, skype, microsoft teams, skype for business) using computer systems or smartphones. Avram (2015), online communication is the transmission of messages through the use of telephone, smartphone, e-mail and social media. These media provide continuous contact among people of the same group. In same vein, Kalogiannidis *et al.* (2022) state that online communication is the use of digital media such as social media platforms for information transmission and this medium is considered cheap as well as ensures continuous contact among and between people.

It allows for the seamless fusion of audio-video conferencing tools and computer technology to connect people in real time, regardless of location, time zone variations, and other factors. In the view of Kaeophanuek *et al.* (2018), one of the digital literacy is the acquisition of online communication skill which lie in the practical ability to communicate, share, retrieve, and use information using digital media such as laptops, smartphones, tablets, the internet, and other technological facilities (including files, images, sounds, music, and other digital information contents). Furthermore, through online communication, messages can be shared with one or many persons over internet and the messages are delivered almost instantly and allows the recipient to respond to such messages. According to Naha (2023), online communication are embedded with the following advantages:



Cost-Effectiveness: One of the biggest benefits of digital communication is that it is cost-effective and has a wider reach than physical communication as it reduces the risks involved in traveling to different locations as calls can be made via different especially through WhatsApp which is even cheaper than traditional calling via telecom services. Multiple real time communication tools have changed the dynamics of online communication as written communication apps can be used rather than having virtual meetings. For business efficiency and growth, online communication has been of great help as money would not be spent on physical conference. This is so because apps like Skype, Viber, and Facebook messenger have introduced free video calling, reducing communication costs and improving customer loyalty.

Efficient Group Video Calls: With online communication tools, you can talk to as many as eight people via video calls on various applications. Free web conference calls can be initiated to connect with clients or colleagues and discuss work with stable internet access. Most companies use Google Meet for web conferences that allow as many as 100 participants.

Flexibility: With working internet connection everywhere, even in public spaces, connecting with people in any part of the world is easy. Even businesses can schedule virtual meetings with their clients and close deals faster.

Increased Efficiency: Online communication makes work easier and better. There's no need for time-consuming physical meetings. Employees can share files and documents instantly over email to do their jobs more efficiently. Moreover, it helps increase productivity as these things are shared almost instantly. Besides, internet communication supports remote work, enabling employees worldwide to collaborate and communicate.

Better Connectivity: This is an intriguing benefit of online communication that continues to flourish daily. Traditionally, people would wait to see their remotely located loved ones for years, but now it is easy to get a glimpse of their friends within seconds. With video calls to your loved ones, you can talk to them face-to-face, irrespective of their geographical locations.

Easy Accessibility: One of the advantages of internet communication is that it is easily accessible to users. The benefit of using an online video conference tool is that it is accessible on any device. Any device that supports an internet connection can be used to conduct an online conference call, including a computer, tablet, or smartphone.

Seamless Experience: Having a smooth, seamless experience is one of the interesting advantages of online communication systems. With a digital communication tactic, one can increase client loyalty. Automation, chatbots, or AI provide clients with the desired convenience by eliminating the need for an agent.

Long-Term Competitive Advantages: Online communication users have various choices for gaining a competitive edge. When coworkers or business partners communicate virtually, they can exchange ideas more quickly, leading to more informed decisions that reduce the time and cost needed to market new services and goods. With online communication tools, business owners can use full-motion video effects to create more meaningful and intimate connections with their customers.

From the foregoing, it could be seen that online communication provides efficiency, flexibility and cost efficiency to the communication process and as such online communication skill is very important for effectiveness and efficiency in task performance. According to Umar and Muhammed (2011), the problem with information service delivery in university libraries is the lack of appropriate channels for communication as the use of complaint boxes, personal contact, notice boards and news bulletin are not as effective as it is in the past. Librarians need to develop



online communication skills in the use of social media, e-mail, video conferencing platform as well as chat services to deliver information delivery services.

In the view of Adamu *et al.* (2022), librarians need online communication skills in the performance of their job especially in the use of electronic bulletin boards, online meeting platform (zoom, google meet), ability to share work related files on Dropbox or Google drive. Agim and Azolo (2019), the use of online communication in information service delivery is very low because digital literacy skills and competencies of librarians in Nigeria in the use of digital technologies in providing library services is very low. This follows the assertion of Adamu *et al.* (2022) that many librarians lack the necessary digital skills to operate a computer, access their email, interact on the Internet, or deliver services via technology devices, resulting in poor job performance. Also, Abdurrahman *et al.* (2018) revealed that the use of electronic conferencing was low while the use of mobile phones, and social networking was moderate for information service delivery.

Social Media Management Skill and Information Service Delivery

Social media are interactive media technologies that facilitate the creation and sharing of information, ideas, interests, and other forms of expression through virtual communities and networks. According to Olugbenga *et al.* (2022), social media are modern interactive communication channels through people as a whole connect to one another to share knowledge, experiences, messages and common interest of information. Also, Hasan (2013) opines that social Media is a form of technology that brought about information super highway that delivers all kinds of electronic services: sound and video, text, data to household, business and libraries. Furthermore, Balarabe (2014) assert that social media is a means of interacting with people to create, share, exchange information and ideas in virtual communities.

According to Wyman (2023), social media is the collection of digital media and technologies that enables users to exchange information and individually or jointly design media content. The exchange of information individually or jointly simply suggest that two types of social media are in existence. Internal social media which facilitates communication as well as knowledge and experience-sharing between staff and strengthens solidarity within the company and external social media which comprises third-party platforms that companies use as a mouthpiece and feedback channel to reach their partners, and especially their customers. With the advent of social media platforms, it has become easy and cheap for people and organizations to create new content and share it with their contacts, as well as to review and comment on contributions, anytime and anywhere as long as there is internet connectivity. In the view of Uwandu and Osuji (2022), there are several kinds of social media platforms such as Youtube, Facebook, WhatsApp, Twitter, Skype, Instagram, Zoom and blog that can be used to create and share different kinds of information ranging from videos, photos, images and documents.

In relation to service delivery, Awurdi (2019) asserts that social media is becoming an indispensable tool used in libraries for improving services as social media is being used to communicate with more potential library users; extending and offering better services to users. Also, it enables libraries to share new ideas, knowledge, information, interact with their users and create awareness of new services to meet up with the information needs of their users. In the view of Bakare (as cited in Uwandu and Osuji, 2022), social media can be used by academic libraries for sharing news, pictures, video clips and marketing their services. Also, Obi, Okore and Kanu (2019) pointed out that answering reference questions, user education, current awareness services, alert users due, display and exhibition, document delivery services and circulation services are library services rendered with social media.

According to Wyman (2013), the use of social media for effective and efficient service delivery in organization requires social media management. Social media management has to do with all activities that is carried out to ensure the efficiency and effectiveness of social media and



this include collecting, filtering, preparing, and evaluating relevant data available on social media platforms to obtain a transparent information base for discussions and decision-making. In the view of Parveen and Ainin (2016), social media management is the process of creating content for the products and services provided by the company which includes managing programming, community, reputation, developing team members, advertisements, and others. Also, Ernst *et al.* (2014) state that social media management is the process of scheduling and creating content in order to nurture the audience on communication platforms through programming and community management, online reputation management, team member development management, and others. Essentially, social media management is a process that involves creating content, scheduling its publishing, developing a strategy, interacting with users, growing reach, and monitoring the performance of a company's accounts on social media. It enables the building of relationships with customers and publishing of relevant posts (SendPulse, 2023).

According to Daowd *et al.* (2021), social media management is not an easy venture because it requires leaders, managers and officials with creative ideas to present the organization's services and products because the acceptability of products and services are premised on skill set of individuals vested with the task of managing social media contents. This becomes important because social media management requires:

Ardent understanding of the target audience. This is necessary for the development of an effective social media strategy. In academic libraries, it is essential to identify the core characteristics of library patrons: disciplines, faculties, research interests, age, gender, and location. This will help in the understanding of library patrons so as to tailor a strategy that addresses their needs and solves problems.

Selection of social media. It is important to determine the most effective social networks to implement the strategy and reach the target audience. This has to do with focusing on the social network that library patrons use the most. Then, prioritize the platforms the target audience prefers. In order to achieve this, it is important to review the library's demographic data through a social media audit. With a social media audit, it will be possible to evaluate engagement on different platforms and find the top-performing. Developing a social media strategy as to how to deliver resources and services to the target audience. In order to create a comprehensive strategy, the goals, mission and values of the library must be included in the strategy.

Designing profiles: it is important to design profiles that depicts the library, the information resources and services provided. Library patrons should be able to recognize the library's brand at a glance. Also, the library should publish professional images and videos to make a great impression and encourage library patrons to follow the library's account. It is important to pay attention to social media design.

Creating a publishing schedule. This is important in drawing traffic to the social media page. It is very important to plan the library's posts and have a calendar on how these posts will be shared automatically to the library patrons.

Interacting with users. To earn users' love and trust, make day-to-day communication with customers a priority. It is important to interact with the library patrons about the content and reply to their comments. Communication directly affects the library's brand reputation, brand awareness, and customer loyalty.

From the foregoing, it could be seen that the management of social media for organisational efficiency and effectiveness require social media management skills. According to Pleasant (2023), social media management skills are the abilities an individual uses to create effective social media strategies. These skills according Hamilton (2023) are verbal and written communication skills, data analytics and time management. In the view of Verma *et al.* (2023), social media



management skills are communication skills, time management skills, attention to details, creativity, problem solving, campaign management skills, project management skills, web design, data analytics, social media tools, Adobe and MS word. Furthermore, Pleasant (2023) assert that social media management skills needed for engagement and connection with target audience are analytics, communication, creativity, customer service, writing, visual design, planning, problem-solving and project management. These skills are essential in the following ways:

- i. Identifying an organisation's target audience
- ii. Researching which social media platforms and content are most effective for engaging with a target audience
- iii. Tracking social media data and campaign results
- iv. Staying updated on the latest social media trends and topics
- v. Creating content for social media ads and posts
- vi. Assigning tasks to team members within a company's social media department
- vii. Using social media to address customers' questions and concerns
- viii. Adjusting content based on social media ad results
- ix. Increasing sales and revenue with product highlights
- x. Answering customer questions
- xi. Recommending ways to expand channels through emerging platforms

With particular reference to academic libraries, Miller (2016) assert that social media is a powerful tool which libraries of the twenty-first century are now leveraging to communicate with their library users because it acts as a powerful magnet in attracting external users to library services, facilitating interactive and collaborative knowledge production and sharing as well as capable of providing local and current information. Furthermore, it serves as an outlet for viewpoints and voices that are not typically conveyed by traditional media like the newspapers, fliers, handbills amongst others. In the view of Chakrabarti (2016), the benefits of social media usage in information service delivery include library drawing closer to the users and build a collaborative platform for the users as well as ease of library registration for all categories of user. The author further stated that social media gives room for users to update, modify and place hold on a material needed via their mobile phone or other smart devices, get answers to specific queries, enhance reference service, create availability of library resources, generate reading list and promote reading advocacy among library patrons. Also, Maidul and Habiba (2015) stated that libraries are recognising the importance of social media for the purposes of marketing, building customer relationships between the libraries and its users, reference services, selective dissemination of information, current awareness service, translation services and many more. Furthermore, it is a platform that can be used for collaborative learning, information gathering, information dissemination, online social and professional connections as well as for promoting library services, library products, sharing library news, events and video conferencing.

Despite the importance of social media usage for library news and events, creating awareness of new additions to the library's collection, providing links to journal articles, videos, community information, solicited feedback and much more, Several studies by Emmanuel and Osuolale (2019), Oyeniran and Olajide (2019). Danbaki *et al* (2020) and John, *et al* (2020) are unanimous in their assertion that libraries and librarians lack social media management skills as evidenced in the paucity of well-trained library staff, poor attitude of staff towards social media



platforms, staff apathy, technophobia, low level of technology penetration among librarians and lack of social media training for staff. This goes to show that social media usage for information service delivery is very low and in many instances no existent in university libraries because librarians lack the prerequisite social media management skills needed.

Research Methodology

Descriptive survey design was adopted for study. The population and sample size of the study comprised 105 librarians in seven federal university libraries in South-South, Nigeria namely-University of Calabar, University of Port Harcourt, University of Uyo, Federal University Otuoke, University of Benin, Federal University of Petroleum Resources and Maritime University using total enumeration technique. Librarians' Digital Library Skills and Information Service Delivery Questionnaire (LDLSISDQ) was used for collection of data. The instrument was face validated by three lecturers- one lecturer from the department of Business Education and two lecturers from Library and Information Science Department, all in the University of Uyo. The instrument has a reliability coefficient of 0.86 determined using Cronbach's alpha reliability statistics. The instrument was divided into sections 'A' and 'B'. Items in Section "A" elicited information on the independent variable under the sub constructs of computer skills, online communication skills and social management skills, while items in Section 'B' elicited information on the dependent variables-information service delivery. Section B was developed on a four point rating scale responses of Very Often (4 points), Often (3 points), Rarely (2 points) and Never (1 point). Mean and Standard Deviation were used to answer the research questions while dependent t-test was used to test the hypotheses. A criterion mean (a midpoint mean) of 2.50 was adopted for agreement and disagreement with the questionnaire items. Any score at 2.50 and above showed agreement while below 2.50 showed disagreement.

Findings and Discussion

Research Question One

What is the influence of librarians' computer skills on information service delivery in federal university libraries in South-South, Nigeria?

Table 1: Mean and standard deviation of the influence of librarians' computer skills on information service delivery in federal university libraries in South-South, Nigeria (n= 78)

Variables	\bar{x}	N	SD
Pair 1 Librarians' computer skills	3.02	78	0.39
Information service delivery	2.54	78	0.52

The result in Table 1 shows the weighted mean scores of 3.02 and 2.54 obtained by the respondents for librarians' computer skills and information service delivery respectively and their respective standard deviation scores of 0.39 and 0.52. These standard deviation scores are small which means that the spread of scores are not too wide apart. Also, since the weighted mean scores for the two variables are above the cutoff point of 2.50, it means that there is influence of librarians' computer skills on information service delivery in federal university libraries in South-South, Nigeria.

Research Question Two



What is the influence of librarians' online communication skills on information service delivery in federal university libraries in South-South, Nigeria?

Table 2: Mean and standard deviation of the influence of librarians' online communication skills on information service delivery in federal university libraries in South-South, Nigeria (n= 78)

	Variables	\bar{x}	N	SD
Pair 1	Librarians online communication skills	2.99	78	0.60
	Information service delivery	2.54	78	0.52

The result in Table 2 shows the weighted mean scores of 2.99 and 2.54 obtained by the respondents for librarians' online communication skills and information service delivery respectively and their respective standard deviation scores of 0.60 and 0.52. These standard deviation scores are small which means that the spread of scores are not too wide apart. Also, since the weighted mean scores for the two variables are above the cutoff point of 2.50, it means that there is influence of librarians' online communication skills on information service delivery in federal university libraries in South-South, Nigeria.

Research Question Three

What is the influence of librarians' social media management skills on information service delivery in federal university libraries in South-South, Nigeria?

Table 3: Mean and standard deviation of the influence of librarians' social media management skills on information service delivery in federal university libraries in South-South, Nigeria (n= 78)

	Variables	\bar{x}	N	SD
Pair 1	Librarians social media management skills	3.15	78	0.54
	Information service delivery	2.54	78	0.52

The result in Table 3 shows the weighted mean scores of 3.15 and 2.54 obtained by the respondents for librarians' social media management skills and information service delivery respectively and their respective standard deviation scores of 0.54 and 0.52. These standard deviation scores are small which means that the spread of scores are not too wide apart. Also, since the weighted mean scores for the two variables are above the cutoff point of 2.50, it means that there is influence of librarians' social media management skills on information service delivery in federal university libraries in South-South, Nigeria.

Test of Hypotheses

Hypothesis One

There is no significant influence of librarians' computer skills on information service delivery in federal university libraries in South-South, Nigeria



Table 4: Result of dependent t-test analysis of the influence of librarians’ computer skills on information service delivery in federal university libraries in South-South, Nigeria (n=78)

Variables	\bar{x}	N	SD	t-value	Sig.	Decision
Pair 1 Librarians computer skills	3.02	78	0.39	7.07	0.01	Significant
Information service delivery	2.54	78	0.52			

*significant at P< .05; df= 77

The result in Table 4 showed that the computed t-value is 7.07 while the corresponding probability level of significance is .01 alpha at 77 degrees of freedom. This level of significance is less than .05 in which the decision is based. With this result, the null hypothesis was rejected. This implies there is significant influence of librarians’ computer skills on information service delivery in federal university libraries in South-South, Nigeria. The finding lend credence to the observation of Anyaoku (2012), who averred that computer literacy skills are essential skills for library and information professional in the present information technology dispensation for effective information service delivery. This skill becomes expedient because of the impact of information technology which brought about electronic information resources and the promotion of remote access to information resources. The finding also lend credence to the observation of Omehia et al. (2021) who alleged that computers skills are of immense importance to librarians in the discharge of information service because it is essential for information acquisition, organization, retrieval and dissemination.

The finding lend credence to that of Agim and Enuma (2019) who found that digital literacy has improved job performance of the 21st century library staff through increased speedy purchase of online information resources, establishment and maintenance of online catalogue database, improved virtual reference services, and enhanced Internet search activities for users.

Hypothesis Two

There is no significant influence of librarians’ online communication skills on information service delivery in federal university libraries in South-South, Nigeria.

Table 5: Result of dependent t-test analysis of the influence of librarians’ online communication skills on information service delivery in federal university libraries in South-South, Nigeria (n=78)

Variables	\bar{x}	N	SD	t-value	Sig.	Decision
Pair 1 Librarians online communication skills	2.99	78	0.60	4.86	0.01	Significant
Information service delivery	2.54	78	0.52			

*significant at P< .05; df= 77

The result in Table 5 showed that the computed t-value is 4.86 while the corresponding probability level of significance is .01 alpha at 77 degrees of freedom. This level of significance is less than .05 in which the decision is based. With this result, the null hypothesis was rejected. This implies there is significant influence of librarians’ online communication skills on



information service delivery in federal university libraries in South-South, Nigeria. The finding is in line with the observation of Owoye and Dahunsi (2014), who reported that internal personal communication is an effective for information service delivery because it is used for achieving individual and organizational goals by facilitating the sharing of information, experience and knowledge, transmission of ideas, decisions and information. Furthermore, communication is used to provide all categories of library personnel with unity of direction, a sense of shared expectations, feelings and attitudes that are essential ingredients for sustaining group effort and attainment of library goals.

The finding is also in line with the observation of Afkhami *et al.* (2019), who asserted that the main mission of library is to serve people and the quality of their relationship with their clients is one of the factors that can be useful in advancing this mission. It is recognised that librarians cannot be effective in their performance of information service delivery without having sufficient knowledge in communication. The finding is in agreement with that of Hamid and Younus (2021) who found that a significant relationship between communication skills and the dependent variable work productivity. Communication skills help library professionals enhance their work performance, service provision, build healthy relationships with library patrons and colleagues, and help reference librarians meet users' information needs. The finding is in line with that of Agunsoye (2023) whose finding showed that academic library personnel in Kogi State possess interpersonal communication skills to a great extent and these skills are quite effective in reference and information service delivery.

Hypothesis Three

There is no significant influence of librarians’ social media management skills on information service delivery in federal university libraries in South-South, Nigeria.

Table 6: Result of dependent t-test analysis of the influence of librarians’ social media management skills on information service delivery in federal university libraries in South-South, Nigeria (n=78)

Variables	\bar{x}	N	SD	t-value	Sig.	Decision
Pair 1 Librarians’ social media management skills	3.15	78	0.54	7.20	0.01	Significant
Information service delivery	2.54	78	0.52			

*significant at P< .05; df= 77

The result in Table 6 showed that the computed t-value is 7.20 while the corresponding probability level of significance is .01 alpha at 77 degrees of freedom. This level of significance is less than .05 in which the decision is based. With this result, the null hypothesis was rejected. This implies there is significant influence of librarians’ social media management skills on information service delivery in federal university libraries in South-South, Nigeria.

The finding is in line with that of Awurdi (2019) who asserted that social media is becoming an indispensable tool used in libraries for improving services as social media is being used to communicate with more potential library users; extending and offering better services to users. Also, it enables libraries to share new ideas, knowledge, and information, interact with their users and create awareness of new services to meet up with the information needs of their users. The finding is also in line with the observation of Jindal (2023) who alleged that social media management skills are essential in making social media more entertaining and engaging towards the satisfaction of the intended audience.



The need for social media management skills is based on the fact that social media enables communication, social interaction and collaboration, creation and exchange of the information and without social media management skills, the adoption of social media for information service delivery cannot be a success. The finding is line with that of Alharrasi (2023) who found that social media management was essential to improving company's performance and sustainability. The finding contradict that of Emmanuel and Osuolale (2019) who found that the use of social media has not translated to effective information service delivery because of librarians' lack of social media skills among others.

Conclusion

The study examined the influence of librarians' digital skills on information service delivery in federal university libraries in South-South Nigeria. Specifically, the study focused on three major digital skill variables: computer skills, online communication skills, and social media management skills and how they influence effective information service delivery in university libraries. The findings of the study revealed that computer skills, online communication skills, social media management skills significantly influence information service delivery in federal university libraries. Librarians who possess adequate computer literacy are better able to acquire, organize, retrieve, and disseminate information resources effectively. Thus, digital skills are critical competencies for librarians in the modern information environment. Librarians' ability to effectively utilize computers, communicate online, and manage social media platforms greatly enhances the quality, efficiency, and accessibility of information services in university libraries. Therefore, strengthening librarians' digital competencies is essential for improving information service delivery and ensuring that university libraries remain relevant in the digital age

Recommendation

Based on the findings from the study, it is recommended that:

1. University library management should organize training and re-training of librarians through workshop and seminar to improve the levels of computer skills of librarians so as to enhance information service delivery.
2. Librarians' should strive to possess various forms of verbal and non-verbal communication skills in order to be able to serve their users with the right information, at the right time and to enhance high patronage.
3. Library management should incorporate more social media platforms for service delivery by librarians to enable the provision of round the clock library services to library users and that librarians should be trained on social media management skills.

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