

**PERSONAL CHARACTERISTICS AND MOTIVATIONAL FACTORS AFFECTING
SOCIAL MEDIA USE FOR SERVICE DELIVERY AMONG LIBRARY PERSONNEL
IN UNIVERSITIES IN SOUTHWESTERN NIGERIA**

BY

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CERTIFICATION

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DEDICATION

This thesis is dedicated to GOD ALMIGHTY who spared my life and showed me mercy throughout the programme. This work wouldn't have become a reality without YOU backing me up. To YOU I give all the glory.

I likewise dedicate this work to my amiable daughter, Ozichukwu Mirable Amson-Okere and my beloved late husband, Osondu Amson Okere who held the ladder for me to climb before his sudden demise, may his gentle soul continue to rest in perfect peace, Amen.

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ABSTRACT

Social Media (SM) is known for its inclusive and multi-dimensional roles for effective and efficient service delivery by facilitating closer relationships between the Library Personnel (LP) and the library users. However, evidence has shown that SM use for service delivery among LP in universities, particularly in Southwestern Nigeria has been relatively low. Previous studies have focused largely on awareness, relevance and importance of SM in enhancing service delivery, with little attention to factors that affect usage such as Personal Characteristics (PC) and Motivational Factors (MF). This study, therefore, examined PC (age, gender, level of education, marital status, computer use experience-CUE) and MF (Perceived Usefulness-PU, Perceived Ease of Use-PEOU, Perceived Enjoyment-PE Computer Playfulness-CP) affecting SM use for service delivery among LP in universities in Southwestern Nigeria.

Uses and Gratification Theory, Technology Acceptance Model (TAM 3) and Motivational Model of Computer Usage provided the framework, while the survey design of the correlational type was adopted. Forty-two universities (7 federal, 8 state and 27 private) and all 556 LP in Southwestern Nigeria were enumerated. The instruments used were MF ($\alpha=0.82$): PU ($\alpha=0.81$), PEOU ($\alpha=0.84$), PE ($\alpha=0.79$), CP ($\alpha=0.83$), SM use ($\alpha=0.73$), Frequency of use ($\alpha=0.72$), Purpose of use ($\alpha=0.79$) scales. Data were analysed using descriptive statistics, Pearson's product moment correlation and Multiple regression at 0.05 level of significance.

The respondents' age was 37.36 ± 2.55 years and 51.8% males. Their qualifications were master degree (41.2%), Bachelor in Library Studies (22.6%), Diploma in Library Studies (19.2%), doctoral degree (7.2%) and other related disciplines (7.7%). Their work experience ranged as follows: 13 years and above (27.7%), 5-8 years (26.7%), 1-4 years (25.2%) and 9-12 years (20.5%). Their CUE ranged as follows: 13 years and above (30.6%), 5-8 years (27.1%), 9-12 years (22.0%) and 1-4 years (20.3%). The SM mostly used were WhatsApp (65.1%, 72.6%, 65.2%), Facebook (59.95, 75.2%, 63.6%), Google+ (44.8%, 54.9%, 47.3%) for federal, state and private universities, respectively. The level of frequency of SM use was moderate ($\bar{x} = 71.84$) against the test norm of 45.01-90.00. Purposes of use of SM across the universities were communicating and interacting ($\bar{x} = 3.33$), information and knowledge sharing ($\bar{x} = 3.31$), promoting and marketing of library information products and services ($\bar{x} = 3.27$), advertising new collections and acquisitions ($\bar{x} = 3.25$). PC: gender ($r=0.28$), age ($r=0.43$), marital status ($r=0.24$), level of education ($r=0.31$), CUE ($r=0.50$) and MF: PU ($r=0.78$), PEOU ($r=0.28$), PE ($r=0.34$), CP ($r=0.26$) had significant relationships with SM use. The independent variables jointly influenced SM use ($F_{(9;459)} = 27.192$, Adj. $R^2 = 0.335$) accounted for 33.5% of its variance. Age ($\beta=0.123$), gender ($\beta=-0.196$), CUE ($\beta=0.224$), PEOU ($\beta=0.288$), PU ($\beta=-0.174$), PE ($\beta=0.404$) and CP ($\beta=0.132$) relatively influenced SM use of the respondents.

Personal characteristics (gender, age, marital status, level of education, computer use experience) and Motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment, Computer Playfulness) influenced Social media use among library personnel in universities in Southwestern Nigeria. Library management, university authorities and government should pay attention to motivational factors, for effective and efficient service delivery.

Keywords: Computer use experience, Library personnel, Social media use in libraries, perceived usefulness, Service delivery in libraries

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TABLE OF CONTENTS

Title Page	i
Certification	ii
Dedication	iii
Acknowledgements	iv
Abstract	viii
Table of Contents	ix

CHAPTER ONE: INTRODUCTION

1.1	Background to the study	1
1.2	Statement of the problem	13
1.3	Objectives of the study	15
1.4	Research questions	17
1.5	Hypotheses	17
1.6	Scope of the study	18
1.7	Significance of the study	18
1.8	Operational definition of terms	20

CHAPTER TWO: LITERATURE REVIEW

2.1	Introduction	22
2.2	Social media use by library personnel	22
2.2.1	Types of social media tools use in university libraries	40
2.2.2	Frequency of use of social media in university libraries	56
2.2.3	Purpose of social media use in university libraries	58
2.3	Service delivery in university libraries	61
2.4	Motivational factors of library personnel for social media use	81
2.5	Personal characteristics of library personnel and use of social media	88
2.6	Motivational factors of the library personnel and use of social media	93
2.7	Personal characteristics and motivational factors of library personnel and use of social media	106
2.8	Challenges to social media use by library personnel	111
2.9	Theoretical framework	114
2.9.1	Uses and Gratification Theory (UGT)	115
2.9.2	Technology Acceptance Model 3 (TAM 3)	120

2.10	Conceptual model	124
2.11	Appraisal of the literature reviewed	126

CHAPTER THREE: METHODOLOGY

3.1	Introduction	127
3.2	Research design	127
3.3	Population of the study	127
3.4	Sampling technique and sample size	132
3.5	Research instrument	132
3.6	Validity and reliability of research instrument	133
3.7	Data collection procedure	134
3.8	Method of data analysis	135
3.9	Questionnaire administration and response rate of the respondents	135
3.10	Ethical considerations	141

CHAPTER FOUR: RESULTS AND DISCUSSION

4.1	Introduction	143
4.2	Socio-demographic profile/personal characteristics of the respondents	143
4.3	Answers to the research questions	148
4.4	Test of hypotheses	182
4.5	Respondents' comments on suggestions on how social media use can be improved for service delivery in the library	208
4.6	Discussion of the findings	208
4.6.1	Socio-demographic data /personal characteristics of library personnel	208
4.6.2	Types and frequency of social media use by library personnel for service delivery	212
4.6.3	Purpose of use of social media by library personnel	216
4.6.4	Challenges to the use of social media for service delivery by library personnel in universities	218
4.6.5	Relationship between personal characteristics and social media use by library personnel in universities in southwestern Nigeria	219
4.6.6	Relationship between motivational factors and social media use by library personnel in universities in southwestern Nigeria	221

4.6.7	Test of relationship between personal characteristics and motivational factors on social media use by library personnel	225
4.6.8	Test of relationship among personal characteristics, motivational factors and social media use by library personnel	227
4.6.9	Relative influence of personal characteristics and motivational factors on social media use by library personnel	228

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1	Introduction	230
5.2	Summary of the findings	230
5.3	Conclusion	231
5.4	Recommendations	232
5.5	Contributions of the study to knowledge	233
5.6	Suggestions for further research	234

REFERENCES	235
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APPENDIX I	282
-------------------	-----

APPENDIX II	287
--------------------	-----

LIST OF TABLES

Table. 3.1: Summary of the total population of library personnel in federal, state and private universities	129
Table 3.2a: Population of library personnel in federal, state and private universities	130
Table 3.2b: Population of library personnel in federal, state and private universities	131
Table 3.3a: Questionnaire administration and response rate of the respondents (federal universities)	136
Table 3.3b: Questionnaire administration and response rate of the respondents (state universities)	137
Table 3.3c: Questionnaire administration and response rate of the respondents (private universities)	138
Table 3.3ci: Questionnaire administration and response rate of the respondents (private universities)	139
Table 3.3d. Summary of response rate of respondents in federal, state and private universities	140
Table 4.1a: Socio-demographic profile/Personal characteristics of library personnel in universities in southwestern Nigeria	144
Table 4.1b: Socio-demographic profile/Personal characteristics of library personnel in universities in southwestern Nigeria	145
Table 4.2a: Types and frequency of use of social media tools by the library personnel for service delivery in universities in southwestern Nigeria	149
Table 4.2ai: Types and frequency of use of social media tools by the library personnel for service delivery in universities in southwestern Nigeria	150
Table 4.2b: Types and frequency of use of social media tools used for service delivery by library personnel according to type of universities	153
Table 4.2bi: Types and frequency of use of social media tools used for service delivery by library personnel according to type of universities	154
Table 4.2c: Types and frequency of social media use in private universities	155
Table 4.2d: Summary of Mean and Standard Deviation scores showing types and frequency of social media use according to types of universities	156
Table 4.3ai: Purpose of use of social media by library personnel in universities in southwestern Nigeria	158
Table 4.3aii: Purpose of use of social media by library personnel in universities in southwestern Nigeria	159
Table 4.3bi: Purpose of use of social media by library personnel in federal and state universities	160

Table 4.3bii: Purpose of use of social media by library personnel in federal and state universities	161
Table 4.3c: Purpose of use of social media by library personnel in private universities	162
Table 4.3d: Summary of Mean and Standard Deviation scores on purpose of use of social media by library personnel according to type of universities	163
Table 4.4ai: Motivational factors of social media use by library personnel in universities in southwestern Nigeria	166
Table 4.4aaii: Motivational factors of social media use by library personnel in universities in southwestern Nigeria	167
Table 4.4aiii: Motivational factors of social media use by library personnel in universities in southwestern Nigeria	168
Table 4.4bi: Summary of Mean and Standard Deviation scores of motivational factors of social media use by library personnel according to types of universities in southwestern Nigeria	170
Table 4.4bii: Summary of Mean and Standard Deviation scores of motivational factors of social media use by library personnel according to types of universities in southwestern Nigeria	171
Table 4.4biii: Summary of Mean and Standard Deviation scores of motivational factors of social media use by library personnel according to types of universities in southwestern Nigeria	172
Table 4.5a: Relative influence of personal characteristics (age, gender, computer use experience, educational qualification and marital status) on social media use for service delivery by library personnel in universities in southwestern Nigeria	173
Table 4.5b: Summary of multiple regression analysis of social media use by library personnel in universities in southwestern Nigeria	176
Table 4.5c: Relative influence of personal characteristics and motivational factors to the use of social for service delivery by library personnel in universities in southwestern Nigeria.	178
Table 4.6: Challenges of social media use for service delivery by library personnel in universities in southwestern Nigeria	180
Table 4.7: Correlation matrix showing relationship between personal characteristics and social media use of the respondents	183
Table 4.7a: Summary of correlation matrix showing relationship between personal characteristics and social media use of the respondents	185
Table 4.8: Relationship between motivational factors and social media use by library personnel for service delivery	187

Table 4.9i: Summary of correlation showing the relationship between personal characteristics and social media use; motivational factors and social media use by library personnel in universities in southwestern Nigeria	190
Table 4.9ii: Relationship among personal characteristics, motivational factors and social media use by library personnel in universities in southwestern Nigeria	191
Table 4.9iii: Relationship among personal characteristics, motivational factors and social media use by library personnel in universities in southwestern Nigeria	192
Table 4.9iv: Relationship among personal characteristics, motivational factors and social media use by library personnel in universities in southwestern Nigeria	193
Table 4.10a: Joint influence of personal characteristics on social media use by library personnel in universities in southwestern Nigeria	196
Table 4.10b: Relative influence of personal characteristics (age, gender, computer use experience, educational qualification and marital status) on social media use	198
Table 4.10c: Joint influence of motivational factors on social media use for service delivery by library personnel in universities in southwestern Nigeria	200
Table 4.10d: Relative influence of motivational factors on social media use	202
Table 4.11a: Joint influence of personal characteristics and motivational factors on social media use	204
Table 4.11b: Relative influence of personal characteristics and motivational factors on social media use for service delivery of the respondents	206

LIST OF FIGURES

Fig. 2.1	Technology Acceptance Model 3 (TAM 3) (Venkatesh and Bala, 2008)	123
Fig. 2.2	Self-constructed model of factors affecting the use of social media by the researcher	125

CHAPTER ONE INTRODUCTION

1.1 Background to the Study

Libraries are established as an essential part of educational and informative system with primary responsibilities of ensuring that all stakeholders are provided with information materials relevant to their needs. They play important roles in the intellectual and academic development of various categories of users such as students, researchers, lecturers and the communities they serve. They are active partners in teaching, learning and research processes in all educational institutions. Libraries are also regarded as the heart, hub and nerve centres of the educational institutions they serve. They ensure the support; improvement and acquisition of reading culture, creativity, and innovation of the users as well encourage them in the development of their independent thinking via the provision of sufficient resources to support teaching, research and learning activities.

University libraries in Africa, particularly in Nigeria are at present being encouraged to render good service to their various users. Consequent upon this, they are striving to ensure that users are provided with quality and effective service. The provision of good and efficient service is very important in order to satisfy the information needs of today's library users. This is because they live in a global community where technology prevails hence; they can easily get the information they need without physically visiting the library. They could also access the abundant resources in the library either remotely or immediate databases in fostering learning, teaching and research activities.

More importantly, the efficiency and effectiveness of the university library as a tool for research and learning is determined by the success of providing users with relevant and timely information (Okite-Amughoro, 2017). The main aim of university libraries therefore, is to ensure that adequate information materials are acquired, processed, systematically organised and disseminated to the users in the format that is most suitable for use. In the times past, the success of libraries was measured based on completeness and balanced collection (Ayiah and Kumah, 2011). This is contrary to the present situation where the success of libraries is not only measured based on

balanced collection but also measured based on the kind of services being rendered. Services such as reference service (Current Awareness Service [CAS], Selective Dissemination of Information [SDI], document delivery) and compilation of bibliographies among others were being carried out manually. The traditional tools and techniques such as book formats for bibliographic details, manual cataloguing, use of catalogue cabinets, traditional reference services among others used then were unsatisfactory and time consuming because they only allowed for one directional flow of information. University library personnel and users were often times exhausted and worn out as a result of frustration created by the traditional methods of rendering service and retrieving information.

In recent times, the trend has changed towards technology-driven service delivery. In order to deliver the service more effectively, computers and telecommunication devices have been introduced to be used by library personnel in university libraries to complement the traditional methods of rendering service and carrying out their operations and activities. This transition is as a result of the development of the Internet through Information and Communication Technology (ICT) which has transformed and converted conventional communication into digital communication media. This development has actually brought about a strong turn around in the activities and operations in library and information centres, hence, their services and operations have become rather easier.

Information and Communication Technology (ICT) could be described as the application of computers, telecommunication and microelectronics in the acquisition, storage, retrieval, transfer and dissemination of information in various formats (Raji, 2018). ICT is an appliance of computers and telecommunications tools and equipment used to store, retrieve, transmit, manipulate data, communicate and manage information. Information and Communication Technologies' awareness and application in library profession are not new; hence, it provides library personnel with opportunities to keep pace with the new trends as well as development in their profession (Aina, 2014).

The need to discover new methods and techniques to organise and manage information resources have led to the adoption of technologies and innovation in libraries (Hamzat and Mabawonku, 2018). Consequent upon this, all the various operations, activities and services that are being carried out in the library have been made considerably easier and more efficient as a result of information and

communication technology. Hence, university libraries should be at the frontline in the use of ICT in Nigeria which could help in improving and enhancing, storing, retrieval of information and service delivery. However, the Internet as an evolution of information and communication technology has helped in empowering users to network socially irrespective of geographical separation. One of the influential outcomes of the Internet therefore is social media.

Social media could be described as the computer-mediated tools which permit individuals, group of people or companies to create, share, or exchange information, career interests, ideas, pictures/videos in virtual communities and networks (Chorasia, 2016). In the same vein *et al* (2017) defined social media as a set of information technologies which facilitate interactions, collaboration, and interactive participation, sharing of information and networking. It allows the creation and exchange of information virtually irrespective of physical location. It facilitates the sharing of ideas, thoughts and information through the creation of virtual networks and communities.

Social media emerged for communication, information and knowledge sharing with intent of allowing users to interact, share information, actively participate and collaborate in a virtual community. Social media is an important aspect of information technology which may be one of the most useful tools both at present and in future for communication, obtaining information and in rendering services to users quickly (Chitumbo, 2015). The strong point of social media therefore, lies in its ability to improve, enhance communication and facilitate strong relationships among individuals. As a result of the strong points, librarians began to integrate the tools into the library environment in order to complement library service most especially in the area of reference service delivery and marketing of library information products and services (Mabweazara and Zinn, 2016).

Social media enables users particularly library personnel to connect, communicate and collaborate with one another, forming online socialisation and online communities. It also encourages participation through open applications and services. It allows library personnel to edit, manipulate, play, control and remix the data from multiple sources in order to render effective service to users. Social media also helps in creating participation of its users in virtual community thereby encouraging users to be more active in interacting with library personnel rather than being passive. It as well offers library personnel the opportunity to interact effectively with library users

without users necessarily being present. Since university library personnel's responsibilities are predominantly aimed at providing effective service to library users, thus, the use of social media can easily make them to overcome the limitations of static web and to employ the opportunities provided by the media to achieve effective service delivery. Consequent upon this, most university library personnel began to address the ways by which social media could be used in libraries for quick and effective service.

Social media, therefore, remains useful tools for diverse library operations and users' centered qualities of social media cannot be underestimated. Today, technological infrastructure of social media applications and increase in the demand for information worldwide have made social media resonate among library personnel because of its interactive nature and for the provision of services to users in university libraries' environment (Kocac *et al*, 2013). Social media such as Facebook, Twitter, Instant Messaging among others as observed by Olajide and Alao (2016) have been found to be very useful to library personnel in the university libraries owing to their capabilities of facilitating effectiveness in service delivery. Libraries however, stand the chance of leveraging social media to disseminate information and market their products and services.

Daluba and Maxwell (2013) stated that academic libraries in developed countries have found social media as effective communication tools for interaction, marketing of new library products, initiatives, new addition to library collections, links to articles, videos, community information, solicit feedbacks, respond to people among others. In today's society and as a result of the current situation globally, the use of social media for information and knowledge sharing, service delivery among others has become a necessary daily activity. Library personnel irrespective of the COVID-19 pandemic still render their services through the use of social media. They now use social media more for interaction, marketing, advertising, access to news and information, schedule virtual reference service even when they cannot physically meet.

In addition, social media at present have become the new must have tools in university libraries and those with no presence of social media might slowly become extinct in this digital dispensation. This is so because every organisation including libraries at present do not accentuate physical contact consequent upon the second and third wave of the COVID-19 pandemic and the use of social media for service delivery has become a new normal. The underlying motives of the presence of social media in

the library particularly in university libraries as observed by the researcher include facilitating efficient service delivery, enhancing effective communication, promoting and marketing of library information products and service. The motives also include online interaction, sharing of information and knowledge among others.

Most university libraries are increasingly making use of social media to connect with the users and have moved beyond the traditional bounds of the library. This is supported by Prabhakar and Manjula-Rani (2017) who reported that the main purpose of using social media in libraries is to market and promote the library information products and services. Other purposes are for fund raising, provision of announcements to library users as regards the events and activities being carried out in the library. In Kenya for instance, Jotham (2013) stated that social media tools are being used to market library services through the provision of current awareness service, wider access to knowledge as well as for information dissemination. The author further posited that libraries in Kenya use social media to improve interactions between users and library personnel. They also use social media to facilitate communication and feedback loop, create an information sharing culture, facilitate a relaxed ambience library environment and also empower users to participate and contribute actively in library development.

One of the purposes of using social media tools in the library is to facilitate and enhance a closer relationship between libraries and the users. Other purposes of social media use in the library according to Prabhakar and Manjula-Rani (2017) include reaching out to new audience of potential users. Provision of quick updates to users, building discussion groups and collaborative work, marketing specific students' programmes and services and reforming the library's image and e-reputation among others. Aras (2015) opined that social media can be used in the library for disseminating library news and events, informing users about the new collections and links to articles for users, marketing of library products and services, reaching out to potential users, provide quick updates to users, build discussion groups and for collaborative work as well as giving quick information to current and prospective users.

Sonawane and Patil (2015) opined that social media can be used to promote events, support library services, stimulate resources/collections at the library, provide update on library refurbishment, encourage new acquisitions, aid library guides and exhibition guides. The authors further stated that social media could help connect with

new students being admitted into the university, engage with the academic community, connect with the wider community beyond the university, connect with distance learners, highlight subject specific information and establish link with potential users. Hence, social media provides incomparable level of collaboration which is very germane in librarianship profession for effective and efficient service delivery.

Therefore, in order to keep pace with evolving information technologies, libraries and library personnel began to use ICTs such as social media to render services and to market their resources with diverse success. Some of the social media tools that can be used in libraries for service delivery include: Facebook, Flickr, Twitter, wikis, blogs, Really Simple Syndication (RSS) feeds, YouTube, LinkedIn WhatsApp among others. These applications could be used in university libraries in marketing library information products and services (Okite-Amughero, 2017); for information dissemination and for feedback; Blogs, wikis, Facebook, Flickr and YouTube, allow users to communicate, store, sort, search and post photographs, interact and create content (Yi, 2016).

Ihejirika, Gouding and Philip (2018) opined that social media applications such as YouTube, Instagram and Flickr allow users to upload, organise and share multimedia materials. Information professionals use social media such as RSS, tagging and bookmarking as a means of promoting library information products and services. Phuong Chi (2020) reiterated that social media has brought competitive advantage and opportunities for library personnel to increase their work efficiency in terms of service delivery. Social media tools are easy to use, cheap and essential which can be integrated in the library environment in order to reach library users and the target audience.

In spite of the benefits associated with the use of social media in libraries for service delivery, it has been observed by the researcher and from extant literature that the frequency of use of social media remains low. In a study by Chisenga and Chandemallya (2012) on social media and professional network of information professionals in Standing Conference of Eastern, Central and Southern African Library and Information Associations (SCECSAL Region), it was reported that the frequency of use of social media among information professionals was very low. Likewise, Ilesanmi and Mabawonku (2020) in their study on use of social media space for library service delivery: evidence from universities in Southern Nigeria reported a low use of social media for service delivery with WhatsApp as the most frequently used. Chisenga and

Chande-Mallya (2012) further posited that the amount of time spent daily on social media varies among users. Majority work on it for 30 minutes daily, and that Facebook was the most frequently used media by library personnel.

In the study by Oyeniran and Olajide (2019) on librarians' use of social media for library service delivery in university libraries in Nigeria with reference to Federal University Otuoke and Niger Delta University, Wiberforce island, all in Blayelsa State, Nigeria, reported low use of social media with Facebook being the most frequently used. Similarly, Taylor and Francis Group (2014) carried out a survey on the use of social media by libraries in 3 focused groups- UK, India and USA, and noted that over 70% of libraries are using social media tools and 60% have had a social media account for over three years while 30% of librarians are using social media such as Facebook and Twitter at least daily.

Sullivan (2014) also reiterated that about 30% of the library personnel posted information on social media daily while Facebook and Twitter remained the most visited. In a related study carried out by Sahu (2013) on information dissemination through the use of social media by library professionals in the Engineering Colleges of Odisha, Eastern India; the researcher found that most professional librarians used social media tools for 30 minutes daily while Facebook and Twitter were the most frequently visited. In addition, Gupta *et al* (2014) and Olajide and Alao (2016) found that majority of the respondents were aware of social media tools but never used social media applications.

They also reported that 72.9% of library staff never used social media tools for service delivery while 27.1% sometimes used social media. The authors found that the most frequently used social media tools were Wikis, Instant messaging and Listserv while photo sharing (Flickr) and Blogging/micro blogging were never used. More often than not, personal characteristics and motivational factors could affect the use and non use of social media among library personnel. Therefore, the low level of use of social media in the libraries by library personnel could be attributed to certain factors and some of the identified factors include personal characteristics and motivational factors.

Personal characteristics are antecedents that make up individuals' personality to be adaptable to new situation and how to respond to physical and social environment in a unique way. Personal characteristics include an individual's age, gender, level of education, computer use experience as well as marital status. Personal

characteristics have been affirmed to be among the key determinants of various forms of exploratory behaviour. They play crucial roles in individual's decision to make use of information system (Jha and Ye, 2016). They could also act as determinants of a person's tendency to commence or not in using any innovation. The personal characteristics that could have influence on information system use are gender, income, level of education, skills, age and self-confidence.

Personal characteristics such as age, gender, computer use experience, level of education and marital status are considered as independent variables of social media use in this study. Age is one of the personal characteristics that could play a very significant role in influencing the acceptance and use of technology. Studies have established that young adults have the likelihood to be more comfortable with information systems. They are more techno-savvy and exhibit less technostress than the older adults (Chung *et al*, 2010). By implication, as age increases, there could be a possibility of decrease in the use of new technologies by individuals.

Aramide *et al* (2015) further affirmed the influence of age on the use of ICT by reporting that young teachers made use of ICT resources more than the older teachers. According to the study, young teachers within the age range of 21-40 years were found to be more capable of using the ICT resources than every other age group. Broady *et al* (2010) also stated that the younger adults are likely to use a new technology such as social media as compared with the older adults. The reasons, however, could likely be due to their attitude towards technology as well as their view about new technologies as useful and important tools for their activities.

Apart from age, another personal characteristic that could influence new technology use such as social media is gender. It has been observed that females are more prone to computer nervousness, are less effective in terms of handling computers and have unfavourable attitudes towards using computers. Studies have suggested that females are less likely to use new technology like social media as compared to their male counterparts hence; males are more Internet savvy than females (Ajuwon and Popoola, 2014). However, it has been observed that gender gaps and differences are gradually disappearing. The assertion is in line with Raman, Don, Khalid and Rizuan (2014) who investigated 65 postgraduate students in Malaysia with respect to the use of an information system and found that gender did not influence use of the new information system.

With respect to computer use experience, measurement of experiences varies. It is seen as an individual's involvement or action in the use of computer over a period of time (Venkatesh and Davis, 2000). An individual's experience is measured by the number of years of using a specific technology and will result in a stronger and more stable behavioural intention relationship (Poon, 2007). Studies have found that a user's degree of relevant experiences influences the use of new technology such as social media as well as intention (Tarhini *et al*, 2016). Intentions could be formed as a result of the knowledge gained from the prior experience on computer use (Fishbein and Ajzen, 1975). When users have prior knowledge in using the technology, it could provide users with a stronger base to learn thus, relating their incoming information with what they had already known (Venkatesh *et al*, 2003).

In other words, knowledgeable users will perceive ease of use as simple when learning a new technology and inexperienced users with no prior experience or knowledge will prefer to use the technology like social media which is easy to use. Level of education is another personal characteristic that could influence the use of a new technology. It is expected generally that people with higher levels of education are likely to use new information system such as social media. Level of education influenced perceptions of ease of use, such that people with higher levels of education perceived new technology as easier to use as compared to individuals with low levels of education (Aramid *et al*, 2015).

Another personal characteristic that could affect the use of social media is marital status. Relatively, little research has been reported on the influence of marital status on new technology use particularly on social media, although getting the understanding of its influence could be significant. Some studies for instance, Nyamba and Mlozi (2012); Ajuwon (2013) have shown that marital status could affect the use of the Internet and social media in the library environment. Apart from the identified personal characteristics that could affect the use of social media by library personnel, motivational factors could also contribute positively or negatively to the use of new information technology by library personnel.

Motivational factors are those factors that could encourage, drive and direct library personnel to use social media for service delivery in the library and university environment. Thus, motivation could be seen as one of the secrets to performance and one of the most important factors affecting human behaviour. It is driven by many needs and desire. It has been conceptualised as a continuous stream of behaviour

comprising three components such as direction (goals), energy (allocated to the pursuit of those goals), and persistence (versus a change) in goal pursuit (Petri and Govern, 2013).

Motivation constitutes a central element in going through the process of human learning. It is also a process of arousing and sustaining a goal directed behaviour. Motivation refers to that aspect which energises, directs, and sustains behaviours as well stimulates individuals to perform better and to produce best results. It is the will to act and the readiness to exert high levels of effort towards organisational goals, conditioned by the efforts and ability to satisfy some individual needs (Yamoah and Ocansey, 2013).

Motivation can also be defined as one's direction to behaviour, or what could make a person to want to repeat behaviour (Lowry *et al*, 2013). The underlying concept of motivation is the driving force within individuals which facilitate the achievement of certain goals which is applied to the entire class of drives, desires, needs, wishes and similar forces. It is regarded as the inner force that drives individuals to accomplish personal and organisational goals. Motivation could broadly be categorised into intrinsic and extrinsic (Uzonna, 2013).

Intrinsic motivation involves an inherent satisfaction the individual derives from performing behaviour. According to Ryan and Deci (2008), intrinsic motivation involves the performance of an activity for no apparent reward except the activity itself. Intrinsic motivation is also performance of an activity because it is inherently interesting or enjoyable. On the other hand, extrinsic motivation involves the use of external agent to attain a goal separate from the activity itself. Extrinsic motivation occurs whenever an activity is done in order to accomplish some distinguishable outcome, while extrinsic motivation contrasts with intrinsic motivation, which refers to doing an activity simply for the enjoyment of the activity itself, rather than its instrumental value.

Similarly, intrinsic motivation as described by Legauli (2016) is a performance of an act or behaviour that is naturally satisfying or enjoyable which is incentive silence in nature; and its motivated action is not predictable upon any outcome not associated with the behaviour itself. Conversely, extrinsic motivation refers to performance of a behaviour that is essentially dependent upon the attainment of an outcome separable from the action itself which is instrumental in nature. Thus, it could be said that one of the basic peculiarities that can be made between extrinsic and

intrinsic motivation is that while extrinsic motivation is determined by forces that are external to an individual, intrinsic motivation is driven by forces that are internal and within that individual in the performance of any act.

Therefore, both intrinsic and extrinsic motivation could be said to have influence on the use of new information technology tools such as social media by library personnel in universities. Some of the identified motivational factors include Perceived Usefulness (PU) (extrinsic motivation), Perceived Ease of Use (PEOU), Perceived Enjoyment (PE) and Computer Playfulness (CP) (intrinsic motivation).

Perceived usefulness in Technology Acceptance Model is the degree to which an individual believes that using a particular system would enhance her job performance (Elkaseh *et al*, 2016).

Correspondingly, Khayati and Zouaoui (2013) as cited by Hamzat and Mabawonku (2018) opined that Perceived Usefulness (PU) is same as Performance Expectancy (PE) and it is described as the gain in performance that an individual believes he can achieve when using any information system. The researchers further noted that performance expectancy (Perceived Usefulness) would have implication on the use of social media system hence a user would only use such a system owing to the fact that the system could provide answers to her queries.

Perceived usefulness is therefore, library personnel's perception of the expected benefits of social media use. By implication, academic library personnel in universities might accept the new technology (social media) with the mindset that social media tools will definitely add value to their work activities and as well improve their performance in service delivery thus, influencing use. Perceived Ease of Use (PEOU) refers to whether library personnel think that social media is easy to use and understand hence, it is the determinant for both perceived usefulness and behavioral intention. Perceived Ease of Use according to Venkatesh *et al* (2003) is the degree to which a person believes that using a particular information system (e.g. social media) or information technology would be free of effort.

By implication, the use of any technology depends on its ease of use. If the technology is easy to use, there is every possibility for it to be used without delay. Library personnel in universities may likely use social media tools in the library for service delivery if they perceive that the tools would be easy to use with less effort. Moreover, easier information systems such as social media are more likely to be used by library personnel than any complex and clumsy information systems. Hence an

information system such as social media needs to be user friendly and its exploration has to be effortless in order for it to be used otherwise users of such system would not use it even though it might be useful.

Technology Acceptance Model (TAM) suggests that both Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) are beliefs about a new technology that influence an individual's attitude towards the use of that technology. The two beliefs are considered the fundamental determinants of use of new technologies and studies have found that Perceived Ease of Use and Perceived Usefulness impact the individual's use intention of any new information system (Elkaseh *et al*, 2016).

Another motivational factor that could influence the use of social media is Perceived Enjoyment. Venkatesh and Bala (2008) and Khalid (2014) stated that Perceived Enjoyment is the extent to which the service or activity offered by social media is perceived to be pleasurable and fun in its own right, apart from any performance consequences resulting from the use of the system. Cheema *et al* (2013:133) described Perceived Enjoyment "as the individual's perception of adopting new system or technology because of the pleasure and fun such individual would derive from it". Perceived Enjoyment is an intrinsic motivation that emphasises the use process and reflects the pleasure and enjoyment associated with using a system (Praveena and Thomas, 2014).

Perceived Enjoyment could also play a key role in social media use by library personnel as a result, influencing the use of information system such as social media (Teo and Noyes, 2011; Chin and Ahmad, 2015). By implication, if library personnel found social media tools enjoyable, it could directly determine use of the information system. On the contrary however, the effect of Perceived Enjoyment (PE) was found to be insignificant on the direct effect on continuance intention to use Facebook in Kerela, India on undergraduate and postgraduate students as reported by Praveena and Thomas (2014).

Computer Playfulness (CP) is another motivational factor that could determine social media use by library personnel in universities. Computer playfulness is termed as library personnel's tendency and propensity to effectively interact freely, intensively, openly, and creatively with computers without bias (Jia and Jia, 2012). Computer playfulness could lead to interesting learning experience which could in turn influence library personnel's level of satisfaction when using such a system. By implication, applying and relating play when using a system could as well reduce

anxiety in an individual. Prior research has shown that Computer Playfulness significantly correlated and interrelated with information system use such as social media (Jia *et al*, 2007) and this could be applicable to the use of social media by library personnel in the university libraries. The rationale is that individuals who are more playful with information technologies in general tend to take too lightly the difficulties associated in using a new technology since they quite simply enjoy the process and do not perceive it as requiring more effort and strength.

Consequently, library personnel that seemingly use computers for fun are more likely to spend more time using the computers or computer related systems as compared to those who are not. This is because, they will perceive it as interesting and they will find it relatively and comparatively easy to handle. Hence, their perception on ease of use would be positive and as a result would increase their readiness and willingness to use the information system such as social media. Thus, the emergence of social media tools and the widespread use in society and by extension in library environment has prompted the urge for this research focusing on some factors influencing social media use by library personnel in universities.

Despite these assertions, it still remains unclear whether personal characteristics and motivational factors could affect the use of social media by library personnel. This study therefore, aimed at filling the knowledge gap by investigating the influence of personal characteristics and motivational factors on social media use by library personnel in universities in southwestern Nigeria.

1.2 Statement of the problem

Globally, the need to provide effective and efficient information service delivery has facilitated the adoption and use of Information and Communication Technology (ICT) in libraries. This is because service delivery in university libraries is essential in order to effectively meet the information needs of users. The ways library users seek for information from information sources have basically changed due to the advancement of ICT, hence the personnel have to move with the new trend in order to still remain relevant. Part of this development is the adoption and use of social media tools for the delivery of different services in the library. However, extant studies reviewed and personal observation revealed that most university libraries and the library personnel are yet to extensively embrace the use of social media for service delivery despite the presence of ICTs in the library environment. More so, service

delivery in university libraries seems to be dwindling and if not taken very seriously could adversely affect service delivery.

Preliminary investigation showed that there is a low use of social media by library personnel in university libraries in Nigeria and those who have adopted social media tools seem not to be using them effectively and extensively as expected for service delivery. From observation also, there appears to be little or no appreciation on the part of the library personnel on how social media could be leveraged to enhance the provision of library services in university libraries in southwestern Nigeria. A number of factors such as trust, security and social media policy have been reported to have played a critical role in the adoption and use of social media for service delivery in libraries without recourse to personal characteristics and motivational factors.

Personal characteristics are germane factors that could affect the use of social media by library personnel. For instance, studies have established that young individuals are more prone to the adoption and use of technology as compared to their older counterparts. This is because the older staff members have been observed to show reluctance and negative attitude towards the adoption of new technologies in service delivery. Studies have established younger adults have a lesser level of computer anxiety than their older counterparts which could be associated with the reluctance to learn new Internet skills and competences. Young adults are also vibrant digital scholars and would display more interest in the use of any new information system while the older personnel might not have interest in using new information system with a negative mindset that the new information system would replace their routine work activities.

More so, gender, marital status, level of education and computer use experience could play important roles in the use of social media. Gender for instance, could predict use behaviour in the realm of information system research. It is reported in the literature that male library personnel are adjudged to be more strategically placed in accepting and using information technology better than their female counterparts. Male library personnel display willingness to accept the use of new technologies than their female counterparts. Marital status also could constitute a problem in the sense that married people are more likely to spend less time on social media, especially outside the office hours, due to their involvement in family matters. This has a way of affecting their skills in the mastery of social media technologies for service delivery. Apart from marital status, level of education could also influence the

use of social media for service delivery. Studies have shown that educational level has been given little or no attention in information system use. It has been reported that higher educational level would lead to easy use of any new information system, thus, reducing apprehension, fear and improving the overall attitude and intention to use new technology. Previous studies also reported that the higher the educational level, the higher the probability of using any new information system for service delivery irrespective of the challenges and consequences that could be associated with it.

Computer use experience could also be responsible for low use of social media. Library personnel who had gained knowledge of the use of computer would have positive intention to use any new information technology such as social media. Studies have established that personnel who had had knowledge of computer would be less susceptible and vulnerable to computer anxiety and apprehension.

On the other hand, lack of information on the relevant tools that could enhance service delivery could hinder the use of social media. Motivational factors such as Perceived Usefulness (relevance), Perceived Ease of Use (ease), Perceived Enjoyment (pleasure) and Computer Playfulness (unconscious interaction) could drive and stimulate library personnel to use social media. For instance, many do not perceive social media as easy to use or even useful as compared with the traditional methods of delivering services. It is also observed that many others do not also perceive social media to be enjoyable for library services. Inadequate intrinsic and extrinsic motivation could as well explain the low level of social media use by library personnel. Therefore, it is against this backdrop that this study investigated the effect of personal characteristics and motivational factors on the use of social media for service delivery by library personnel in universities in southwestern Nigeria.

1.3 Objectives of the study

The main objective of the study was to investigate the influence of personal characteristics and motivational factors on social media use for service delivery by library personnel in universities in southwestern Nigeria. Specifically, the study sought to:

- i. ascertain the types and frequency of use of social media for service delivery by library personnel in universities in southwestern Nigeria;
- ii. find out the purposes of social media use for service delivery by library personnel in universities in southwestern Nigeria;

- iii. identify the motivational factors of social media use by library personnel in universities in southwestern Nigeria;
- iv. examine the relationships between personal characteristics (age, gender, computer use experience, level of education and marital status) and social media use for service delivery by library personnel in universities in southwestern Nigeria;
- v. determine the relationships between motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) and social media use for service delivery by library personnel in universities in southwestern Nigeria;
- vi. ascertain the relationships between personal characteristics (age, gender, experience, level of education and marital status) and motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) on social media use by library personnel in universities in southwestern Nigeria;
- vii. find out the relationships among personal characteristics (age, gender, experience, level of education and marital status), motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) and social media use for service delivery by library personnel in universities southwestern Nigeria;
- viii. find out the joint influence of personal characteristics (age, gender, experience, level of education and marital status) and motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) on social media use for service delivery by library personnel in universities in southwestern Nigeria;
- ix. determine the relative influence of personal characteristics (age, gender, experience, level of education and marital status) and motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) on social media use by library personnel in universities in southwestern Nigeria; and
- x. identify the challenges to the use of social media for service delivery by library personnel in universities in southwestern Nigeria.

1.4 Research questions

The study provided answers to the following research questions:

1. What are the types and frequency of use of social media tools by library personnel in universities in southwestern Nigeria?
2. For what purposes do library personnel use social media in universities in southwestern Nigeria?
3. What are the motivational factors of social media use by library personnel in universities in southwestern Nigeria?
4. What is the relative influence of personal characteristics (age, gender, experience, level of education and marital status) and motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) on social media use by library personnel in universities in southwestern Nigeria?
5. What are the challenges to the use of social media for service delivery by library personnel in universities in southwestern Nigeria?

1.5 Hypotheses

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

1. There is no significant relationship between personal characteristics (age, gender, experience, level of education and marital status) and social media use for service delivery by library personnel in universities in southwestern Nigeria.
2. There is no significant relationship between motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) and social media use for service delivery by library personnel in universities in southwestern Nigeria.
3. There are no significant relationships between personal characteristics (age, gender, experience, level of education and marital status) and motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) on social media use for service delivery by library personnel in universities in southwestern Nigeria.
4. There are no significant multiple relationships among personal characteristics (age, gender, experience, level of education and marital status), motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment

and Computer Playfulness) and social media use for service delivery by library personnel in universities in southwestern Nigeria.

5. Personal characteristics (age, gender, level of education, computer use experience and marital status) and motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) will not jointly influence the use of social media by library personnel in universities in southwestern Nigeria.

1.6 Scope of the study

The study focused on personal characteristics and motivational factors affecting social media use for service delivery by library personnel in universities in Southwestern Nigeria. The study also focused on the two independent variables - personal characteristics (age, gender, computer use experience, level of education and marital status) and motivational factors (Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Perceived Enjoyment (PE) and Computer Playfulness (CP) as factors that are likely to influence social media use by library personnel in 42 universities in southwestern Nigeria. The study examined the use of various social media tools such as Facebook, LinkedIn, twitter, YouTube, among others in service delivery and also the point of access in exploring those tools for service delivery. The study additionally investigated social media use (types, purpose and frequency of use of social media) for library service delivery by library personnel in universities in Southwestern Nigeria. For the purpose of this study, the library services are basically the public service delivery (readers' service delivery) including all other services being rendered in the library.

The respondents included professional librarians (holders of master/doctoral degrees) and library officers (with Diploma/Bachelor of Library and Information Studies) and other cognate and related degree holders. In terms of geographical scope, the study covered all universities (federal, state and private) in southwestern Nigeria.

1.7 Significance of the study

The outcome of the study would be relevant to the following stakeholders: library personnel, library users, library management, university management and the government. The outcome of this study would create awareness on the core benefits of social media particularly to library users and the library personnel thus stressing the integration and use of social media for service delivery and communication. The study would serve as an avenue to promote the use of social media tools by library personnel

in the library environment for effective service delivery. The results of the study would also help in providing a better understanding on how social media tools could be used for knowledge and information sharing by library personnel among peers, the extent of use, and for what purpose they are using social media in universities in Nigeria.

The findings of the study is expected to encourage more library personnel to integrate social media in their various libraries for service delivery by proffering diverse ways through which university libraries and their personnel can use social media to effectively render library service. The study would also sensitise library personnel on how to be in a vantage point of packaging the available information resources and service in order to be in tune with the current trend of information service provision and use. The application of the outcome of the findings would enable library personnel and their management team to take decisive measures in terms of tactical approach and policy development to enable library personnel to use social media tools in achieving high quality and effective service delivery.

Furthermore, the outcome of the study would provide users with information on the need to make use of social media tools for the enhancement of their information needs either for academic, research or social purposes. The findings would as well sensitise users on the Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and playfulness of social media which will in turn enhance their academic, research, social and political endeavours. The findings of the study would guide libraries and their management team on the need to subscribe to technological means of rendering library service through the use of various media such as social networking (Facebook, WhatsApp, Twitter and host of others).

The findings of this study would also guide libraries and their management on the need for training and retraining of the library personnel in acquiring necessary skills required to use social media tools. It would provide the institutions' management with useful information needed to facilitate an enabling environment that supports social media use for efficient and effective service delivery. Moreover, the findings would guide the government to expend more on library resources, information and communication technologies and other computer-related resources in the library system for the enhancement of their job performance. The study would also contribute to knowledge in the area of social media use and application in libraries, as well as competences and skill development of library personnel in the university libraries particularly in southwestern Nigeria.

1.8 Operational definition of terms

Within the context of this study, the following terms were operationally defined:

Computer Playfulness: This refers to the extent to which library personnel interact freely, openly, and creatively with computers and other related telecommunication devices as well find the interaction very enjoyable.

Computer use experience: This is the library personnel's involvement in the use of computer over a period of time.

Extrinsic motivation: This is the performance of an activity of library personnel in order to attain and achieve some separable outcomes, external rewards and goals. Example of extrinsic motivation is Perceived Usefulness.

Intrinsic motivation: This refers to the performance of an activity of the library personnel because of innate and inherent satisfaction and pleasure being derived from the job rather than the external reward and some separable outcomes. Examples of intrinsic motivations are: Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness.

Library personnel: Library personnel in this context refer to librarians and library officers with Diploma and Bachelor degree in Library and Information Studies, as well as those with cognate and related degrees (Bachelor degrees) and Master(s)/Doctoral degrees respectively.

Motivational Factors: These are both intrinsic and extrinsic factors that encourage, drive and direct library personnel to use social media for service delivery in the library and university environment such as perceived usefulness, perceived ease of use, perceived enjoyment and computer playfulness.

Perceived Ease of Use: It refers to the degree to which library personnel believe that using social media technology would be free of effort and easy to understand.

Perceived Enjoyment: It refers to the extent to which the library personnel believe that using social media in library environment is enjoyable in its own right, aside from any performance consequences resulting from social media use.

Perceived Usefulness: It is the degree to which library personnel believe that using social media technology will help them to attain gains and enhance their job performance and to meet related goal-driven needs.

Personal characteristics: These are the antecedents that make up the library personnel's personality to get along in a new situation particularly in the use of social

media such as age, gender, level of education, computer use experience and marital status.

Service delivery: This refers to intangible and unrestrained service such as reference/referral service (Selective Dissemination of Information, document delivery) compilation of bibliographies, literature search, cataloguing and classification, that university library personnel in Southwestern Nigeria render to their users to meet their information needs.

Social Media: This refers to a group of Internet-based applications which allow the creation and exchange of user generated content such as Facebook, Twitter, YouTube, Blogs Wikis, and WhatsApp among others used for communication, creating, sharing information, knowledge and ideas in an online community.

Social media use: It is the application of social media by library personnel for delivering of information to the users cutting across types of social media, purposes and frequency of use in the universities in Southwestern Nigeria.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the review of relevant literature in order to have clear understanding of the topic as well as the performance in the subject area. The literature review for the study is presented under the following sub-headings:

2.2. Social media use by library personnel

2.3. Service delivery in university libraries

2.4. Motivational factors of library personnel for social media use

2.5. Personal characteristics of library personnel and use of social media for service delivery

2.6. Motivational factors of library personnel and use of social media for service delivery

2.7. Personal characteristics and motivational factors of library personnel and social media use for service delivery

2.8. Challenges to social media use by library personnel for service delivery

2.9. Theoretical framework

2.10. Conceptual model

2.11. Appraisal of the literature reviewed

2.2 Social media use by library personnel

The basis of information delivery lies on effective and efficient communication between the library personnel and the users which could either be one on one or through the use of other media of communication and interaction. The emergence and advancement of ICTs have revolutionised the activities of the library. It has also brought about transformation in academic libraries' operations and the way services are being rendered to users. This development, therefore, facilitates and expedites library personnel's relevance to be able to compete globally in the current information age. As a result, library personnel are expected to acquire new skills and knowledge on the application and use of technologies to enable them to provide round the clock

library services to their diverse users. One of these trends is the use of social media tools in the dissemination and marketing of information products and services to users.

Social media is a revolutionary and innovative trend that emerged from the concepts of Web 2.0 platforms and user generated content (Kaplan and Haenlein, 2010). Owing to the fast growing nature and diversity in delivery tools, there is lack of agreement on the definition of social media. Nevertheless, social media has been defined in several ways by different authors. In general, social media can be seen as online tools for the interaction, communication, collaboration, and creating and sharing of various types of digital contents (Bryer and Zavattaro, 2011). Kim *et al* (2010) described social media as the online applications designed to facilitate and accelerate information sharing, knowledge distribution and opinion exchanges. The authors further stated that social media could also be regarded as online services or tools that focus on facilitating the building of social network among people who share interest, activities and background on real life connections. Social media tools also allow users to share information within a selected group or subscribe information content as both information providers and consumers.

Social media could be defined as “online resources that individuals use to share content, video, photos, images, text, ideas, insight, humor, opinion, gossip, news among others” (Drury, 2008: 1). Junco *et al* (2010) also defined social media as the concept derived from social software movement with mirage of collection of Internet websites, service, and practices that support collaboration, community building, participation and sharing. Okonedo *et al* (2013) on the other hand described social media as a collection of web-based technologies like blogs, wikis, audio-podcasting, Really Simple Syndication (RSS) feeds, social bookmarking and tagging, social networking, media sharing among others. According to Dykeman (2008), social media tools involve and encompass the means through which any person or persons could publish digital creative content, provide and obtain real-time feedback through online discussions, commentaries and evaluations. They as well enable individuals to make changes or corrections to the original content.

Marchese (2007) distinguished social media from traditional media by stating that social media is not the media itself, but the system of discovery, distribution, consumption and conversation surrounding the media. Safko and Brake (2009) further considered social media as activities, practices, and behaviours among communities of

people who gather to share information, knowledge, and opinions online using conversational media.

Lai and Turban (2008) described social media as online tools for creating, sharing opinions, experiences, photos, videos, music, and perceptions with one another. Al-Barkri and Kisswani (2014) further opined that social media is a means of interactions which creates, shares, and/or exchanges information and ideas in virtual communities and networks. They additionally reiterated that social media tools provide the gateway for organisations, users, and all other stakeholders to access data applications and all necessary information they need. Similarly, Jain (2013) argued that social media is a group of web-based and mobile applications that allow users to share and create knowledge in a real time social interaction and communication.

According to Bradley (2012), social media denotes the use of web-based and mobile technologies to turn communication into interactive dialogue and discourse. Social media deserve special attention in the information society particularly in the field of library and information science because of its global occurrence and phenomenon. Social media tools have varieties of users' driven-market channels and have been categorised by some authors. For instance, Chan-Olmsted, *et al* (2013) classified social media into blogs and micro-blogging (Twitter, Skype); social networking sites (Facebook, Myspace, LinkedIn, Friendster, Google+); virtual communities (YouTube, Flickr); Instant messaging (WhatsApp, Black Berry Messenger) Really Simple Syndication (RSS), among others with lots of benefits and advantages to library personnel and users. These tools as suggested by Peslak *et al* (2011) offer a variety of advantages as an alternative method of communication, interaction, collaboration and service delivery in libraries. Such advantages include among others marketing of library information products and service, to enhance library service, for advertisement, information and knowledge sharing.

As outlined by McLoughlin and Benn (2013); Akporhonor and Olise (2015), some of the benefits of using and integrating social media into library services include increased engagement with users, effective service delivery and transition from one-directional communication to more collaborative user involvement and participation. It also helps in efficient and effective marketing of information products and services, building brand loyalty, saving time and cost, increasing library users among others. Taylor and Francis Group (2014) also listed some of the benefits of social media tools as: low costs of using social media; little training is often times required; promotion of

library services and disseminating news swiftly, delivering information more directly to library users; increase in the engagement and interactions with library users; for gathering feedback to enhance users' services; promotion of library holdings and to increase usage of content; enhancement of communication both within the library and with other colleagues; for outreach activities through onward sharing, which could be beyond the institution.

Apart from the benefits that could be derived from social media tools, they also possess certain attributes and functionalities that differentiate them from the traditional and conventional information communication. Kietzman, *et al* (2011) on one hand identified seven functions of social media to include identity, conversation, sharing, presence, relationship, reputation and groups. While social media tools also cover different online tools with various attributes, communication formats and sociability functions, with certain characteristics that all social media applications fundamentally and basically share. However, Mayfield (2008) on the other hand identified five specific characteristics that underlie the operations of all social media as: participation, conversation, connectedness, community and commonality and openness.

Participation according to the author is one of the most distinctive characteristics of social media which gives individuals who are interested an opportunity to engage in an effective interaction. Chan-Olmsted *et al* (2013) defined participation as the extent to which senders and receivers are actively and dynamically engaged in the interaction as opposed to where users are mere observers. Conversation however, is the extent to which social media tools allow for a two-way conversations rather than one-directional transmissions or distributions of information to the audience. While participation is behaviour/action-oriented interactivity, conversation is embedded in communicational aspect of interactivity.

Conversationality is the epitome of interactivity, and thus an important virtue of social media. For example, while social media networking site (SNS) like Facebook offers numerous communication components for conversations between users, micro-blogging tools such as Twitter, content communities like YouTube have comparatively more limited conversation or two-way communication because of the core utilities and structures inherent in these social media tools (Pilch, 2009). Additionally, connectedness is the ability of social media to provide web links to other sites, resources, and people and as well allow media users to move from one point to the

other in cyberspace (Mayfield, 2008). Lee *et al* (2001) posited that connectedness is positively related to closeness and identification with others.

By implication, universities library personnel with high connectedness would feel close and friendly with their colleagues and users, identify with them, and engage with social groups whereas those with low connectedness often experience psychological distant from others. They see themselves as outsiders, and are not adequate and tolerable for social situations as well not being able to know their users' information needs. What makes social media tools unique according to Boyd and Ellison (2007) is the ability of social media tools to be able to connect individuals with one another including the public display and articulation of one's connections which often result in new connections between and among individuals.

Another characteristic of social media is community and commonality: social media tools give room for individuals and organisations to identify and communicate with people whom they want to be associated with. That is, it offers a mechanism for university library personnel and their users to form communities quickly and to develop relationships effectively among themselves and with other colleagues who share some commonality with them. In other words, social media provides an effective means of developing communities, with core function of linking and connecting library personnel and users with others that share a certain commonality, as determined by their temporal needs and interests at the time of interaction.

In the same vein, one main feature of social media is its openness to user feedback and participation with little barriers to accessing information or making comments. Social media tools enhance and improve openness as a result of easy-to-use mechanisms of the tools for creating and sharing contents. Rogers (2009) suggested openness to involve three types of behaviour which include: requesting for information, receiving the information requested for, and acting on information received. Therefore, the essence of openness could be either through technological or cultural means, which is perceived by the ease of giving and receiving contents, information, and comments by users.

Furthermore, it is pertinent to note that one of the salient features of social media tools is the spread of use behaviour. To better understand the spread and rate of use, a fundamental question is how to envisage (future) use possibilities for academic library personnel in Nigeria who are yet to use the tools. Nevertheless, a number of studies have examined the use of social media applications in academic libraries

worldwide. For instance, earlier study conducted by Xu *et al* (2009) on 81 academic library websites and investigated on the application of Web 2.0 tools in university libraries in India, and how these tools could be used to enhance library service. They found that social media tools can enable collaboration, improve section management through instant communication, and also improve accessibility and integration of cataloguing resources for cataloguing departments. Jacobson (2011) affirmed that the tools can be used for announcements and marketing of library information products and service. Draper and Turnage (2008) also indicated that blogs are mostly used by library staff for promoting library service effectively.

In addition, the proliferation of social media tools makes social media interaction inevitable among users by way of sharing and commenting on other users' submission. As a result of the spread, they have grown significantly to support users to gain access to valuable knowledge and information through different resources not only for professionals, organisations but for anyone who does not have any web design skills. In recent past, social media was seen by many as having little relevance for use in a professional context especially by library personnel but in recent times, there has been a radical change in attitudes of libraries worldwide. Social media is now widely used by library personnel in developed countries to fulfill a variety of objectives and has since evolved to become web-based social networking tools; but still at infant stage in the developing countries as observed.

The rapid penetration is being driven by the rise in affordable facilities and broadband connectivity. More people are now connected to the Internet through their personal computers and cell phones to interact, communicate and share information with one another. Consequent upon the evolvement of social media tools into a global phenomenon, they have progressively and gradually been used by most professionals in other fields hence academic library personnel must not be left out in the terrain. It is evident from the literature that social media tools have the potentials to facilitate and expedite effective service delivery, foster professional development and facilitate much closer relationship between the library personnel and their users. The use of social media tools in libraries as reiterated by McLoughlin and Benn (2013) could offer cost effective marketing opportunities. The main opportunities associated with the libraries already using social media tools could be seen to be related to their low cost, ability to take library service to users in their preferred spaces and the opportunity

to build a sense of community between the library and the users (Luo, *et al*, 2013; Mabwezara, 2014).

Therefore, it is important for university libraries in Nigeria to do more of integration and use of social media tools in service delivery in order to keep up with users' demands and expectations. Prior to the advent of Information and Communication Technology (ICT), university libraries were place based service providers. At these periods, users visited the library to consult the physical collections of print information materials, CDs among others.

However, with the rapid development of ICT in the recent past, libraries globally have been transformed completely in the manner in which they render service to users. These days, information products and service are being rendered to users without being physically present. There is also a widespread use of one or two social media tools within libraries with intent of reducing barriers to communication among the library personnel and the users (Tripathi and Kumar, 2010; Chu and Du, 2012; Hosny and Fatima, 2012).

Social media tools could be regarded as relevant tools for library personnel in information seeking, retrieving and sharing through provision of speedy and quick information to the community of users. The tools have also helped academic library personnel to share information with users in the easiest way. With the introduction of this domain, the credibility and value of library personnel get a boost. As summarised by Canty (2012), social media can be used in a variety of communication methods such as in transmitting and conveying messages, response to enquiries and then conversation between library personnel and users, regardless of the approach taken. Social media would provide library personnel ways to reach out to their users who may not have considered the library as a resource for their information needs. For university libraries in Nigeria to have their activities attractive to users, the use of social media becomes a necessity and essential.

Generally, it has been observed that the use of social media by library personnel still remains ad hoc and somewhat experimental particularly in Nigeria but the uptake of the tool is increasing and they will likely play vital roles in library services provision. Numerous studies have attempted to investigate and analyse the purpose and importance of social media use in the libraries (Shoniwa and Hall, 2007; Linh, 2008; Kim and Abbas, 2010; Loudon and Hall, 2010; Mahmood and Richardson, 2011; Stone, 2014; Abdullah *et al*, 2015; Cavanagh, 2015). The studies revealed that

one of the primary uses of social media in the libraries is to advertise and market the library to users and potential users. The outcome of the studies also showed that social media tools are ideal sources for dissemination of information and news to users.

Landis (2010) reiterated that social media tool such as Facebook could be used to attain and accomplish libraries' activities and mandates such as provision of reference services, outreach service to users, library instruction, and research. Similarly, Devoe (2009); Forrestal (2010); Cuddy and Morton-Owens (2010) reported that Twitter is a real time communication platform that allows users to send and receive quick and short messages. Ayu and Abrizah (2011) investigated the use and application of Facebook among Malaysian academic libraries in rendering service to users and reported that most academic libraries use Facebook for marketing and creating awareness on library services to their users. Aharony (2012) and Chiu and Lin (2012) also noted that social media tools can allow library personnel to connect with the places where users are, providing library events and reference services and sharing information related to users from various sources, including marketing of library services to users.

Additionally, Taylor and Francis Group (2014) opined that social media could be used in the library for seeking opinion on the library and its services basically for self-evaluation purposes; encourage debate and to instigate an opportunity to respond to library user feedback; reach library users in their homes or 'virtual spaces' . this is because, today's modern online library is no longer solely relying on its physical space as an access point to reach their users; publicise events, services, news and library presence; encourage collaboration, for example through collection development and building repositories of collaborative content specific to certain user groups; increase usage of library collections by promoting new and existing content; connect with other librarians and keep abreast of new developments and to build a sense of community with both users and also with other institutions at large.

There have been a number of empirical studies on the importance and usefulness of social media in university libraries. For instance, a study conducted by Linh (2008) showed that at least two-thirds of Australian university libraries deployed one or more social media technologies for services. The survey reported that among social media technologies used by Australian university libraries, Really Simple Syndication (RSS) was the most widely applied technology while instant messaging was the least used technology. Xu (2007) surveyed 82 academic libraries of New York

State and Long Island in the USA. The researcher found that blogs, Instant Messaging and Really Simple Syndication were the main social media applications which have been used extensively compared to other tools.

Furthermore, Xia (2009) investigated library usage of Facebook as a means of marketing library services in Indiana, USA. The researcher found out that libraries are able to connect with library users by constantly updating the users and the community on new trends and events happening in the library including new collections. In addition, Tyagi (2012) conducted a study on social media use among librarians and library professionals in Western Uttar Pradesh, Northern India and reported that librarians' skills in interest usage actually influenced the use of social media.

Considering the benefits of social media adoption in university libraries, Khan and Bhatti (2012) however, conducted a study on the application of social media tools in marketing of library and information service in Pakistan. They affirmed that social media could provide more opportunities for library professionals to be able to reach their user community, target specific audience and give them the opportunity to interact with the library personnel.

On the other hand, Shihab (2015) carried out a study on social media awareness and use among LIS professionals in India. The researcher found out that majority of LIS professionals were aware of social media tools but the tools were being mainly used for personal purposes, only few were reported to have been using social media tools for their professional development and promotion of their libraries. The researcher further opined that developing countries are prominent users of social media but are still far behind in using social media tools for the development of their libraries and profession as well as for effective job performance.

More so, Amuda and Adeyinka (2017) carried out a study on the application of social media for innovative library services in Southwestern Nigerian universities. This study revealed that social media such as Facebook, twitter, Blog, YouTube, LinkedIn, Delicious, MySpace and Flickr are being used for library services delivery. In addition, the researchers further reported that the selected libraries are using social media majorly to communicate with their users, provide reference services, and disseminate information as well as news on library services, Facebook being the most frequently used. Muhammad and Khalid (2012) investigated the changing role of librarians in the digital world with the adoption of web 2.0 technologies by Pakistani librarians; the

study showed that social media have had significant impacts for service delivery on university libraries in the developed countries.

Similarly, Kwanya *et al* (2012) stated that social media is being used in Kenya to enhance interactivity between users and library personnel in the process facilitating continuous communication and feedback. Priolkar and Kumbhar (2015) also studied the use of social media sites by library professionals in India. The researchers distributed questionnaire to 25 library professionals in 10 government institutions in India. They reported that library professionals primarily used Facebook in disseminating information to users. Adewojo and Adebara (2016) carried out an empirical study on 60 library personnel in Yaba College of Technology, Lagos on social media usage by staff in academic libraries. It was reported that social media tools are being used by the library personnel in delivering services to their users. In accessing the extent of usage, it was revealed that the library personnel are currently using WhatsApp and Facebook tools only in rendering their services.

A study was conducted by Chu and Du (2012) on factors that influence the application of social networking sites (SNS) in 140 Asian, North American and European university libraries. Their study revealed that Twitter and Facebook were the most commonly used tools and library staff had positive attitude towards the use and application of these tools. In another survey conducted by Tripathi and Kumar (2010) in Indian academic libraries on the adoption and use of social media, it was shown that most academic libraries were experiencing larger benefits of using social media tools whilst just a few had not used these tools as a result might not be able to ascertain the relevance social media presence in library environment. The study further revealed that Really Simple Syndication (RSS), Instant Messaging (IM) and Blogs were the most popular social media tools amongst librarians. The study concluded that librarians should use social media tools to enhance their services in an innovative manner and address the information requirements of the techno-savvy users.

Gerolimos and Konsta (2011) conducted a study on the use of social media tools by sending an online questionnaire to 69 academic librarians in North America, 32 academic librarians in Asia and 82 academic librarians in Europe. The study concentrated on Blogs, Tags, RSS, IM, YouTube, Facebook and Twitter. The results of the study showed that Facebook and Twitter were the most used tools amongst the European academic librarians while Asian librarians had largely implemented Tags. They further reported that librarians in Europe and Asia had lower levels of social

media usage compared to the academic librarians in North America who had two university libraries using a majority of social media tools. Correspondingly, research conducted by Kim and Abbas (2010) provided a clear comparison on the use of social media tools between the librarians and users. Questionnaire was sent to 184 academic library users from two different universities in the Midwest of America. The findings revealed that 73% of the surveyed academic libraries used RSS. Koshy (2013) conducted a study on factors that affect the use of Facebook and twitter as marketing tools in the UAE. The researcher reported that Facebook was the most popularly used social media followed by Twitter in Arab emirates.

Olajide and Alao (2016) found that the use of social media has not been fully deployed by academic librarians. The findings contradicts the findings by Ezeani and Igwesi (2002) that majority of academic libraries made use of social media tools for services delivery. Smeaton and Davis (2014) carried out a study on the use of social media to create participatory library services in Australia. The study showed that although most of the libraries made use of social media tools such as Blogs, Facebook and Twitter, but the tools had not met the needs of users and the goals of the librarians.

Social media tools are regarded as important tools in learning, and service delivery. The vast popularity of social media has led to increase of studies that examined the role social media plays in higher education (Balakrishnan and Gan, 2016; Manca and Ranieri, 2016). Findings of previous studies such as Schlenkrich and Sewry (2012); Balakrishnan and Gan (2016); Sobaih *et al* (2016) revealed that social media has an abundant potential for enhancing learning experience through active interaction, knowledge sharing and collaboration.

Conversely, Collins and Quan-Haase (2012) carried out a study over a period of one year to examine the adoption and use patterns of social media tools by academic libraries in Canada. The study examined 21 academic libraries that are members of the Ontario Council of the University Libraries (OCUL). They basically focused on Facebook, Twitter, YouTube and Flickr as these were the most popular social media tools in Canada. They noted that the use of social media tools were higher in the Southwestern Ontario as against the Eastern and Northern Ontario libraries where adoption and use were low. The main reasons attributed for the limited use include absence of training and funding, lack of interest or skills among the library staff and poor technological infrastructure. The study however revealed that Twitter was the most significantly used social media tool among the academic libraries.

Several empirical studies have also been carried out on the use of social media among library personnel around the world. Studies such as Charnigo and Barnett-Ellis (2007); Harinarayana and Raju (2010); Ezeani and Igwesi (2012) among others noted that social media could be effectively used in the library for provision of quick services to the users. Charnigo and Barnett-Ellis (2007) particularly found that some of the librarians held the opinion that Facebook was a feasible and practical way to deliver library services and communicate with users effectively. For instance, Chu, *et al* (2010) citing Graham *et al* (2009) reaffirmed that the Kimbel Library of the Coastal Carolina University has used Facebook for providing reference assistance and library tours, and promoting their services.

The degree of social media use and implementation varied greatly from one country to another. LeBlanc and Kim (2014) suggested the reasons could be due to cultural differences, technological and financial barriers. For instance, Tripathi and Kumar (2010) conducted a study on 277 universities from the U.K., U.S., Canada and Australia which they randomly selected. Their study discovered that Instant Messaging (IM) tools were the most used tools across the board at 44%, followed meticulously by blogs at 33% and Really Simple Syndication (RSS) at 31%. Mahmood and Richardson (2011) conducted a survey of 100 (ACRL) Association of College and Research Libraries. Their findings specified that Really Simple Syndication (RSS), blogs, social networking, wikis and Instant Messaging (IM) tools were used by over 80% of the libraries.

Han and Liu (2010) stated that in the U.S. and the U.K., academic libraries were the early adopters pioneering and introducing the use of social media technologies for service delivery, while academic libraries in other countries were slower and dawdling in the use process. Han and Liu (2010) conducted a study on thirty-eight Chinese university libraries in 2009. They noted that 80% of them had implemented and employed at least one social media tool to support library service. The authors stated that the most popular tools employed among the Chinese universities were RSS at 55%, blogs at 13% and IM at 11%). Coelho (2011) also conducted a study in 2008, 2009 and 2010 on Portugal's fifteen public university libraries comparing the implementation of social media tools among them. The results indicated that 59% of the libraries were not using any of these tools in 2008. By 2009, only 11% were not using any of the tools either and by 2010 all of the libraries had started using at least one social media tool.

Thus, among the libraries, the most popular tool was RSS in 2008 with little usage of the other tools. By 2010, RSS was still first, multimedia/ media sharing sites (YouTube, Flickr) were second, social networks and blogs/microblogs (Twitter) followed closely. It was stated that most libraries and information centres in America were at the time of the study using social media tools to promote library services to their library community. Social Media tools like Twitter, Blogs, Flickr, Podcasts, online videos were being used, but Facebook (71.4%) was the most popular (Rogers, 2009).

In addition, at South Carolina State Library, Facebook, Twitter, Blogging, YouTube, Flickr, Google Docs, Wikis were all used; the most common as at then was Facebook (88.8%) and Twitter (46.8%) (MacManus, 2012). According to American Library Association report (2012), social networking is used to publicise library events such as gaming nights; to alert users to additions to collections; to provide links to articles, videos, or web content that might prove relevant or helpful to users; and to provide a community information.

Social Media tools also play important role in fostering relationships with the community by allowing users to ask questions or provide feedback about library services. In Pakistan, Khan and Bhatti (2012) investigated on the librarians and LIS (Library and Information Science) school academicians' attitudes towards the usefulness and relevance of social media in marketing of library information products and service. The study suggested that social media was integral to marketing library services and products among online users; the tools could capture potential users of library and offer various benefits to libraries and user communities. The study recommended that online news groups/forums, video sharing (YouTube), social networking (Facebook, Myspace), Wikis, professional networking and Blogging could also be good avenues for marketing libraries' different services. These tools could be used for announcements and service alerts, provision of quick updates to online users as well as to publish library news and press releases among online users.

Luo *et al* (2013) carried out a study in China using a case study of an online video marketing project on academic libraries. The video series was posted to Youku, a popular video sharing site in China, which received about 160,000 visits within 20 days, averaging 8,000 visits per day. A majority of 97 % students acknowledged that the video format marketing was a good method to engage library users, instruct and pass information by library personnel. In Germany, Mundt (2013) carried out a survey

study among German public and academic libraries to evaluate the marketing success of libraries' social media presences. The study established that social media was used to market library information materials and services.

Nfila (2010) conducted a study based on how academic libraries support e-learning at Bostwana University Libraries. It revealed that University of Bostwana would take advantage of social media for lectures, tutorials and for posting course materials. Mabweazara (2014) indicated that University of South Africa is already using social media tools for promoting and extending library and information services to open and distance library users. Hough and Neuland (2012) opined that 80% of the programmes done in University of South Africa were delivered through the use of social media. Van Royen (2012) investigated the use of Instant Messaging for the second year students of accounting course at the University of South Africa. The study revealed that students preferred WhatsApp, Blackberry messenger to interact with the library personnel because they were very much familiar with the applications.

In Hong Kong, Chu and Du (2013) investigated the use of social media tools in academic libraries and examined the extent of their use and library staff's perceptions on their usefulness and challenges. Like other empirical studies, Facebook and Twitter were considered the most successful tools. Most library staff had positive opinions on the usefulness of the tools, but hesitancy, indecision and reluctances among library staff and limited participation of users were barriers to usage. In Nigeria, Baro *et al* (2013) surveyed 321 librarians working in Nigerian university libraries in 2012. Their survey investigated both the librarians' awareness of the different social media tools as well as the use of those tools in the library.

The findings showed that Nigerian librarians were aware of many of the tools: 89% knew about social networking and microblogging, 77% knew about IM, 67% knew about media sharing sites, 61% knew about blogs, 59% knew about wikis, 45% knew about social bookmarking and 42% knew about RSS. The researchers identified several barriers that impeded Nigerian libraries' use of these tools. One of the largest barriers was lack of modern computers with Internet access as well as the lack of stable and reliable Internet access across the country. Another large barrier was lack of skills on the part of the librarians in using these tools and lack of training available to librarians that would enable them to gain these skills.

In Bangladesh, Islam and Habiba (2015) investigated the use of social media in marketing of library and information service. In their study, public universities (17),

private universities (24) and special (5) libraries in Bangladesh were selected as research samples. The findings showed that most of the libraries use Facebook and LinkedIn for marketing of library and information service, sharing library news and events, video conferencing, advertisement, and research purpose. Okite-AAmughoro (2017) carried a study on the effectiveness of web 2.0 in marketing academic library service in Nigerian universities in South-south, Nigeria. The researcher reported that most academic libraries are using some of the social media tools such as YouTube, LinkedIn, Twitter, Facebook, Academia.edu, blogs, wikis, RSS Feeds among others in rendering effective library services. In Malaysia, Rasaan and Latip (2016) examined factors that influence the usage of social media in marketing and revealed that factors such as usefulness, ease of use and enjoyment influence the usage of social media by the Malaysian SMEs.

Furthermore, Ezeani and Igwesi (2012) examined how Nigerian libraries can leverage on social media skills to provide dynamic library services. They acknowledged that social media tools provide important opportunities to libraries for efficient and effective service delivery. Library personnel can use these tools for marketing library and information service as well reaching their users in a short time. The study identified the challenges faced by Nigerian libraries in the use of social Media tools as: lack of awareness of social media, lack of trained staff, lack of government intervention, bandwidth problem, technophobia, and unreliable power supply. On the contrary, it is observed that university librarians could be fully aware of the existence and Perceived Usefulness of social medial tools but might not have been using these tools for library activities and for service delivery.

Quadri and Idowu (2016) investigated social media use for information dissemination on 82 librarians in three selected federal university libraries in southwestern Nigeria. The study reported that there was a high level of awareness of social media tools like Facebook, Google+, Twitter, LinkedIn, and Academia.edu. However, the study also established that Facebook, Google+, and Twitter were the mostly used for disseminating information. More review of the literature showed that a wide range of social media tools had been implemented in academic libraries around the world. The tools being used were blogs/microblogs, instant messaging (IM), multimedia and media sharing sites, podcasts, really simple syndication/rich site summary (RSS), social bookmarking/tagging, social networking, video conferencing, and wikis (LeBlanc and Kim, 2014). Chua and Goh (2010) studied the widespread use

of social media tools applications in higher education and public libraries. They examined the web sites of 120 public and academic libraries in North America, Europe, and Asia. They reported that blogs and RSS were the most popular social media tools, followed by instant messaging (IM) while social networking sites, wiki, and tagging were less popular. The researchers further affirmed that North American libraries engaged more in web technology than European and Asian libraries.

Boateng and Liu (2014) studied the use of Web 2.0 technologies and trends at the top 100 US academic libraries as exemplified through their library web sites. They found that wikis was the least used Web 2.0 tool. The blog was the second most popular tool, after RSS and IM/Chat. Vodcasts and podcasts had, respectively 47% and 46% participation rates. Makori (2012) also carried out a study to examine the extent to which university libraries in Africa are using social media technologies for bridging the information gap. The researcher found that RSS feeds were being widely used as communication tool. The study highlighted how social media tools had helped university libraries to provide, expand, promote, support and post information service to their users. By implication, instead of users going to the library to check on the 'traditional' notice boards about what information the library wants to pass across to them, they would rather get the information through their Facebook pages and other social media tools thereby instantly and quickly reaching as many users as possible.

However, of all social media tools, some studies have indicated that Facebook has been the tools most libraries use (Coelho, 2011; Collins and Quan-Haase, 2012; Priolkar and Kumbhar, 2015). Facebook is particularly considered useful for selecting suitable methods to evaluate the marketing success of social media presence. Furthermore, Collins and Quan-Haase (2014) surveyed the ubiquity of social media through a longitudinal study of the adoption rates and usage patterns of Facebook, Twitter, and YouTube at academic libraries in the Canadian province of Ontario from April 2010 to April 2012.

The study indicated that there were inconsistencies in adoption rates across libraries, with two-thirds of Ontario academic libraries upholding at least one social media application during the period of the study. Beyond expectation, it was also discovered that Twitter and Facebook were correspondingly popular social media tools being used for service delivery. Despite its low adoption rate and usage, the study revealed that YouTube was extremely the most effective means of reaching users.

Most of the studies identified barriers to social media use as: lack of staff resources or competence, privacy issues and a general hesitation about the potential benefits of social media, and lack of social media policies. Less than one third of the libraries have developed and implemented social media policies. It is therefore, evident from the empirical review on the use of social media tools that the need for social media tools in the university libraries cannot be over emphasised and overlooked. These technologies as observed can increase the quality of operations in academic libraries. Particular attention has been paid to the ability of libraries to market service, remain relevant to users and achieve a new level of interaction between library personnel and either current or prospective users (Collins and Quan-Haase, 2012).

Social media applications are highly valued for their ability to connect libraries with users who may be unaware of their existence. Sadeh (2007) argued that implementing social media presence in libraries is fundamental to meet users' expectations. Ayiah and Kumah (2011) in their study on social networking tool for effective service delivery to clients by African libraries found that social media tools could offer libraries an opportunity to reach out to their clients without delay, allow academic libraries to link their clients to social networking sites from the library web page; allow users to participate in live discussions with peers and professionals on issues pertaining to various academic issues and as well allow libraries to advertise their programs and events. A combination of different applications of social media is helpful in reaching unique audiences at the same time. Libraries can as well promote their new acquisitions, events and resources using different tools. They can also get feedbacks from their users and ensure maximum engagement of their users in the promotion of the library's products and service (Sullivan, 2014).

Despite the numerous benefits that could be accrued in use of social media tools in university libraries, it is evident that the wider use of social media tools by academic libraries in service delivery is not without some challenges. For instance, Banda (2011) conducted a survey on the use of social media tools by librarians in three public universities namely the University of Zambia, Copper-belt University and the Mulungushi University. The study found that social media tools were hardly used for work related activities by librarians in Zambia. It was also revealed that in these universities, the Information Technology Department restricted them on particular Web-based facilities they could access. Other challenges reported to be encountered include bandwidth constraints, lack of time by librarians to use social media, lack of

knowledge among librarians on the use of social media and lack of interest of librarians still preferring to do things the traditional way.

A research study was carried out by Thanuskodi (2012) in India to explore the awareness and factors that affected the use of library 2.0 applications amongst Library and Information Science (LIS) professionals at the Animalia University. The instrument used was a questionnaire which was distributed to 60 respondents. The result of the research showed that 80% of the respondents indicated that factors such as training and awareness of social media tools affected the use of these applications. It has also been noted by some researchers that other major obstacles in the use of social media tools include inadequate ICT infrastructure such as low bandwidth, erratic power supply amongst others (Hosseini and Hashempour, 2012; Arif and Mahmood, 2012).

Akporhonour and Olise (2015) conducted a study on the librarians' use of social media for promoting library and information resources and services in university libraries in South-south, Nigeria. The study showed that social media tools such as blogs with a mean score of 3.23 and Facebook with a mean score of 3.01 were used by the respondents for promoting library resources and services. However, their findings corroborated the findings of Draper and Turnage (2008) that blogs were impressively used to promote library services. Conversely, the findings is at variance with that of Collins and Quan-Haase (2012) that twitter was the most commonly utilized social media tool by academic libraries to promote library services.

One notable factor that discouraged and disheartened most library personnel from using social media according to Blank and Reisdorf (2012) was the effect of age. The researchers stated that older people were less likely to use social media because of confidence and technical skills and may not be comfortable and at ease with operating the technology. Hosseini and Hashempour (2012) also found that lack of knowledge in the use of social media tools was a major impeding factor amongst librarians in Iran. Lack of training according to Owusu-Ansah *et al* (2015) was another barrier for the librarians' inability to use social media tools. It is important to note that the success of social media tools mainly depends on attitudes, participation and motivation of the users' community.

Furthermore, Taylor and Francis Group (2014) identified some challenges associated with the use of social media in libraries to include the following: the use of social media requires considerable time commitment from library staff; technological

expertise, low level of interest and skills with using social media; limited funds to support more advanced social media use; difficulty in maintaining library branding for content/resources made accessible via social media; potential copyright issues when using social media such as YouTube to build collections; Internet connectivity, technological infrastructure and government restrictions on the use of social media which may restrict access.

Linh (2008); Xu *et al* (2009); Kim and Abbas (2010) earlier suggested that some libraries take for granted the actual level of technological understanding and sophistication and erudition of their users and while adopting social media tools, they misjudge the technological prowess, dexterity and interest of their users and the impact their services provide. From the literature, it has been established that most academic libraries in USA, UK and Canada are already enjoying the relevance of social media tools in service delivery while it appears that the adoption and use by African academic libraries particularly Nigeria remains disappointing and unsatisfactory (Baro *et al*, 2013).

This could probably be due to some factors such as inadequate training opportunities, lack of knowledge, privacy and identity theft, security, slow speed of Internet and electricity failure (Thanuskodi, 2012). Social media has come to stay and it is relentlessly increasing and altering the way in which individuals acquire information, source for information including the format in which information is set up or stored for easy retrieval.

Therefore, in order to continue to remain relevant in the information age, university libraries need to take the bull by the horn by embracing the advantages and the opportunities available in using social media. By so doing, it would enable library personnel to keep in touch with users as well as to connect with new and potential users. Consequently, it is very pertinent for university libraries in Africa particularly in Nigeria as a matter of necessity to integrate one or two social media tools for quality service delivery. Social media could therefore, be said to possess the potentials to facilitate a much closer relationship, enhance efficient and effective communication among the library personnel and the users wherever they are and however they choose to access library services and resources.

2.2.1 Types of social media tools use in university libraries

There are different types of social media tools that could be applied and used in university libraries for service delivery. These tools have experienced massive

growth in the recent past. Each of the social media tool correspondingly has a presence on several other platforms. This is because there is no one social media tool that is stand-alone in providing information to everyone; relatively, they work through each other by transmitting information in a different form to target group of users. Just as social media tools have variety of definitions, the tools also have a diversity of applications with different core functions and structures and new ones emerge every time.

Social media tools allow individuals to stay connected with their social contacts irrespective of geographical location. These tools have been categorised by some authors such as Kaplan and Haenlein (2010); Chan-Olmsted *et al* (2013), Jain (2013) as social networking sites (Facebook, SixDegrees, Myspace, Bebo, Friendster, Google+ and LinkedIn), Blogs (Weblog) Microblogging (Twitter, Jaiku, Open diary, Technirati, and LiveJournal), content communities/multimedia applications (YouTube, Flickr), virtual social worlds (Second Life), collaborative projects (Wikipedia) Instant Messaging (WhatsApp, Skype), Really Simple Syndication (RSS), Podcast, virtual game world (World of Warcraft) among others.

However, the most popular social media tools that could be used in the library for effective service delivery as evident from literature include among others Facebook, LinkedIn, Twitter, Blogs/Weblog, YouTube, Flickr, Wikis, WhatsApp, Really Simple Syndication (RSS), and Podcast.

Facebook, a Social Networking Site or an Information Sharing Site is the largest social networking site in the world and one of the most widely and extensively used social media tools with about 2 billion users (Jacobson, 2011; McLellan, 2013). It has the largest audience particularly when conveying information to a large group of people and in building online communities (Baldvin Þór Bergsson, 2014; Palmer, 2014). Facebook was first founded by Mark Zuckerberg in 2004 while at Harvard University with the help of his friends - Andrew McCollum and Eduardo Saverin (Charlene, 2007; Zeevi, 2013). The launching of the website transformed and changed online social interaction globally.

Hence, Facebook actually started at Harvard University where the three friends were students with a community of 1200 Harvard University students. It was later extended to Stanford and Yale Universities which later became available on all Ivy League servers including all universities in North America. By October 2004, Zuckerberg had manpower and institutional backing to go global. In September 2006,

Facebook further expanded giving anyone with a valid e-mail address the opportunity to sign up.

However, Facebook remained a closed network until May 2007 when Zuckerberg declared that Facebook was going to be a social operating system for the Internet. During that time, Facebook platform was meant for Facebook alone but at present users could incorporate all their activities into their single Facebook profile. Facebook offers individuals the ability to network with friends, colleagues and relatives, it can also be used to access different Facebook apps to sell online and can be used to market or promote businesses, brand and products by using paid Facebook ads.

In the library environment, it appears to be the most popular tool that has been adopted by most library personnel probably because of its friendly nature. It is user friendly and allows library personnel to create library awareness and market library information products and services. It is a free social networking website that allows registered users to create profiles, upload photos and videos, send messages and keep in touch with friends, family and colleagues (Rouse, 2009; Chu and Du, 2013; Du Toit and Mulatiningsih, 2013; Dowd, 2013; Mundt, 2013).

One of the primary uses of Facebook by academic libraries is to promote the library by creating a Facebook page/account/library homepage as a portal to the library. In the same line of thought, Khan and Bhatti (2012) stressed that the use of social media tools in the libraries can help library personnel to promote the image of the library, publicise their newly acquired materials and create service alerts. Wan (2011) added that university libraries can use Facebook to provide updates on library services such as new reference service, document delivery, research supports among others. University libraries can also put up post related to library collections such as updates or promotions of electronic and print collections, database and other research resources.

University libraries also through Facebook can create event invitations for programmes as an additional forum to promote library activities (Chu and Meulemans, 2008). In addition, university libraries can provide updates to users on new resources available, information on library events, links to an author's profiles (Fredrick, 2012). Phillips (2011) affirmed how librarians have found Facebook useful in promoting support services, study areas, fundraising and advocacy. It is somewhat stress-free to connect your library's account on other forms of social media to the Facebook page,

allowing for updates on YouTube, Flickr, Twitter and blogs which could also be shared through Facebook status updates (Glazer, 2012).

More so, using Facebook application, university libraries can integrate library catalogue to the home page to allow users to access the contents without actually visiting the libraries' websites. 'Ask the librarian' feature can also be embedded into the Facebook page to provide reference service just like the Library of Congress Facebook page. They further reiterated that the underlying motive of creating a Facebook account/page is to actually provide customised library service within Facebook rather than redirecting users to the official page.

Islam and Habiba (2015) carried out a study on the use of social media in marketing of library and information services in Bangladesh public, private and special libraries were selected. The findings of their study showed that most of the libraries use Facebook and LinkedIn for marketing of library and information services. The authors further noted that most of the libraries use social media like Facebook for marketing library products and services, for sharing library news and events, video conferencing, advertisement, and research purposes.

Aras (2015) investigated the role of social media in the promotion of university libraries in Turkey. It was reported that libraries in Turkey (private and public) made use of social media tools for service delivery. However, the result indicated that social media tool such as Foursquare was the type and most frequently used by libraries in Turkey particularly the public libraries followed by Facebook then Twitter. Agyekun and Trivedi (2016) also explored the adoption of social networking tools in public university libraries in Ghana and revealed that the most frequently used social media by librarians was Facebook followed by Instant Messaging. They also reported that social media tools such as LinkedIn, Twitter, Blogs, Wikis, Flickr, Slideshare and Youtube were not significantly used. In addition, Phillips (2011) carried out a study on the use of social media for developing relationships among librarians and users. The study revealed that Facebook was the most popularly used social media for the establishment of cordial relationships with their users.

Another social networking site that could be used in the library for service delivery is LinkedIn. It is for professionals and has a way of getting library users connected to library for their information needs. LinkedIn also allows professionals to create their own profiles as well as invite other professionals to be part of their networks (Anttiroiko and Savolainen, 2011; Sullivan, 2014). Librarians can use these

tools to render specialised service such as Selective Dissemination of Information (SDI) to their users. LinkedIn being a business and professional oriented network with more than 300 million users enables most people to connect LinkedIn for the purpose of posting their job history and résumé, it also provides a social network that libraries can use to connect with the professional community by setting up discussions about topic-related issues (King, 2015). LinkedIn can be effectively used by librarians in personal career development as well as offering resources for library users (Níelsdóttir, 2017). Librarians can use LinkedIn to give updates on current library trends and technologies as well as to connect with experts who are willing to share their knowledge in related fields.

Twitter is the second most popular social media tools. It is micro blogging network of real posts that came on board in 2006 and all the posts are limited to 140 characters and less (Aharony, 2012; Procter *et al*, 2013). Twitter can allow users to share ideas and information. It can also be used to keep library staff and users updated on library's daily activities, for instance, frequently updated library collections, new arrivals, and current content service of the library. Twitter can also be used to create library service alerts. Apart from service alerts, it can as well be used to express opinions, share information and links (Ezeani and Igwesi, 2012).

Librarians can likewise use twitter to build connection with researchers and various institutions. For instance, Tamaira (2013) cited in Willemse (2014) noted that 29 out of 65 New Zealand public libraries have a library Twitter account which they use for communication and for sharing information. Marion and Omotayo (2010); Waddell *et al* (2012) also stated that the ease and effortless of posting and sharing information on twitter makes it an indispensable tool for library personnel to reach their users.

Library personnel in Nigeria can use this tool to offer users first-hand information about any ongoing topical issues, listen to users' comments about the library and getting feedbacks from users on how to serve them better (Bell, 2012). Cavanagh (2016) carried out a study on the use of Twitter in Canadian public libraries and found that public libraries made use of Twitter mainly for internal staff initiative or management decision; to expand current social media presence; reach out to the community and potential new patrons; spread information and extend conversations.

Correspondingly, Oladokun (2015) asserted that using twitter in the library can help library personnel to create an online community of users where questions relevant

to library services and resources can be raised and addressed. In addition, announcements, possibly on new arrivals or useful materials that can help users write their assignments, projects, term papers and other services available can be made. Fiander (2012) opined that twitter should be used primarily as a customer service medium for announcement as well as tracking feedback from users for better and enhanced services. Hence, twitter can be used to promote the library image and the services being offered.

WhatsApp is an instant messaging tool in social media that allows interaction between library personnel and their colleagues and also promotes effective library services to the users. WhatsApp Messenger is a cross-tool messaging application which allows users to exchange messages without having to pay for SMS in as much as there is an Internet connection (Adewojo and Adebara, 2016). The application is compatible with iPhone, BlackBerry, Android, Nokia, and other Windows smartphones. WhatsApp features include one-on-one chat, group chat, notifications, sending and receiving both video and audio files including pictures and post cards (Shambare, 2014). WhatsApp's popularity has grown exponentially after being purchased by Facebook and at present has over one billion users with 450 million daily active users (Smith, 2018).

As stressed by Adewojo and Adebara (2016), it was estimated that September 2015, WhatsApp had had more than 900 million monthly active users up from over 700 million in January 2015. Hence, the numbers have increased to over one billion active users as at the time of this study. This could be as a result of the free nature of WhatsApp and the application can be used through mobile phones mobile phone and also permits users to send text messages and multimedia files with ease. Some of the benefits of WhatsApp for service delivery in libraries and information centres as stated by Ansari and Tripathi (2017) include to facilitate collaborations and promote effective communication between library staff and the users; gather feedback for the enhancement of better services; promote library services and disseminates news quickly and delivers the information in real time to the users; foster and increases the engagement and interactions among library personnel and the users; promote library holdings in order to increase usage of the content and adequate utilisation of information materials embedded in the library.

Ansari and Tripathi (2017) conducted an online survey on the use of WhatsApp for effective delivery in libraries and information centres in India. The

result showed that librarians in India used WhatsApp for service delivery. Most of the respondents indicated that WhatsApp could improve alert services (CAS, virtual reference, notifications); enhance outreach activities through resource sharing among others. Hence, libraries can utilise the potentials of WhatsApp application for the provision of effective service delivery. The service is one of the most popular mobile applications worldwide and with this tools, communication flow could be very effective.

QQ: Tencent QQ (more popularly known as QQ) is an instant messaging (chat-based) social media platform. It became international (with more than 80 countries using it), after it was launched in China. It can be used to stay in touch with friends through texts, video calls and voice chats. It has a built-in translator to translate chats.

WeChat: This is an all-in-one communications application for messaging and calling (similar to WhatsApp) that enables users to connect with the people of their choices. It was also developed by Tencent in China and can easily work alongside QQ.

Like QQ and WeChat, QZone is yet another social networking site service developed by Tencent. It enables users to share photos, watch videos, listen to songs, write blogs, and maintain diaries among others. It also empowers users to choose the accessories and customise the look and feel of individuals QZone webpages. University libraries can deploy QZone for posting videos on how to use databases and library's e-resources for effective utilization of library materials.

Other relevant social networking sites which can be used for service delivery in the library include Google+, Myspace, and Skype among others. Google+ is owned by the tech giant Alphabet (Google). It is an interest-based social networking platform that enables users to stay in touch with people by sharing messages, photos, videos, and useful links to sites among others. It also extends support for video conferencing through hangouts and allows businesses to promote their brands and products through Google+ business pages. Myspace is a social networking websites offering an interactive, user submitted network of friends. It also provides blogs, groups, personal profiles, pictures, videos and many others.

Skype: It is owned by Microsoft and one of the most popular communication-based social networking platforms that allow users to connect with people through voice calls, video calls (using a webcam) and text messaging. Individuals can even conduct group conference calls with ease. The best part of Skype is that Skype-to-Skype calls are free and can be used by library personnel to communicate with users

located in any part of the world via the Internet. Media sharing sites are also relevant in libraries for service delivery. Media sharing site such as Pinterest, Flickr, YouTube and Instagram, Google+ among others can also be deployed by library personnel to render effective services.

Pinterest is a photo sharing and visual bookmarking social media site or app that enables users to find new ideas for their projects. It was launched in 2010 and acts like a virtual bookmark or pin board that allows users to organise and share images (Canty, 2013). Pinterest is a free graphical and an emerging Social Media tool. It is an online pin board that allows users to organise and share items, photos and Cards (Gallardo, 2013; Jain, 2013). Pinterest provides great avenues and opportunities to market library service and resources.

A library can make its own profile and create boards, pinning photos and video showcasing the library. Pinterest is a social media tool that can be used to post and find visual content (King, 2015). It also provides opportunities for peer to peer connections and content collaborations. There has been increase in the use of Pinterest by many libraries and library associations (American Library Association (ALA), 2013). ALA (2013) reiterated that librarians can use Pinterest to market the resources and services they provide by pinning content such as book covers, creating reading lists and promoting library activities.

Another type of social media that can be used in the library as a service tool is Flickr. It is a product of Yahoo and a form of photo sharing social media that has 92 million users (King, 2015). Flickr is a website for uploading and sharing photos and videos. It is an excellent and superb marketing tool which librarians could integrate and use for marketing of general library services to users. This can be done by posting materials of special collections (Akporthonor and Olise, 2015) on this platform in order to create the awareness and as well meet the information needs of users. Most users are not even aware of the different services offered in the library such as reservation of books, reference services such as Selective Dissemination of Information/Current Awareness Services.

This photo sharing service allows users to tag photos for easy identification (Canty, 2013). Photos shared on Flickr can also be shared on individuals' websites, Facebook, Google Plus and Tumblr (King, 2015). Flickr can be used to create library tours, images from the library, community events, and highlights from collections, new additions to your collection, staff photos and photos from staff functions/activities,

through slideshows. These slideshows can be imbedded in the library's blog or website. Flickr can also be used in collaboration with other libraries or museums to create collections for shared interests or events (Anderson, 2012). Flickr can be used to sensitise users with library services and it provides great opportunity to users (Jain, 2013); to enhance photos and image sharing within higher learning institutions and among themselves (Penzhorn, 2013), to inspire writing and creativity; as well enhance knowledge sharing (Grosseck, 2009).

YouTube is another essential social media tool that could be adopted in the university libraries for promoting and marketing of library and information products and services. Alexa (2012) as cited by Collins and Quan-Haase (2012) reiterated that YouTube is one of the world's leading social media Web sites and the fourth most popular Web site in Canada. YouTube, a subsidiary of Google was created in 2005 and allows users to share and upload original videos. YouTube is a video sharing applications that can allow library personnel to post videos and link the videos to other websites for easy dissemination.

YouTube helps library personnel not only to upload videos in any format but also to assist, train and to notify library users with new arrival of library materials and contents (Mahmood and Richardson, 2011). YouTube can also be used to keep records of important speeches, posting of book trailers, either created by the book publisher or by giving library users the opportunity to create their own trailer with personal interpretations of their favorite books (McLellan, 2013). The New York Public Library as opined by (Níelsdóttir, 2017) keeps uploaded video records of their guest speakers and offers behind the scene tours on their YouTube channel.

YouTube also allows library personnel to easily upload and share video clips on www.YouTube.com and across the Internet through websites, mobile devices, blogs, and email. Academic libraries could also post videos of library tours including bibliographic instructions for users which can be shown during library orientation and how to make use of the e-resources/databases if available. University of South Africa according to Dickson and Holley (2010) created a video for students demonstrating and showing them how to use database for their academic activities.

Instagram on the other hand was launched as a unique social networking platform that was completely based on sharing photos and videos. It is a subsidiary of Facebook and a photo-sharing form of social media that uses filters and tagging with hashtags to customise photos (King, 2015). This photo sharing social networking

application enables users to capture the best moments of their lives with a phone's camera or any other camera, and convert them into works of art. This is possible because Instagram allows users to apply multiple filters to their photos that can be easily posted to other popular social networking sites, such as Facebook and Twitter. Libraries can also use Instagram for sharing pictures of events or what is happening behind the scenes as well as showing makerspace, displays collections, staff and users. Sharing content from the library's Instagram account can add to the role the libraries play in the institutions and the communities they serve while being a marketing tool that motivates users to use the library frequently.

Blog on the other hand is one of the oldest social media tools originated from weblog. It functions as an online journal where the entries which are called post are published, with lists of useful links, detail information about the library as well as the photo gallery (Kronqvist-Berg, 2014). The entries in Blog appear in a chronological order with the most recent entries appearing first (Gunelius, 2014). Blog is popularly used in libraries to broadcast library news and market other library resources. Dankowski (2013) affirmed that in New York public libraries, Blogs are invaluable and irreplaceable part of social content marketing, with librarians acting as internal advocates, supporters and promoters.

Ezeani and Igwesi (2012) reiterated that librarians can also develop subject-specific Blogs and play a leading role in advocating the use of Blogs for scholarly communication and for commenting on research findings and outcomes. The two most popular blog platforms as reiterated by Fiander (2012) are WordPress and blogger. The author stated that libraries can create a blog and post contents online without having to be responsible for managing a server itself. An example Linda Ikeji's Blog that has gone viral where millions of people have access to get current information about happenings and topical issues all over the world.

Walia and Gupta (2012) opined that libraries are increasingly using Blogs for publishing library news and events, providing information about new acquisitions, and encouraging use of library services. Correspondingly, Ekoja (2011) expressed that Blogs are very helpful in promoting library services like new acquisitions, opening hours, library events and programmes, online discussions among others. Dickson and Holley (2010) added that with Blogs, library personnel can post news about the library as well as events occurring in library for users. Mazzocchi (2014) revealed that Blogs can be used by library personnel to encourage users' interaction through their feedback

regarding the information provided and the library itself. The author further stated that libraries embarking on large projects such as renovations can also create a blog detailing and notifying the progress to the users.

Additionally, there are two basic types of blogs that libraries can operate: Branch Blogs, and Topic Specific Blogs (Stevenson and Xie, 2014). Branch Blogs are very specific to an area or community. Librarians can share information regarding their branches and events or information of interest. An example is the blog operated by the University of California (Regents of the University of California, 2010). The blog is accessible through their webpage and contains updates of what is happening in the library, including new acquired resources, events and closing periods.

On the other hand, Topic Specific Blogs sometimes can be collaborative projects by several libraries or library branches in which information is posted on a specific topic of interest or subject areas. The British Library Board according to McLellan (2013) has a collection of Topic Specific Blogs that express the thoughts, opinions and events of British Library staff members such as Medieval Manuscripts Blog, the Science Blog, and the Maps and Views among other.

Blogs/Weblogs are social media tools that are very crucial for service delivery. This is because they provide current and up-to-date information to users. In the words of Schwartz (2005), a blog is an online diary which encompasses news, articles, latest and current information which is usually arranged in a reverse chronological order. According to the author, blogs are user-friendly form of web publishing which carries a time and entry date for each entry and users can revisit the archive for previous entries for further information. Dinesh and Nikam (2009) reiterated that blogs are used to improve library services to match with users' anticipations. The authors further highlighted that blogs take after resource-sharing viewpoint, and they reduce the time lag between acquisition and dissemination of information.

Furthermore, wiki is another social media tool that could be incorporated in the library for collaboration. Wiki is a collaborative and communication space which provides freedom, ease of use and access, and a better way to organise knowledge. It is a website on which several authors can collaborate to share information (Grace, 2009; Parker and Chao, 2007). Maness (2006) stated that wikis are essentially and basically open web-pages, where anyone registered with the wiki can publish, amend and edit information. It enables social interaction among library personnel and the users. They

also provide links and references to other web sites that are related to various subjects in order to help users to better understand the context.

In the same line of thought, Kim and Abbas (2011) stressed that Wiki can also be used to facilitate knowledge sharing, collaborative authoring and online discussion. Researchers can easily publish their articles on wikis and allow others to read, edit and criticise contents. Most often, Wikis are seen not to be very authentic for consultation and for research.

Really Simple Syndication or Rich Site Summary (RSS) Feed is also another social media tool that can be used in the library for the promotion of services by library personnel. It comprises frequently updated web feeds that indicates news, events, and blog entries that a user can subscribe to and follow (Xie and Stevenson, 2014). Bradley (2007) described it as a family of web format used to publish information about frequently updated works especially keeping up-to-date information. It updates users about the additions or changes on websites of interests, providing information to users about activities and events happening in the institution without having to visit them (Tripathi and Kumar, 2010).

New contents could also be retrieved from the sites by a feed reader that would help in browsing from a single website (Rutheford, 2008). It is also an excellent tool for obtaining information on a regular basis from news service, and can be employed within academic libraries in order to disseminate library news and current alerts, posts library announcements, exhibition of new and already existing acquisitions processes and to enhance reference services (Harinarayana and Raju, 2010; Akeriwa *et al*, 2014). In the same line of thought with Tripathi and Kumar (2010), Chua and Goh (2010) affirmed that RSS feed supports information dissemination within academic libraries whereby users can be kept informed on the changes made to the web content including blogs and podcasts without having to revisit the website.

Similarly, Makori (2012) carried out a study to examine the extent to which university libraries in Africa were using social media technologies for bridging the information gap. The researcher found that an RSS feed was being widely used as communication tool for efficient dissemination of information which led to effective communication and information sharing among librarians and between the library personnel and the users. Podcasting is another type of social media tool that should not be left out for use in the university libraries for service delivery. This allows sharing of audio files and enables library personnel to provide audio tour or orientation to users

and new users. With Podcast, recorded lectures as well as recorded speeches could be distributed easily as when required to the users (Rakshikar, 2015).

It is however, very similar to a radio broadcast but the difference is that it is transmitted via the Internet and it produces pre-recorded content. Podcasts can be enhanced through the use of images, videos as well as links to web sites content. It can also be used in the library for information literacy programmes for users (Sood and Khanna, 2015). Harinarayana and Raju (2010); Kim and Abbas (2010) stated that podcast contains audio and video contents which are available on the Internet and that can be automatically delivered to a user's personal computer. Hence information is remembered better if it is encoded both visually and verbally (Penzhorn, 2013).

Thus, based on prior studies, it is evident that social media tools can be very relevant to the library personnel for quality service delivery, online interactions, open distance learning as well as for information literacy programme (Breeding, 2010; Makoe, 2010; Si *et al*, 2011; Makori, 2012; Chen, 2011; Ezeani and Igwesi, 2012; Baro *et al*, 2013; Chu and Du, 2013; Penzhorn, 2013). Other purposes of social media tools in the library environment are to publish information and news about the library, promote library events, announce new acquisitions, for reference services, for communication between the library personnel and the users, to promote the use of online resources, knowledge sharing and to provide research assistance among others (Echeng and Usoro, 2013).

Akporhonour and Olise (2015) conducted a study on the librarians' use of social media for promoting library and information resources and services in university libraries in South-south, Nigeria. The study showed that social media tools such as blogs with a mean score of 3.23 and Facebook with a mean score of 3.01 were used by the respondents for promoting library resources and services. However, their findings corroborated the findings of Draper and Turnage (2008) that blogs were impressively used to promote library services.

Conversely, the findings is at variance with that of Collins and Quan-Haase (2012) that twitter was the most commonly utilized social media tool by academic libraries to promote library services. Adewoji and Adebara (2016) shows that library staff in Yaba College of Technology use social media tools for promoting library services which include reference service, selective dissemination of information which had the highest frequency 34(85%). Library staff also use social media tool in keeping track with current trends in the library with 32(80%). This finding is in collaboration

with the study of Chu and Du (2013) that through the use of social media, library personnel can collaborate and share information. Quadri and Idowu (2016) in their study also indicated that social media tools like Facebook, Google+, Twitter, LinkedIn, Academia.edu, and the other social tools Facebook, Google+, and Twitter were mostly used for disseminating information.

Google + is another social media tool that can be employed by librarians for effective communication and collaborations. It is somehow similar to Twitter and Facebook with over 100 million active users. Google+ offers a unique way of connecting with users various contacts, allowing them to send group messages to particular social circles designated. Google+ account does not require an existing email address to sign up. For a library to be part of Google +, such library has to acquire a Google account to be able to sign up to the platform to form what is called a circle. In Google +, similar to groups on Facebook, friends are established into circles and individuals can select which circles to belong in order to see what is being posted (Brixey, 2015).

The introductory portion of Google+ is the circles, which allow for more privacy when posting. Whereas Facebook allows people to put their friends into categories, Google+ allows for a more complete separation or splitting up. Users put their contacts into circles by user-created category. Addition of people to circles is an independent action hence getting permission from the other person is not required at all. Google+ users would only get a message when they have been added to a circle. They can reciprocate by adding that person to their circles, or decline.

Circles are like categories for individual's connections. It enhances sharing of updates selectively with diverse groups such as a group of friends, family, professional colleagues and people with a particular subject interest. Circles may be separate or have connection, so that, information and updates can be shared with people in the same book club. Users outside a circle can as well see a list of names belonging to a circle but not the name of the circle. Posts can be sent to individual circles or more than one at once.

Librarians can create niche brands by gathering circles for various aspects of their professional lifespan. A librarian who manages the library's social media, Facebook, Twitter, and Foursquare, can set up a circle on Google+ to interact with other librarians with the same interest or have a different circle for each and send all at once. Librarians with various subject interests can also create circles for each of those

interests and review postings at varying times to update their knowledge when the need arises. Google+ users can find and add friends, follow companies, entertainers, politicians, colleagues, other institutions and more. They can also create profiles with information about personal interests, job history, education, and location, share photo albums, status updates, and events, share videos, links to online articles, send instant messages and private messages and post public messages or messages to friends, post video chat and video conference for free, use privacy settings to control what information is shared with whom, search Google+ public posts to see what other users opinion and what is being shared about any given topic (Queens Library, 2018).

Another feature of Google+ is Google Hangouts. Google Hangouts is a service that allows users to interact and communicate with text or chat with or devoid of video. The communication can be within a group or one on one and are useful in collaborative projects. Hangouts are an option for video chat for up to 10 people at any given time. In Hangouts, a video chat session can easily be initiated by a user and people in that circles can join in Chat session. Individuals with webcam can begin or join a hangout.

While in a hangout session, users can chat upload videos from YouTube to jointly view and comment on the issue. One significant of hangouts over other video chatting software is that they respond more quickly hence there is no need to dial a user directly or specify locations. If people in a user's circle are online at the time, they could easily join the hangout. With the additional features of being able to record hangouts and view YouTube videos during the video session, librarians can use hangouts for meetings, instructions and professional communication.

Other features of Google+ include photos, streams, and sparks among others. All posts in the stream can be viewed at once, or the stream can be sieved by each circle. Circles and streams allow users to read the information they are most interested in and to save the rest for later use. Stream is an activity feed of all the latest information and updates from the people and companies being followed. Sparks are the themes or subjects of discussion with others. The interface is an adaptation of Google search. Sparks was initially released as a major part of the Google+ experience, appearing on the main stream page. The intent was to help a user locate things of interest by providing recommendations and an open search. However, spark now appears alongside results for people and what is being posted. The searches made

can be saved and pinned to the main stream page. Spark enables users to find current information on a topic and share it with circles, without ever having to leave Google+.

Snapchat is another type of social media tool that could be used in libraries for service delivery. Snapchat is a mobile social media App that was created by Evan Spiegel and Bobby Murphy in 2011 with about 150 million active users every day around the world and 65 million in the United States and Canada (Chaykowski, 2016). It allows users to capture pictures and videos. Snapchat is growing in popularity particularly among young people. It can be used across educational spectrum. It emphasises interaction and communication on the playful side of social media and has a unique way of enabling users to send multimedia messages (King, 2016).

Snapchat has different types of features that allow marketing approaches for advertisement. The features are non-sponsored (non-financially supported) and sponsored (paid by sponsor). Some examples of the features that Snap-chatters can use are the Filters, Lenses, Discover and Snap ads. Filters and Lenses are illustrations and effects added to the images or videos taken by the user that can be sponsored or not, provided by Snapchat. Discover and Snap Ads are features created and selected by Snapchat or its partners and both are sponsored (Sousa, 2017).

Users' ability to chat with friends, use filters, mix in an emoji, and showcase their relaxed sides are some of the many reasons young adults flocked to the platform. Consequent upon this, most librarians started incorporating Snapchat into the library as a service tool. Library Snapchat accounts have begun setting off over the past years, and the librarians behind these accounts are finding innovative ways to reach their users. Abono (2016) stressed that Snapchat can be used in the library for promoting events and programmes, uploading behind the scenes tours of the library, ten second speeches by library personnel, upload photos of library users with and without filters for the images and promotion of displays.

Consequently, the purposes as observed seemed common across the globe, hence, the need to promote their integration and use in the libraries become paramount. Therefore, it has become very important for library personnel to change their attitude towards change and adjust to the needs of the users through taking new tasks available on social media in order to effectively render qualitative service to the users.

2.2.2 Frequency of use of social media in university libraries

In order to provide quick services to satisfy the needs of library users, university libraries are making best use of social media to support their services and activities. Consequent upon the benefits of using social media tools for service delivery, it has been observed that most university personnel have not been using social media tools as expected although some libraries in developed countries are using some of the applications for effective delivery of service.

In a study carried out by Adewoyin *et al* (2017) on social media use and service delivery in federal universities in southwestern Nigeria revealed that the frequency of use of social media by library personnel was low with a total mean score of 2.68. The authors indicated that 67 (64.4%) of librarians pointed that they made use of some of the social media tools daily such as Facebook daily with a mean of 3.48, 23(22.1%) weekly, 11(10.6%) occasionally and 3(2.9%) never used social media for service delivery. In addition, 26 (27.4%), RSS feed (Really Simple Syndication) weekly with 24 (25.3%), occasionally with mean of 2.40, Wikis and Twitter 34 (34.3%) and 26 (26.3%) respectively.

Other social media tools such as Instant Messaging, YouTube, MySpace, WhatsApp, Flickr, Podcast, Google+ and LinkedIn were used by the librarians occasionally with a total mean score of 2.62%. Taylor and Francis Group (2014) reiterated that studies in recent years have placed Twitter and Facebook as the most frequently used social media tools in academic libraries. In a survey of public libraries in the US according to Dowd (2013), Facebook was the most frequently used. Similarly, Gupta *et al* (2014) carried out a study on the awareness and use of social media applications among library staff of power sector organisations in North India and reported that the frequency of use of social media was low. The authors noted that majority of social media tools were never used while some were sometimes and frequently used.

Akeriwa *et al* (2014) carried out a study on using mobile technologies for social media based library services at the University of Development Studies Libraries in Ghana. The study affirmed that social media tools used most often by librarians were social networking (99%), instant messaging (62%) and video sharing (61%). Other tools used by the respondents were considerably lesser, with only 39% for blogs and 16% of the respondents signified that they used social bookmarking. 89% of respondents who made use of social media indicated that they used social networking

applications (such as Facebook) on a daily basis with only 30% indicating that they use Instant Messaging every day. None of the other applications was used on a daily basis.

In addition, in a study by Adewojo and Adebara (2016) on social media usage by library staff in academic libraries at Yaba College of Technology, Lagos State, Nigeria averred that majority of the respondents used Facebook, WhatsApp, Blogs and Twitter for service delivery. The authors stated that the frequency of use differs. For instance, the study showed that social media tools such as WhatsApp 25(62.5%), Facebook 23(51.5%) were used daily. The study also corroborated with the study of Priolkar and Kumbhar (2015) that library professionals mostly use Facebook every day for disseminating information. Mitchell and Wastein (2007) stated that Facebook was used for reference services.

Idiegbeyan-ose, *et al* (2016) examined the use of social network sites among library professionals in university libraries in Ogun State, southwestern Nigeria. The result of the study revealed that the most frequently visited social media was LinkedIn (58.2 %) followed by Twitter (41.8 %), Facebook (40 %), RSS feeds (39.1%), YouTube (34.5%), Flickr (32.7 %), Hi5 (12.7 %), Myspace (25.5 %), Instant Messaging (9.1 %). Taylor and Francis Group (2014) carried out an online survey on the use of social media by libraries and found out that over 70% of libraries made use of social media tools for service delivery, 60% of libraries have had social media account for upward of 3 years or even longer, 30% of librarians posted information daily on Facebook, 25% of libraries have more than 5 persons making constant updates on their social media pages, while Facebook and Twitter remained the most frequently and popularly used for service delivery.

In the same vein, Bosque, *et al* (2012) conducted a study on 296 academic libraries and found that social media tools such as Twitter was most frequently used by the libraries examined. Agyekum, *et al* (2016) carried out a study on the adoption of social networking tools in public universities in Ghana. The study uncovered that, the most utilised social media tool used among professional librarians was Facebook followed by Instant Messaging. However, librarians were aware and sometimes use LinkedIn, Twitter, Blogs, Wikis, Flickr, Slide share, and YouTube, Professional librarians used social networking tools for dissemination of library news, library events, group discussion, general library information, sharing e-resources, and offering library resources.

2.2.3 Purpose of social media use in university libraries

Social media is made of Internet web-based technologies that enable people to share information and knowledge, connect with one another in a virtual community, communicate, interact and corroborate. Consequent upon this, university libraries all over the world are gradually and increasingly involving themselves on the use of social media in order to connect, communicate, share information, render services to their users and corroborate with colleagues outside the traditional bounds of the library.

To buttress the above assertion, Maness (2006) and Canty (2013) stated that libraries identified the need to be present wherever their users are regardless of their locations for quality service delivery. As a result, majority of libraries and library personnel began to see how they could create a presence for themselves within social networking sites (American Library Association, 2014; Vassilakaki and Garoufallou, 2014; Wetta, 2014) in order to maintain a connection with prospective and current users (American Library Association, 2012; Cowden, 2014). Social media has turned out to be the principal need of what individuals, organisations, institutions crave for to reach out to their customers quickly beyond any geographical boundaries and Library and Information Science professionals are not left out hence, they have started using social media tools to carry out some of their activities and to promote different services of their respective libraries.

Social media tools could be used in university libraries for variety of purposes. For instance, Jacobson (2011) averred that the exploration and use of social networking tools applications would help to enhance library services and also support library marketing and the teaching of social media literacy, which will in turn help library and information professionals to gain knowledge about these applications and how they can use them in library for effective performances. The author further reported that Facebook can be used in libraries to identify discrepancies between intended goals and actual use.

Similarly, Espersen (2015) and Phillips (2011) noted that social media tools play significant role in service delivery. In the same line of thought, Li and Li (2013); Young and Rossman (2015) opined that social media tools are used for marketing of library information products and services. Aside that, they could also be used to respond to feedbacks timely and in a positive way, create online community where users could help to shape services to fit the community's needs (Canty, 2013; Smeaton, 2014).

A study conducted by Kumar and Reddy (2016) among the Engineering Institutional librarians in Andhra Pradesh reveals that the use of online social network by academic libraries is also increasingly prevalent and they are being used to communicate with the potential library users, as well as extending the services provided by individual academic libraries. Adewoji and Adebara (2016) affirmed that library staff in Yaba College of Technology use social media tools for promoting library services which include reference service, selective dissemination of information which had the highest frequency 34(85%). Library staff also use social media tool in keeping track with current trends in the library with 32(80%).

This finding is in collaboration with the study of Chu and Du (2013) that through the use of social media, library personnel can collaborate and share information. Quadri and Idowu (2016) in their study also indicated that social media tools like Facebook, Google+, Twitter, LinkedIn, Academia.edu, and the other social tools were mostly used for disseminating information. Idiegbeyan-ose *et al* (2016) also reported that social media tools were mostly used for the purpose of connecting and collaborating with friends and colleagues, carrying out current awareness and reference services to library users. They further posited that majority of the respondents (90 %) indicated that they made use of social media mainly for making new friends and for current awareness, 80 % indicated that they made use of social media for professional usage and reference services, 60 % for connecting with friends and to collaborate with colleagues, while 30 % indicated use social media for research purposes.

In the same vein, Quadri and Idowu (2016) in their study on the use of social media for information dissemination by librarians in Nigeria stated that 73 % of librarians made use of social media for current awareness services, 63.3 % for reference services, 56.7 % for selective dissemination of information and 58 % for library orientation. Burgert and Nann (2014) posited that social media tools encourage promotion of library services and products, promote interaction with users. Kemorajh (2013) identified Facebook, Twitter, Flickr, YouTube, LinkedIn, Foursquare, Tumblr, Vimeo, Pinterest, Instagram, and Wikipedia as some of the social media tools for service delivery by most libraries. Canty (2013) also noted that social media could be used in libraries for marketing information products and services as well as for reference services.

Taylor and Francis Group (2014) from their study found that social media tools were being used by librarians basically to fulfill a variety of objectives, particularly on

promotion (visibility for and usage of the library service and resources), receiving feedbacks, outreach, for increase in visibility and connections within the broader library community; as well as for assisting in the promotion of the work of the faculty members. Islam and Habiba (2015) carried out a study on the use of social media in marketing of library and information services in Bangladesh. Public, private and special libraries were selected. The findings of their study showed that most of the libraries use Facebook and LinkedIn for marketing of library and information services.

The authors further noted that most of the libraries use social media for marketing library's information products and services, for sharing library news and events, video conferencing, advertisement, and research purposes. They further reported that Facebook (97.75%) and LinkedIn (86.95%) were the most frequently used social media tools in Bangladesh.

Similarly, studies conducted by Hussain and Ahmad (2014); Gul and Islam (2013) and Perveen (2011) showed that social media tool such as Facebook was the most popular used. Satya and Vairagare (2015) investigated the use and utility of social media in the promotion of today's library and information services in India. The study revealed that social media could be used for the promotion of library services and interacting with users in knowledge searching process. Similarly, Mandal (2011) studied about blog or weblog and its role in library and information services and explained that blogs are being used to get links to recommended Internet sources, book reviews, book discussions, research tips, communication among libraries, alerting services, promote library events and collection development.

Furthermore, Sachs, *et al* (2011) carried out a study on effective use of Facebook by academic libraries on 14 peer institutions at Western Michigan University (WMU). The authors noted that Facebook is one of the fastest growing social networking sites. The authors also measured user comfort and satisfaction with a library's presence on Facebook of Western Michigan University. They found that majority of the respondents found Facebook to be a useful and attractive tool to learn about library resources and services and for marketing and outreach purposes. The result of this study indicated that an effective library Facebook page must maintain a balance between providing pertinent and useful information and preserving patrons' privacy.

2.3 Service delivery in university libraries

The changing needs of information users have strategically positioned librarians to render both immediate and proactive service. This development has therefore, reawakened university libraries' mandate of promoting effective service delivery through the provision of adequate information materials in different formats and in a manner accessible to users. According to Cassell and Hiremath (2013), service delivery could be described as the process of resolving information needs of users in response to a particular question, interest or problem and building positive relationships with users.

Service delivery is the process of delivering library information products and service to users in order to satisfy and meet their specific information needs. It also involves the interaction between library personnel and users where the provider (library personnel) offer service, to users and in turn users either find value in the service as a result of the quality of service rendered which could actually occur either in a virtual form or traditional form.

Similarly, Gronroos (2001) noted that service delivery entails series of activities aiming at facilitating interaction between a customer and service employees which would provide solution to the customers' problems. Newland and Hopper (2009) affirmed service delivery to be an act of transferring service from one individual to the other. World Meteorological Organisation (2012) listed 12 features of service to include effectiveness, availability timeliness, dependability, reliability, usability, usefulness, credibility, responsiveness, flexibility, sustainability, expansion and authenticity. Service delivery in library systems could therefore, be described as the quest to deliver current, timely relevant and right information resources to the right users and extends to cover everything necessary to help library users in their expedition for information, education and knowledge.

Akpan-Atata (2013) emphasised that for information to be at the disposal of every user, the library must be adequately equipped with well-packaged information service delivery system. Therefore, library personnel have the responsibilities of assisting users in finding, using and interpreting appropriate information for the enhancement and improvement of users' learning and research activities. Effective service delivery involves efficient and effective communication, much closer relationship between the library personnel and the users with the aim of ensuring that users' information needs are met. This indicates that university libraries are under the

obligations and commitments of carrying out effective service delivery to meet the information needs of users and also work towards the achievement of the university goals and objectives.

In order to render effective service, library personnel need to be skilled, competent, innovative, creative and responsive for better services. Hence, library personnel are expected to be aware of the various tools that can be used in information provision and dissemination, and how best to meet the information needs of users. There are varying degrees of services that can be rendered in university libraries. The services, however, include: lending service, inter-library loan service, (ILL) reservation service, display and exhibition service, bibliographic service/compilation of reading lists, information literacy programmes/library instruction, user education service, indexing and abstracting, outreach service, library consortia service, referral service, and reference service among others

For instance, lending service involves offering information materials to users for a certain period and the materials are expected to be returned at a stipulated time period. In this type of service, users may have to visit the library physically to request for the needed information materials and also may not have to visit the library if it is to inquire whether the information materials are available or not or on reserve. Sometimes, the library may not have all the requested materials and in order to meet the information needs of users, the university library may have to collaborate with other libraries to share resources since no individual library can effectively meet the needs of their users.

Inter-library loan (ILL) is another service rendered in university libraries. Inter-library loan service involves sharing of information resources and this type of service represents a key strategy in ensuring that scholars and researchers have the opportunity to study, teach and conduct research in a resource-rich environment, enabling discovery, analysis, and reflection leading to the creation of new knowledge (Shrauger and Scharf, 2017). Often times, university libraries place ILL requests on behalf of users for items and materials that could be returned and those that might not be returned.

Inter-library loan is used to facilitate access to materials that are not readily available in a particular library but available in another library (Nwalo, 2003). Interlibrary loan service could also be referred as resource sharing process. Resource sharing has long been regarded as a means through which libraries engage in library

cooperation and collaboration for using resources available in other libraries. Therefore, resource sharing provides the basic background for bringing together, sharing, and making use of such resources to satisfy users' information requests and needs. It is therefore, imperative for university libraries and their personnel to develop union catalogues in order to assist in locating information materials easily.

Another service provided by university libraries to users is resource sharing or library consortia service. Library consortia is the act of coming together of two or more libraries in a formal agreement to cooperate with a team spirit to share their information resources for efficient service delivery. Verzosa (2004) defined library consortium as the service that entails creation and operation of equitable service, that is mutually 'fair', collaborative arrangements between libraries and information providers which enhance the common good through making information available to all users as well as potential users (without impediment to access by reason of cost or otherwise) which is more extensive or more valuable to users and/or is of lower cost to the collaborating providers. Guan and Wang (2012) similarly described consortia as a co-operation, co-ordination and collaboration between and amongst libraries for the purpose of sharing information resources.

In the same line of thought, Obaro (2013) noted that resource sharing or library consortia is a vital practice in every library especially in academic libraries due to the fact that no library can boast of self- sufficiency. In other words, it is a cooperative arrangement among institutions fashioned to increase the collection and acquisition power of the participant institutions in order to expand library information resources to meet the users varying needs which could be formed at local, regional, national, or international level on subject basis or functional basis.

Porter (1997) affirmed that historically, the primary purpose of library consortia is to facilitate the sharing of printed materials among libraries for better service delivery. The author further stated that academic libraries accordingly are forming consortia to provide common access to electronic resources across the Internet, and they are forming these consortia on a state-wide basis which would enable them reach users remotely. Edward (1997) reiterated that the concept of resource sharing through library consortia is based largely on three functions, which are: bibliographic access, interlibrary lending service and cooperative collection development.

In addition, Rezaul Islam (2012) posited that library consortium could be used to facilitate collective acquisition and sharing of traditional and e-resources; cooperate in processing of information resources; access and downloading the required resources remotely by the users of the participating libraries; help develop a country-wide acquisition policy to avoid unnecessary and wasteful duplication in purchase; develop a more sophisticated search engine which would enable simultaneous search of multiple databases; establish an electronic journal centre to serve as a permanent archive for electronic journals; to provide extensive facilities to use full text databases and electronic journals; develop digital resources jointly and to provide access to such materials to the members of the consortium; as well as establish reciprocal borrowing agreements among the participating libraries to share resources and many others.

Yao and Zhu (2015) noted that resource sharing consortia are established to solve the emerging issues relating to library resource construction and sharing. The authors further posited that the main contents of resource sharing includes consortium acquisition, online cataloguing, resource integration, interlibrary loan and document delivery, resource public archiving, statistical evaluation and union training, aiming at elevating and improving the quality of library information service delivery. The resource sharing consortia could be dedicated to solve problems of library resource building and sharing, to achieve mutual benefit and subject to mutual appreciation, agreements and contracts checking. Library consortia in this sense can strengthen universities' goals and missions as well as their integrity in the area of library organisation of information resources.

Apart from library consortia service, reservation service is another important service rendered by library personnel. Reservation service entails keeping and preserving information materials that are regularly requested for by users which may be very limited in the library. It also involves materials on loan already which on return may be reserved for other users which have also indicated interest. In order to satisfy library users' needs, returned information materials will not be allowed to be renewed except in a situation where the user who had earlier requested did not show any further interest (Nwalo, 2003). Other reasons could be as a result the fragility of the information materials, high demand of the materials, could be very costly and consequent upon this, the materials might not be easily purchased by users. Thus, for efficient and effective service delivery, library personnel in university libraries often

place on reserve those limited and expensive materials in order to satisfy users requesting for them.

Library display and exhibition is yet another service rendered in university libraries. Library displays and exhibition entail showcasing the information resources, new arrivals and for the facilitation of current awareness among others. Exhibitions in university libraries are educational acts and are organised around ideas with intent of serving as a facilitator for further thought and may seek to increase the use of the library and its resources (Lu and Wei, 2006). Libraries exhibit in order to promote the educational mission of university libraries, reflecting the intellectual quality of their collections and their role as centre for learning. Therefore, the essence of library exhibitions and display is to facilitate resource sharing and to sustain and increase the readership of the users as well as creating awareness on the available information materials.

University libraries also compile bibliographies and reading lists for use by the users. Nwalo (2012) stated that library personnel provide bibliographic service to users which involve compiling list of publications related to each other on all subjects in order to assist users to identify and locate information materials of interest relevant to their work. In addition to bibliographic service, university libraries also offer compilation of reading list by putting together diverse subjects which will be made available to users in order to assist them in the achievement of their research and academic mandates.

Another service in the university library system is information literacy programme service. Information literacy programme is a conscious effort employed by library personnel to teach and tutor users on how to search for information and use the information to solve problems. In the words of Willee, *et al* (2014), information literacy is a set of abilities, skills and competences requiring individuals to recognise when information is needed and have the ability to locate, evaluate and use effectively the needed information. Information literacy programmes over time have gained credence in the library environment.

The concept is a very critical component of higher education hence, this call for library personnel in universities to work collaboratively to ensure that users can recognise and solve their information problems. Ojedokun (2007) stressed the need for integration of information literacy programmes in institutions and further stated that the goal of information literacy programmes in institutions for users can however

only be reached through partnership of faculty members and librarians working as a team. Information literacy programme according to Abah, *et al* (2016) is geared towards attaining a common competence in the use of library and computer network technologies.

Furthermore, service delivery in university libraries can also be in form of user education. User education entails library personnel teaching and tutoring library users on how to effectively use and locate wealth of resources embedded in the library. It also requires library personnel to render help to users in order for them to be more efficient in locating and retrieving useful information materials needed. Similarly, Israel (2012) posited that user education is often used in university libraries to intimate users on how best to use the library effectively. It involves various programmes of exploration and instruction provided by library personnel to their users in order to make them more efficient and effective in the use of available library information products and services (Nithyanandam *et al*, 2006). They further reiterated that user education is very essential in the university library environment due to its relevance in ensuring that library information products and services are published maximally.

Furthermore, user education helps in improving the image of the library thereby incorporating and implementing the five laws of librarianship. There are various forms of user education as posited by Wickramanayake (2015) to include library orientation, library instruction, bibliographic instruction, information skills courses, on-line instruction' and course-related instruction. User education is concerned with the whole of information and communication process and it involves the total interaction of the user with the library. This important service should be a continuous process for university libraries to foster adequate service delivery.

The aims of user education in university libraries are enumerated by Nithyanandam, *et al* (2006) to include training users on how to exploit the library resources effectively; provide users with skills for independent information seeking; encourage users to seek assistance of library personnel when the need arises. The importance of user education lies in providing the library user necessary skills and knowledge in making the optimum use of library resources and service in the changing education scenario (Cassell and Hiremath, 2013). In university libraries, the main purpose of user education is to stimulate library use by the users. Many academic libraries especially university and research libraries emphasise the need for users to acquire skills that will enable them search for information independently on any aspect

of knowledge using both traditional and electronic methods of accessing information (Abah *et al*, 2016).

Indexing and abstracting are also major services offered by university libraries. Indexing entails the systematic listing of essential contents of a document for the purpose of speedy information retrieval while abstracting involves the summary of the essential contents of documents (Nwalo, 2003). The value of indexing and abstracting service lies in promoting and facilitating the basis of research and to fill in the time gaps. Abstracts help the user to determine whether the document will meet her information needs or not. One of the primary goals of university libraries is reaching out to users within and outside the community they serve as well as introduce, market and promote library information resources to a variety of users in the community. To achieve this, university libraries often times engage in outreach service.

Outreach service is one of the common missions of university libraries and it can be used to promote the value of library resources and services (Edwards and Thornton, 2013). Anthony (2010) noted that outreach efforts are crucial in establishing relationships between the academic library and teaching faculty. According to Edwards (2010), outreach service is the kind of service provided to irregular users or non-users with the aim of drawing them closer to the library. Library outreach strives to provide equitable delivery of service to all, through the development of programmes, service and policies which make the library available to everyone. For many libraries, the motivation behind outreach programme is marketing (selling the library's services and programmes to members of the community who do not or have not yet come into the library for any reason).

University libraries outreach activities had also expanded and evolved in the time past (Johnson *et al*, 2003) and in recent years in response to changes both in the library profession and in the broader environment of higher education. The primary purpose of library outreach is to ensure that users who are underprivileged in communities and disadvantaged groups are reached without bias and prejudice. Kodikara, *et al* (2013) posited that outreach is a two-way engagement that builds mutually beneficial relationships, which does not produce immediate outcomes but can produce effective outcome at a later time. Hart (2012) itemised the aims of library outreach to include: increasing numbers of libraries and bringing them closer to the people; providing electronic access to information; improving study facilities; broadening the scope of service offered and; teaching people how to use information to

their benefit, thus creating an environment supportive of sustained economic, social and civic development.

Similarly, Carter and Seaman (2011) stated that reaching out to users, encouraging use of library and promoting positive image on the university within the community are the reasons for outreach service in the university environment. Outreach has an educational role, raising the awareness of existing service and often meant to fill in the gap in the service provided by mainstream service (Dewson *et al*, 2006). Outreach service also promote mutual relationship between library professionals and users and as well foster effective collaboration and information networking. Therefore, it is pertinent for university libraries to engage in outreach service in order to reach those users who are not privileged to visit the library for their information needs.

Another service university libraries offer is referral service. To also improve the quality of service being offered, university libraries' personnel correspondingly offer referral service to users in order to meet the expectations of users. Referral service directs or refers users to sources of information, which may be a document, an individual or even an organisation/institution. Oftentimes, users may not get all the information resources they require to solve their educational and research needs through the library collections, these needs are being met by referring users to other libraries' resources for their information needs.

Kwon (2006) stressed that referral service enables library personnel to offer users with richer resources that will help them meet their information needs. This implies that when a library does not have a particular material which is on demand and cannot obtain it from the sources, but knows where the information could be obtained, the librarian could as well refer the user to the sources of information making delivery of service more effective and efficient.

Another key service that library personnel render to their users is reference service. One of the successful strategies to enhance exploitation of resources is to ensure users' satisfaction through an efficient and effective reference service (Arya and Mishra, 2011; 2012). Reference services are very vital service delivery in university libraries. Reference service according to Qobose and Mologanyi (2015) refers to any form of assistance to those seeking information, and this can either be direct or indirect, in-person or remotely. Oketunji (2005) see reference service as a professional advice and assistance provided by library personnel from the information resources in

the library or somewhere else to assist users using the library's reading room or making enquiries through e-mail, telephone, or otherwise to meet their needs. Ifijeh (2013) posited that reference services are library services given by library personnel which necessitate inter-personal interaction to take place in order to meet the information needs of users.

Reference services are being offered in accordance to users' needs by making use of various skills, intelligence and competences to create a link between library users and the available library resources (Wolfe *et al*, 2010). The authors further noted that reference services are offered when the users of the library visit the library and tender queries on needs. Ifidon and Ifidon (2008) similarly reiterated that reference services are direct personalised assistance offered by library personnel to users who are in need of information or the other. In addition, McLoughlin and Benn (2014) opined that reference services are the assistance given to users by the library personnel in acquainting them with the intricacies of the catalogue, in answering questions and ensuring access to the library's resources. The definition according to these scholars was the early definition of reference service which still applies in the present day, hence, the introduction of new information communication technologies only helped to enhance the service.

The authors further stated that libraries started offering reference service in the mid of late 19th Century and later became an established service. Reference and information service according to Chowdhury (2012) referred to the personal assistance provided to users in the pursuit of information. The author further stressed that provision of such personalised information service has remained the central theme of the library and information profession making the importance of these services to grow over time with the introduction of new technologies and services in libraries. Reference and User Service Association (RUSA) (2008) of the American Library Association also described reference service as information consultations in which library personnel recommend, interpret, evaluate and or use information resources to help users meet particular information needs.

According to Musangi (2015), reference service could be regarded as a variety of activities associated with personal assistance to library users, including selection, liaison activities, and bibliographic instruction. It also indicates a direct librarian-user interaction, which takes place in some physical service points, typically the reference desk. Tyckoson (2011) affirmed that there are four main goals in reference service and

these include: instructing users; answering information questions; recommending resources; and promoting library service. These goals according to the authors have remained consistent since their introduction by Samuel Green in 1876 at the first American Library Association convention, hence, the way librarians provide these services are changing to reflect varying users' information seeking attitudes and behaviour.

Chowdhury (2012) categorised reference service into three broad groups: information service that involves either finding the required information on behalf of the users, or assisting users in finding information; instruction in the use of library resources and services (broadly defined as information literacy skills); and user guidance, in which users are guided in selecting the most appropriate and suitable information sources and services. Reference service also involves rendering occasional assistance to inexperienced and confused library users who are novice on how to make use of the library and the resources available for use.

In librarianship, there are two main aspects of reference service: ready reference service and the long range reference service. Ready reference service by nature involves facts finding types that can finish within a short possible time while the long term reference service is basically on the consultation of every available and possible information sources in order to get the much needed and relevant information, hence this type of service does not require immediate service delivery rather it entails taking time to get the current, relevant and required information and making it available to the user who requested for the service.

Similarly, Nwalo (2003) stated that a quick reference query refers to a situation where the user requesting for the information requires an immediate and instant answers, while a research query needs a longer time to answer therefore, the user may have to come for the answer at a given time. Reference services are basically reactive service and the service are provided when asked for by the users. In furtherance to ensuring adequate provision of information, library personnel in universities have also been playing key roles in providing information services in expectation of user needs. Reference services are however very significant in university libraries because of the nature of users in the academic setting who consult the library for their academic and research purposes therefore, demand optimal use of library resources. McKibbin (2007) posited that reference service in university libraries enables library personnel

and users to enjoy the value of freedom of expression by creating an enabling interaction towards meeting users' information needs.

Service delivery also extends to other types of reference services such as Current Awareness Services (CAS) (Selective Dissemination of Information (SDI)), Document Delivery Service (DDS) and telephone service. Popoola (2008) however, identified the following library services as core library services designed to help users derive maximum benefit from the library: Current Awareness services (CAS) such as Selective Dissemination of Information (SDI), Statistical Data Analysis (SDA), word processing, Internet/e-mail service, facsimile, translation, photocopying, referral, bindery, abstracting and Indexing, CD-ROM databases searching, document delivery, loan services, and microfilming.

Current Awareness Services (CAS) enables library personnel to render current service to library users. These services enable users to have adequate knowledge of the current information resources acquired in the library and how to have access to the resources. The main aim of offering CAS in university libraries is to bring users closer to the library and to ensure that they are aware of the recent library information resources available in the library (McMullen and Gray, 2012). Nwalo (2003) submitted that CAS are provided by library personnel in order to ensure maximum exposure and utilisation of library information resources, hence the library's missions and objectives are best achieved more when the resources are exposed and utilised effectively.

In addition, Israel (2012) noted that CAS are rendered in university libraries as one of their major services to acquaint users on the available information materials with the aim of bridging the time gap between the time research findings are published and the time they will be available. It is the most used information service for the support of research activities of users (Kamber, 2008). This is also in tune with Adebayo (2009) who noted that libraries traditionally render CAS in order to fast-track access to literature that is published recently. CAS is a system of service which ensures that all the current information likely to influence the progress of a research worker or a research team is made available to them at the right time and in a convenient form (De Giusti, Villarreal, Vosou, and Martínez, 2010). Other benefits of CAS as stated by Unegbu (2013) and Edem (2013) are as follows: keeping users better informed; providing access to needed documents; supporting academic, professionals and management skills; providing information in a preferred format.

Current Awareness Services include Selective Dissemination of Information (SDI), publication of current contents and publication of a list of new arrivals (Nwalo, 2003). The author further stated that SDI matches prospective users with useful information in their subject area of interest. This according to the author is done by library personnel by capturing the research/academic profile of users through purposefully designed questionnaire; keeping a file for each user; scanning of the contents of most recent publications acquired by the library and acquainting them of their availability; matching the information contents with specific user profiles; capturing the information through photocopy; putting and gathering relevant information materials in users' files; and sending files to users to check whether the information gathered are relevant to their fields of interest.

Current Awareness Services such as SDI is always directed to target groups or individual users and its main drive is to help users in rendering information service that gives up to date and current literature in their subject of interest (Uzohue and Yaya, 2016). The authors further stated that CAS also helps users overcome the information overload which could result from information explosion emanating from different sources. Selective Dissemination of Information is also used by library personnel to alert users on the available information materials and services in the library as well as available resources in their various fields of interest.

It provides up-to date services and offers flexibility of access by users hence, saving the time of the user which is in line with Ranganathan's 4th law of library science which emphasised that library's users' time must not be wasted. SDI fosters librarian-user interaction and relationship whereby users are drawn closer to the library personnel giving them the opportunity of relying on library personnel to update them concerning new acquired information materials, their availability and accessibility.

The basic objectives are to acquaint users with all the latest information exclusively matching with their requirements which is to take place at regular and fixed intervals. The evaluation criteria should match the satisfaction of users, and their feedback gives the opportunity to improve and have control over the accuracy of provision of information (De Giusti *et al*, 2010). The profiles of users' interests or the target groups are kept with their profiles and are further matched with the resources available through the libraries and information centres. These activities are frequently and largely visible in special libraries (Fourie, 2001) and university libraries must be in the forefront.

Libraries generally have been in the vanguard concerning the implementation of SDI systems to provide users with needed information. SDI is a process by which users express their information needs either clearly or inferred by the system and then receive notifications through library personnel. SDI is very essential in the library environment because of its ability to keep a user informed of new resources on specified and preferred topics (De Giusti *et al*, 2010; Pandey, 2016). It was further reiterated that SDI is an advanced kind of service directed towards library users which is highly a personalised service given to users for easy satisfaction.

Conversely, numerous studies have reported a decline in reference services by library personnel in the library environment (Aguilar *et al*, 2011; Stevens, 2013). More so, Sidorko and Cmor (2012) also stated that the Association of Research Libraries Annual Statistics Service Trends showed a 60% decrease in reference services over the periods of 2000-2010, with the Australian Academic libraries showing slightly less decrease over same periods with 49.5%. The decrease according to them may not be from the library personnel but from the angle of library users as a result of underuse or under value of library information products and services or their unsophisticated research skills including low ability to critically interact with the world of information around them.

Additionally, in Bangladesh, Siddike (2012) carried out a survey on 100 selected academic libraries on users' perception regarding networking and resource sharing. The researcher reported that 40% of respondents admitted that SDI was highly desired by users but there was a low SDI service. SDI facilitates and enhances the reputation of the library including library patronage by users. The utilisation of library information products and services is what makes the library relevant. Hence, library personnel in university libraries need to carry out assessment of their resources and services from time to time to ensure continual relevance to their parent institutions (Ezeala and Yusuff, 2011).

Therefore, the provision of adequate service delivery in the library environment including university libraries calls for proactive actions. This corroborates with the assertion of Shan and Shaheen (2013) that emphasised on the need for provision of good library service which is more important than the mere physical library building. In addition, SDI service enables library personnel to bring the right information closer to users; saves time by offering quick and precise information; and facilitates good relationship between the librarian and information users.

Other types of Current Awareness Services include publication of current contents and publication of list of new arrivals. Publication of current contents on one hand involves extracting current contents of the most recently acquired information materials mostly journals and arranging them alphabetically. Publication of list of new arrivals on the other hand entails library personnel preparing a list of the most recently acquired monographic publications and circulating to users and potential users (Nwalo, 2003). Thus, it is the responsibilities of library personnel to ensure that these services are well coordinated and delivered efficiently to library users.

Traditional reference service would continue to be highly valued by library users however; newer forms of services such as e-mail, virtual reference service, Instant Messaging (IM) among others have grown tremendously in the library environment. Although, librarians have always provided reference services in variety of formats, ranging from fixed desk, telephone, e-mail, to more recent synchronous virtual reference service which has become trendy in most academic libraries in the recent years (Qobose and Mologanyi, 2015).

At present, the trends have shifted away from 'static' reference service, that is, sitting at a reference desk awaiting for questions, to a more blended, mobile, and adaptable model (Dempsey, 2011) where users could send their queries online and would get response as well without physically being present through some technological tools. Chandler (2001) asserted that in the past, reference professionals wanted to provide precise answers to users, but with the added networked information resources, that goal has expanded to include facilitating the development of self-reliant customers through a basic level of user instruction. The author further stated that web-based technology allows end users to access information directly with ease. Much of this information, once restricted to use only in the library, is now often available from remote locations twenty-four hours a day.

Nevertheless, the ways these services are being rendered have tremendously and enormously changed as a result of the Internet and various technological tools that facilitate service delivery. Iwhiwhu, *et al* (2010) noted that before the advent of ICTs, communication in the library was done on one directional base as well as through books, newspapers, microforms, slides, among others. Conversely, in recent times, the use of telephone, computers, the Internet and other ICT tools has taken prominence.

In line with this, Egunjobi and Awoyemi (2013) opined that the application of ICTs such as computers, Internet, e-mail as well as other networked technologies, has

unbolted and opened new and wider potentials together with opportunities to global library information services and products which the traditional library could not deliver. Oluokun (2015) similarly declared that ICT has radically influenced the way knowledge and information are generated, developed and transmitted which has also reduced the entire world into a global village and replaced the use of physical strength in performing task with automation". In other words, library services have expanded and have now become numerous with the use of Internet and social media technologies.

According to Uzohue and Yaya 2(016), Information and communication technology (ICT) encourages creation and sharing of information which can also be used to perform certain activities in the libraries including lending service, inter-library loan, reference service such as CAS and many others. In the same line of thought, Vishwakarma, *et al* (2013) stated that reference services are currently being rendered electronically through various technological tools through which the users get useful links to information that will meet their needs. Ramos and Abridgos (2012) corroborated the above assertion by affirming that users in university libraries and communities now prefer to make use of technological means to get their queries answered. By implication, library personnel are expected to be more techno savvy, possess necessary skills and competences on the use of these technological tools in order to serve users better. One of such tools currently deployed by library personnel in rendering innovative services to users as a result of ICTs is mobile phone service.

Mobile phone services such as sending of bulk text messages, e-mail and e-alert service, packaging of information to meet specific demands, have brought considerable improvement in information provision and service delivery in university libraries. In recent times, the acceptance and use of Web technologies not only changed the quality of the e-mail reference service for the better, but also challenged librarians to develop effective means for managing questions and answers (Arya and Mishra, 2012). Madukoma (2015) admitted that the era of information and communication technologies has prompted users to request for services via the Internet, ask questions and send to library personnel requesting for a document through SMS (Short Message Service) to be scanned for use.

Elahi and Islam (2014) affirmed that mobile devices and application provide access to information in the comfort of people's homes and offices, using their cellular phones or personal digital assistance. This can be done by inquiring from library

personnel about book reservations, available information materials and upcoming events and activities. Library personnel can as well send messages through their mobile phones to users as regards overdue notices and fines. Sahoo and Sharma (2016) posited that social media tools like MySpace and Twitter offer mobile phone services allowing members to interact effectively with one another.

Herman (2007) posited that short message service (SMS) has become a popular way of communication particularly, among the younger generation. Thus, library personnel can deploy the use of mobile phones in reaching out to their users conveniently through short message service. In the same vein, Maxymuk (2009) avowed that text messaging offers a variety of ways in helping to establish a strong relationship between users and library personnel. Libraries that add mobile technologies to their traditional services will not make them only available but also make them more relevant to their users (Elahi and Islam, 2014). Mobile technologies according to Murray (2010) can be used to offer services such as library websites, Short Message Service (SMS), reference, and Mobile Online Public Access Catalogue (MOPAC).

Short Message Service (SMS) is one of the oldest, reliable and widely used mobile phone applications service today as stated by (Jetty and Anbu, 2013). It is limited to 160 characters (Luo, 2011) and offers a cheaper, efficient and more convenient way of communication than voice calls most times preferable by many users (Tomaszewski, 2011). Many academic libraries are now making use of the application to deliver library service in a platform preferred by their users (Ruppel and Vecchione, 2012; Li, 2013; Hua *et al*, 2015). Wang *et al* (2012) reiterated that SMS text message alerts can be used by library personnel to offer services such as date-due reminder service, renewal- request service, overdue notification service, request arrival notification service (reminds users about the availability of reserved items), exhibitions, instructions, new title notification service, among others. Chandhok and Babbar (2011) similarly stated that users can use the SMS service to request for an overview of outstanding fines, checking the availability of resources, requesting for opening hours of the library, and mobile instructions.

Library users on their own are currently more techno savvy and library personnel must not relent in following the trend in order not to be pushed out of the trend. Consequent upon this, library personnel globally are currently deploying various technological tools such as social media tools in rendering effective services to library

users. Ezeani and Igwesi (2012) affirmed that Information Communication Technologies (ICTs) advancement has globally transformed and improved library profession. This development has led to enormous and progressive changes in the activities of library personnel and services offered and delivered to library users in university libraries. In a similar vein, Harmon and Messina (2013) averred that library personnel have adopted the use of social media in virtual referencing for advertisement, marketing and promoting latest acquisitions and for alerting users on library events, programmes and activities.

It is worthy of note that library personnel in university libraries are assiduously working towards employing tools that will enhance service delivery and increase efficiency of job performance. Use of social media tools has become part of the service tools among library personnel in higher institutions of learning. Hence, university libraries are incorporating new technologies such as social media in order to remain relevant in their universities and to meet the information needs of their users. Daviesi (2012) stressed the importance of integrating social media tools in university libraries for the enhancement and improvement of service delivery.

Similarly, Daluba and Maxwell (2013) reiterated that social media tools serve as means of interaction and communication through which users create, share and exchange ideas, information and knowledge in a virtual community. Hanif (2009) also pointed out that the fast pace technological developments have changed the way user's access and retrieve information which, the effective service delivery and dissemination of information has been made easier with the use of social media tools. In support of the above, Mon (2015) made a declaration that the rise of social media technologies has created new ways of seeking and sharing information for millions of users worldwide, but also has presented new challenges for libraries in meeting users where they are within social spaces.

Libraries have therefore, responded by creating positions within a variety of social media platforms and seeking new ways of engaging users in social spaces and in virtual communities. As university libraries crave to continue to remain relevant in the global trend, social media tools become indispensable in influencing and maintaining relationships with users who are already captivated into using social media tools. Social media enhances communication to near face-to-face where everyone can create and communicate content irrespective of the geographical location (Ayiah and Kumar, 2011; Lenhart, 2015).

Another library service that has gained global recognition in university libraries as a result of social media is the Instant Messaging service (IM). It is a real-time, virtually instantaneous communication between two or more people using word-based format. Most libraries are already deploying IM for providing “real-time reference” service, where patrons can synchronously communicate with librarians much as they would in a face-to-face reference context (Arora, 2008). The application of social media in the library has resulted in the effective management of library services and resources especially in the area of CAS and SDI. Adebayo (2009) was of the opinion that more dynamic, challenging and practical user-friendly services such as CAS, SDI, literature searching, Indexing and Abstracting Service and functional ICT service should be given priority in all libraries.

The use of social media by library personnel in the library environment has been reported from across the globe. Studies have indicated that social media tools such as Flickr, Facebook, Blogs, LinkedIn YouTube, Slide share among others have been deployed by majority of academic libraries for service delivery. For instance, Akporhonor and Olise (2015) carried out a study on librarians' use of social media for promoting library and information resources and service in university libraries in South-south Nigeria. It was revealed that social media tools such as blogs and Facebook were the most commonly used social media to promote library and information resources and services in the libraries. They also reported that librarians' use of social media promotes two-way communication, which made communication with library users easier, as well provided forum for feedback and increased library use and patronage.

In addition, Ramos and Abarigo (2012) carried out a similar study on the evaluation of digital reference service (Ref.2.0) in some selected academic libraries in Philippine. The researchers stated that social media tools such as Facebook and Twitter were being utilised by few libraries for their service delivery. In the contrary, in USA, Hendrix, Chiarella *et al* (2009) carried out a study on the use of Facebook in academic health science libraries and reported that most libraries in the US have full integration of social media tools for effective service delivery. Another study was carried out by Mahmood and Richardson (2011) on the adoption of Web 2.0 technologies in selected 100 academic libraries in the US. The study revealed that US libraries were implementing the use of social media at different levels. It was also reported that RSS was the most frequently used (98%), Social Networking Site such as Facebook (90%),

blogs (85%), Vodcast (70%), Podcast (65%), while Flickr (48%), wikis (40%) and Instant Messaging (9.5%) were not sufficiently used.

However, the overall findings indicated that a good number of libraries made use of social media basically for information literacy programmes, promoting and marketing of library information products and services, sharing of knowledge and information and to gather feedback from users. A related study was carried out in Illinois US by Phillips (2011) on the use of Facebook among academic librarians and how they could build relationship with students using Facebook. The researcher revealed that academic libraries were considering applying Facebook for marketing and delivering services to users, hence the relationship established between librarians and users would encourage more patronage.

A more recent study by Hamad *et al* (2017) on the role of social networks in enhancing the library profession and promoting academic library services in two academic libraries in Jordan, (the University of Jordan library and Al-Balqaa' Applied University library) revealed that there was a high awareness and extensive use of social networks for professional development. However, it appeared that social networks were not fully exploited to promote library services and they recommended that academic libraries in Jordan universities should endeavour to integrate and make better use of social media tools to promote library services.

Bosque *et al* (2012) also carried out a study on the use of Twitter in 296 academic libraries in the US and found that 34% of the libraries had a Twitter account for service delivery. The researchers reported that libraries were using Twitter to inform users about library events and activities, instructional workshops, new resources, responding to users' tweets among others. The researchers admitted that Twitter is a worthwhile tool that could be used for effective interaction and communication between library personnel and library users.

Wan (2011) added that university libraries can use Facebook to provide updates on library services such as new reference service, document delivery, research supports among others. The author further stated that university libraries can also put up post related to library collections such as updates or promotions of electronic and print collections, database trials, create events invitations for promoting library activities. A study by Ayu and Abrizah (2011) explored the application and use of Facebook among Malaysian academic libraries, the authors reported that outreach service proves to provide better practices using social networking sites. Fabian *et al*

(2003) on the other hand explained how multimedia technologies were used to deliver variety of outreach events over a calendar year at University of Buffalo libraries.

Phillips (2011) suggested that libraries should endeavour to apply their knowledge in modern technologies when initiating services particularly outreach activities after conducting an analysis using Facebook to build relationships with students. Facebook is seen to be user friendly. Library personnel can deploy Facebook platform to interact with users to know their information needs and as well get feedbacks, comments even critics and suggestions from them on how to improve the services being rendered. Stone (2013) posited that library personnel that have deployed the use of Facebook as a tool for service delivery attract more library users. This is because Facebook is user friendly, easy to use and encourages effective communication. Chan (2011) avowed that Facebook allows for advert placement to be tracked in great detail and to reach out to majority of users without any limitation. A similar study by Jacobson (2011) concludes that Facebook appears to be a useful tool for announcements, advertisement and for library marketing.

A newer social networking site that is gradually gaining popularity in university libraries is Pinterest. Pinterest is a social media tool that allows users to share images, crafts, designs, photos among others. Dudenhoffer (2012) affirmed that Pinterest is being used by library personnel to promote and market library information products and services. They have further made some efforts in integrating it into information literacy programmes and copy right instruction for users. The scope of service delivery in the library environment has tremendously increased as a result of social media.

Social media tools such as Really Simple Syndication (RSS) feeds, blogs, MySpace, Facebook, LinkedIn, Twitter, YouTube, e-alerts, Flickr, slide share among others are important tools for CAS. Library personnel utilise these tools to keep users abreast of current information and to increase users' awareness of e-resources available in the library for their research. They can be deployed for promotional purposes, marketing, information and knowledge sharing, user education, inter-library loan services, literature search, to receive feedback and many others (Ali, 2014).

Social media tool such as YouTube could be deployed by university librarians for user education service, outreach service and for library instruction service. In line with this, Meyer-Martin and Lambert (2013) identified various ways by which academic libraries are using YouTube for tutoring users on how to access and locate

information materials in the library as well as how to use the Internet to source for information. They also asserted that Californian State University Northridge is using YouTube for library user education and tutorials.

Service delivery in library environment typically entails full interaction between library personnel and library users. The application and use of social media in university libraries are increasing at an exponential rate particularly in developed countries (Canty, 2012, Makori, 2012), while developing countries are still lagging behind in the integration of these tools for effective service delivery and for job performance (Ezeani and Igwesi, 2012; Sullivan, 2014). Therefore, the integration of various types of social media for service delivery particularly in university libraries would be of immense benefit to both library personnel and users.

2.4 Motivational factors of library personnel for social media use

University libraries play significant roles in institutions they serve and library personnel in these institutions are the best human resources responsible for delivering quality and effective services to users. The capacity and ability of library personnel to offer efficient services with a high level of quality will enable them to win a niche in the new trend of information age. It is therefore, imperative for library personnel to be motivated for quality service delivery. Motivation is one of the key factors used to measure performance of personnel in organisations, firms, and institutions among others. Motivation activates behaviour, gives direction and drives personnel to reach individuals and institutional goals and objectives. In order to improve the understanding of library personnel's motivations, universities and libraries' management are stimulated to recognise the nitty-gritties of motivational factors of library personnel for social media use.

Thus, the term motivation according to Khan *et al* (2010) is derived from the Latin word 'movere' which means to move. Therefore, motivation implies to move, push or persuade towards satisfying a need which is a basic mental and emotional processes. Motivation could also be described as the inner will of an individual to carry out activities and mandates with enthusiasm and commitment. It could also be a way of encouraging individuals to pursue and meet up with constraints being faced. The provision of appropriate motivation improves service delivery.

In addition, Snelgar, Shelton and Giesser (2017) citing Robbins and Judge (2011) refer motivation as the procedures that portray an individual's intensity,

direction and persistence towards the accomplishment of a particular goal. They further opined that in order to ensure job satisfaction in employees, it is important to have the knowledge of what motivates personnel to perform optimally as well ensure its integration. Hence, any influence that triggers, directs and maintains individuals' attitude and behaviour could be regarded as motivation. Therefore, understanding the factors that motivate library personnel to render effective service delivery becomes necessary. One of the most renowned applications of motivation research to information system use is the Technology Acceptance Model (TAM).

TAM was originally developed by Davis (1989) from research on user acceptance of computer technology through Theory of Reasoned Action (TRA) developed by Fishbein and Ajzein (1975) which was later upgraded to TAM 3 by Venkatesh and Bala (2008). Based on this model, technology use is directly determined by behavioural intention to use information system and this intention is determined by attitudes of the user toward the technology.

Explicitly, intention is determined by motivational factors such as the perceived usefulness of the technology (usefulness of the information technology for attainment of objectives) and perceived ease of use (the usability of the technology). Research has established that perceived usefulness is influenced by perceived ease of use and that perceived ease of use is determined by multiple factors that consist of self-efficacy, perception of control, computer anxiety, computer playfulness, enjoyment, and objective usability which indicates the actual level of effort required to use the technology to complete a specific task (Venkatesh, 2000; Venkatesh and Bala, 2008).

However, the initial theories of motivation such as Maslow's hierarchy of needs, Theory X and Y, the Two- Factor Theory by Herzberg and McClelland's Theory of Needs built the foundation for research in motivation which is classified as content theories. These content theories identified causes or needs connected with motivation on one hand. These theories also limited the explanation of motivation to a specific number of factors but only describe how to motivate people under these conditions (Francesco and Gold, 2005) cited in Snelgar *et al* (2017). On the other hand, process theories, such as Reinforcement Theory, Goal Setting Theory, Expectancy Theory and Equity Theory, principally considered the activity than to the content. Process theories enable individuals to understand how behaviour begins, guides, sustains and stops (Jalilvand and Ebrahimabadi, 2011).

Therefore, motivation is concerned with the power and direction of behaviour and the factors that would influence individuals to behave in certain manners. Motivating other individuals is about making them to move in the direction towards achieving a positive result. Personnel are motivated when they expect that a progress of action is likely to lead to the accomplishment of a goal. Motivation can be broadly categorised into extrinsic and intrinsic motivation.

Extrinsic motivation

Extrinsic motivation usually centers attention on factors that are goal driven such as rewards, benefits and remunerations of performing a definite task. It is driven by forces that are external to an individual rather than internal. Extrinsic motivation is not linked to the gratification and fulfillment the employee derives from performing the task itself, but rather from the external outcomes of the task such as financial rewards or incentives (Giancola, 2014).

Similarly in the words of George and Jones (2012), extrinsically motivated personnel are motivated when they get progressive appraisal or reinforcers provided by other people, and they are often motivated by factors such as salary at the end of the month or a bonus, elevation or promotion. Qayyum and Sukirno (2012) describe extrinsic motivation as the effect of external factors on an employee's motivation level which originates from outside of a person, for instance, financial incentives and status or avoidance of punishment. Conversely, extrinsic motivation according to Legauil (2016) refers to performance of behaviour that is essentially dependent upon the attainment of an outcome that is separable from the action itself.

Intrinsic motivation

Intrinsic motivation on the other hand could be referred as a behaviour that is determined by internal rewards. In other words, the motivation to engage in a particular behaviour arises from within the individual because it is naturally satisfying to such an individual. It involves performance of an activity without any obvious external reward. In intrinsic motivation, individuals enjoy activities being performed or see it as an opportunity to explore, learn, and actualise positive potentials. Legauil (2016) sees intrinsic motivation as the engagement in behaviour that is inherently satisfying or enjoyable which is instrumental in nature (that is, action is not contingent upon any outcome separable from the behaviour itself).

In intrinsic motivation, individuals in most cases actively strive toward performing actions they find interesting, fun or enjoyable. Intrinsic motivation can

arise from factors generated by oneself. This could influence people's attitude to work which is not created by external incentives but by the work itself. Consequent upon this, individuals would feel that their work is imperative, fascinating and inspiring and it would provide them with a reasonable degree of independence, with freedom to perform and develop their skills, abilities and competences.

However, both intrinsic and extrinsic motivations are not mutually exclusive. Personnel can be either intrinsically motivated or extrinsically motivated or both at the same time. Some researchers and theories had stressed that intrinsic motivation can be more effective than extrinsic motivation in motivating individuals at workplace (Nasri and Charfeddine, 2012; Giancola, 2014). This is because intrinsic motivators derive natural and innately satisfaction from their work performance rather than external rewards. Hence, for the purpose of this study, motivational factors on the use of social media by library personnel such as Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Perceived Enjoyment (PE) and Computer Playfulness (CP) would be considered.

Perceived Usefulness is an example of extrinsic motivation which could be a determinant of any new information system use such as social media for service delivery by library personnel. Previous studies have shown that Perceived Usefulness has a strong and consistent positive relationship with information system usage and many have examined the effect of Perceived Usefulness on the acceptance and use of technology (Plouffe *et al*, 2001; Hong *et al*, 2002; Liaw, 2002; Chau and Hu, 2002; Gefen, 2003; Hardgrave and Johnson, 2003; van der Heijden, 2004; Morris *et al*, 2005). A plausible reason is that individuals will use any information system only if they perceive that the use of such information system will help in achieving the desired task performance.

Likewise, Akinde and Adetinmirin (2012) investigated on Perceived Usefulness as a correlate of extent of Information and Communications Technologies (ICTs) use for teaching by library educators in Nigerian universities and found that Perceived Usefulness had a positive impact on teachers. This implies that the extent of any new information system use depends on its usefulness. This is also in line with Davis (1989); Adams *et al* (1992); Chiu and Wang (2008); Ataran and Nami (2011); Ke *et al* (2012); Stone and Baker-Eveleth (2013); Baker-Eveleth and Stone (2015); Weng *et al* (2018) that Perceived Usefulness influences information system use. In TAM context, PU is postulated to be the direct predictor of behavioural intention (BI) to use any

technology of interest (Park *et al*, 2014). Previous study like Baker-Eveleth and Stone (2015) indicated that PU is positively related with continuance intention in the context of e-text.

Similarly, Abd.Hamid *et al* (2016) carried out a study on the effects of Perceived Usefulness and Perceived Ease of Use on continuance intention to use e-government in Malaysia and found that both Perceived Usefulness and Perceived Ease of Use were statistically significant predictors of Malaysians' continuance intention to use e-government. This finding is consistent with prior studies such as Kim (2010); Barnes (2011); Li and Liu (2014) and Abbas and Hamdy (2015). Ramirez-Correa *et al* (2019) carried out a study on the use of social networking sites by older adults in Chile and found that perceived usefulness was significantly related to the use of social networking sites by older adults.

In the field of information science, many TAM studies have confirmed that an individual's willingness to use an information system is determined by the perception of how useful the information system is to them (Liang *et al*, 2011). Therefore, it is expected that library personnel in universities in Southwestern Nigeria would adopt social media for service delivery if they perceive that social media tools would be useful and support them in attaining desired performance in service delivery. Perceived Ease of Use plays a critical role in information system use. It is seen as the extent to which library personnel perceived that using social media for service delivery would be easy and understandable with less effort.

Library personnel would more likely use social media tools for service delivery as a result of being easy to use and not complex. Abd.Hamid *et al* (2016) in their study on the effects of Perceived Usefulness and Perceived Ease of Use on continuance intention to use e-government in Malaysia and found a significant relationship between PEOU and continuous intention to use e-government but it was not as strong as perceived usefulness.

Hwa *et al* (2015) examined Perceived Usefulness, Perceived Ease of Use and behavioural intention to use a learning management system among students in the University Tunku Abdul Rahman (UTAR) in Malaysia. The study reported that Perceived Ease of Use was positively correlated with behavioural intention to use learning management system. It was inferred from the findings that students who perceived the technology as easy to use would increase their behavioural intention to use the system.

Dumpit and Fernandez (2017) carried out a study on the analysis of the use of social media in Higher Education Institutions (HEIs) in Philippine using the Technology Acceptance Model. The researchers found that perceived ease of use (PEOU) significantly determines perceived usefulness (PU) and that both Perceived ease of use and perceived usefulness are determinants of information system use. Thus, if information system such as social media is effective and easy to use, library personnel would be more likely to use it as this would be expected to strengthen library personnel's perceived ease of use of the system.

Perceive Enjoyment is a vital intrinsic motivation that describes the extent to which pleasure and fun can be derived from using any information system (Chao, 2019). Enjoyment is an effective reaction that could affect job performance such as service delivery. In hedonic information technologies such as social media tools, Perceived Enjoyment is consistently described as major indicator of intention to use new technology (Pillai and Mukherjee, 2011; Moqbel, 2012; Ernst *et al*, 2013).

Oum and Han (2011) proposed that service providers should unceasingly provide users with a pleasant experience while using any information system because use of user-created content services is significantly influenced by Perceived Enjoyment. On the contrary, studies on some information technologies such as 3G mobile services by Suki and Suki (2011) and blended learning systems by Padilla-Meléndez *et al* (2013) revealed that Perceived Enjoyment is not a direct determinant of Information system use.

In a similar vein, Mubuke *et al* (2017) carried out a study on the impact of Perceived Enjoyment on the intention to use M-learning in university environment basically from Makerere University and Kampala University in Uganda. Results indicated that Perceived Enjoyment showed a significant impact on the intention to use M-learning. Similarly, a study carried out by Wong and Haung (2015) revealed that Perceived Enjoyment had an impact on the intention to use M-learning systems. Therefore, it's indicated that PE significantly affects intention to use learning systems via mobile devices.

Previous studies by Zhou (2012) and Wu *et al* (2012) have empirically included PE to the Unified Theory of Acceptance and Use Technology (UTAUT) to predict user acceptance and adoption of information system, and found this construct has a positive effect on attitude towards using a specified system. Perceived enjoyment is one of the

key external factors that significantly influence individuals' PU, PEOU, and use intentions toward an Information System.

Chao (2019) investigated on factors that determine the behavioural intention to use mobile learning with an application and extension of UTAUT model in Taiwan and found that perceived enjoyment significantly influences individuals' PU and PEOU and has influence on any information system. Therefore, the rationale is that library personnel who experience enjoyment from using an information system such as social media for service delivery are more likely to use it extensively than those who do not perceive it to be enjoyable.

Computer Playfulness is another factor that could influence library personnel use of social media for service delivery. Venkatesh (2000) stated that computer playfulness is seen as the desire for using computers for fun rather than specifically for positive outcomes associated in using which basically involves exploration and discovery. This implies that those who use it for fun are more likely to take it too lightly the difficulty associated with the use of the information system because they simply enjoy the process, and thus, they do not perceive it as being complex compared to those who are less playful. Therefore, those who are more playful with computers that is, using it for fun) are expected to perceive it to be easy to use (Venkatesh, 2000).

Prior research has found Computer Playfulness to be significantly related to actual use behaviour of information system use. For instance, Computer Playfulness is positively related to attitudes towards using computers, higher computer self-efficacy, lower computer anxiety and positive easy-of-use perceptions (Webster and Martocchio, 1991; Venkatesh, 2000; Hackbarth *et al*, 2003).

Hence, Computer Playfulness not only contributes to individuals' willingness to use information system, but also directly affects the actual usage behaviour where Computer Playfulness leads to profound involvement while using any information system (Agarwal and Karahanna, 2000). Invariably, if library personnel perceive the use of computers for service delivery as fun and easy to use, they are more likely to use the system because it would give them more gratifying experience. Therefore, it could be inferred that motivational factors could have effect on social media use by library personnel in Nigerian universities.

2.5 Personal characteristics of library personnel and use of social media

Information technologies have greatly influenced the pattern of rendering information service in most libraries and information centres. Libraries and personnel alike have in some points improved in functions and activities carried out through the use of various information technologies. Social media tools are some of the most prominent methods in information provision. Social media has been observed to have advantages for university libraries to maintain competition, save costs, enhance service delivery, marketing and promotion activities, as well maintaining and attracting users into the library. By implication, both the library personnel and the university libraries still need to make more efforts to understand some of the factors that could lead to the use and non-use of social media tools in the library.

However, the integration of new computer technologies have come with many challenges not just for physical resource allocation, but for the human resource as well. Previous study carried out by Medlin (2001) indicated that the use of any technological innovation may be due to several reasons. The reasons attributed include resource allocation, peer pressure and peer support. Nevertheless, the use of social media tools by library personnel in Nigerian universities as observed has been very slow and dawdling. This could be attributed to certain factors that were not unconnected with their personal characteristics such as age, gender, experience, level of education and marital status.

Personal characteristics such as age could influence the use of social media by library personnel in universities. Prior studies have indicated that age is an important personal characteristic that has influence on use of new technology (Venkatesh *et al*, 2003; Porter and Donthu, 2006; King and He, 2006; Wang *et al*, 2009; Chung *et al*, 2010). Studies have shown that majority of information system users tend to be young adults (Master, 2008; Ajuwon, 2013). Empirical studies conducted by Ajuwon (2013); Tarhini *et al* (2016) indicated that age was a factor that could determine the successful use of information systems. They further reiterated that older workers did not easily adapt well to changing technology probably due to age factor and they showed more resistance to change and use of new technologies. Hence, cognitive skills such as mental, intellectual skills among others could be lost with age.

Venkatesh *et al* (2003) reported that age was an important moderator in the Unified Theory of Acceptance and Use of Technology (UTAUT) model. They found that within an organisational context, the relationship between Perceived Usefulness

and behavioural intention to use a new technology was stronger for younger adults. In terms of the use of computer and the Internet, it has also been found that older people were less techno savvy in the use of technology (Tarhini *et al*, 2014). The reason could be that older adults often think that they are too old to learn a new technology.

Studies have also shown that age differences influenced the perceived difficulty of learning a new software application. Studies also indicated that younger adults had lower levels of computer anxiety than their older counterparts and that lower levels of computer anxiety could be associated with less reluctance to engage in opportunities to learn new Internet skills (Venkatesh and Morris, 2000; Saunders, 2004; Morris *et al*, 2005; Chaffin and Harlow, 2005; Jung *et al*; Cody and Silverstein, 2010). Porter and Donthu (2006) conducted a study among managers and policy makers in America on the factors influencing use of the Internet technology. They deployed age, education and income to test Perceived Usefulness and ease of use of new technologies among managers and policy makers. They reported that the capacity and ability to learn new things were less in older people and thus might avoid using new technology and also to circumvent any risk associated with the use of new technology.

According to Keller and Hrastinski (2006), age was a very significant factor that affected perceived participation and involvement in new technology use. The younger adults as vibrant digital scholars had more desire of participating in online community by using social media. Age was negatively correlated with Internet use as shown by empirical evidences (McKeown *et al*, 2007; Goldfard and Prince, 2008). However, the impact of age may be attributed to a combination of factors, including lack of Internet skills as well as differences in attitude among age groups and the perceptions of the benefits associated with the use of new technology, which are lower for older adults (Hargittai, 2003).

Invariably, older library personnel in universities might find it difficult to adapt to changing environment and might not want to use social media as a new technology for their work activities and for service delivery with the mindset that the new technology has come to take over their work activities and routines. Marumbwa (2014) explored moderating effects of socio-demographic variables on consumer acceptance of mobile money transfer services (MMTS) in Southern Zimbabwe and reported that age had a negative influence on using mobile money transfer services.

Gender is another personal characteristic that could influence the use of social media by library personnel. Tahini *et al* (2016) defined gender as a hierarchical and

classified separation between women and men entrenched in both social institution and social practices. They further reiterated that gender was considered as a factor for new technology use in models of behaviour and was introduced in the gender schema theory and other technology acceptance models such as Technology Acceptance Model 2 (TAM2) and Theory of Planned Behaviour (TPB). Venkatesh and Morris (2000) indicated that men and women are poles apart when it comes to decision-making processes, using different socially constructed mental structures in drawing inferences. Researchers have suggested that gender plays an important role in predicting use behaviour in the area of information system research (Venkatesh *et al*, 2003; Wang *et al*, 2009; He and Freeman, 2010).

A review of literature by Goswanmi and Dutta (2016) revealed that gender had influence on Information Technology use and that male users used information technology more than their female equals. Teo (2001) studied the Internet activities in Singapore and found that males were more dominant users and they took to Internet faster than their female counterparts. In a study conducted by Coklar and Sahin (2011) in Turkey among social network users, it was also found that female users had higher technostress levels than male users. Jackson *et al* (2001) also in their study on gender and Internet found that females were more prone to computer nervousness, computer anxiety and apprehension, less effective in terms of handling computers and have unfavourable and disparaging attitudes towards computer usage.

Islam *et al* (2011) have affirmed gender could affect the use of new technologies. In their study on 80 students from higher institutions of learning in Malaysia on e-learning revealed that female students faced technical barriers in understanding e-learning system as against their male colleagues. Bimber (2000); McKeown *et al* (2007) in their various studies indicated that information system use was lower for women compared to men. However, other studies carried out by some researchers such as Master (2008); Goldfard and Prince (2008) indicated that no difference existed between the percentage of male and female in their information technology use. By implication, gender might or might not have any effect on the library personnel use of social media in the library environment hence gender is becoming a less significant factor as the use of the Internet increases.

Computer use experience is another personal characteristic that could influence the use of social media among library personnel. Computer use experience according to Sun and Zhang (2006) is measured by the number of years a user has with

computers. Venkatesh and Morris (2000); Tarhini *et al* (2016) refer experience as the involvement of an individual in something over a period of time. Similarly, computer use experience according to Sun and Zhang (2006) is measured by the number of years a user has with computers.

Prior experience can be described as knowledge of a set of conditions gained in the past which are sufficient, adequate and appropriate to make actions based on those conditions (Eccles and Wigfield, 2002). This experience could positively relate to use of social media technologies (Echeng and Usoro, 2014). Fishbein and Ajzen (1975); Tarhini *et.al*, (2016) stressed that users may employ the knowledge that they have gained from their prior experience to form their intentions to use or not to use new information system. Hence, users' degree of relevance experience could influence the use of any information system.

Taylor and Todd (1995; 2001); Venkatesh and Davis (2000); Park *et al* (2012) empirically confirmed the relationship between those who had experience in the use of computer with those who were novice users. They noted that those who had computer experience would prefer to use new information system more than those who had little or no experience at all. Therefore, computer use experience could have a positive influence on the use of social media. Studies in the past also reported the influence of computer use experience on the use of new technologies.

For instance, Igarria (1990) as well affirmed that the rationale for control beliefs could be that older people were less likely to have computer experience, be less open to change, and consequently, be more susceptible and vulnerable to computer anxiety and nervousness. This implies that, when library personnel have prior knowledge in using computer technology, it could provide them with a more robust base to learn a newer information system hence relating their incoming information and experience with what they had already known.

Unlike age and gender, which are noted as the most fundamental predictors of information system use, educational level has been given very little importance in information system literature (Morris and Venkatesh, 2000). Similarly, Teo (2001) affirmed that there is limited amount of research on the relationship between level of education and system use. Igarria *et al* (1995) years back stated that in most cases, the level of education might not be among the main constructs, it is usually measured as part of the demographic characteristics or a control variable in data analysis. Previous researchers have found educational level to have had influence on the use of

information system (Mahmood *et al*, 2001; Zakaria, 2001; Rogers, 2003; Porter and Donthu, 2006; Sun and Zhang, 2006; Burton-Jones and Hubona, 2006). Venkatesh and Morris (2000) found a positive correlation between the level of education and Perceived Usefulness of any information system.

Similarly, Burton-Jones and Hubona (2006) suggested that higher education level could lead to easy use of a system thus reducing the computer anxiety as well as improving the overall attitude. Furthermore, evidences showed that the higher the educational levels, the higher the probability of information system use (Ono and Zavodny, 2007; Goldfarb and Prince 2008). Islam (2011) in his study on the effect of demographic factors on e-learning effectiveness in a higher learning institution in Malaysia indicated that users with higher level of education accepted using e-learning tools, which includes online resources such as library portal as a learning program and therefore contributed to the effectiveness of the e-learning system.

Teo (2001) in his study on demographic and motivational variables associated with Internet use activities reported that high level of education resulted in greater knowledge about information system use thereby facilitating Internet usage. This means that library personnel with higher level of education might have the capability of using the social media tools irrespective of the challenges that could be associated with the tools. More so, the library personnel's level of education could positively be related to social media use.

Another factor that could influence the use of social media tools is marital status. Marital status was found to have no significant effect on the effectiveness of e-learning system according to Mufutau *et al* (2012). It has been observed that marital status has not been adequately researched into as regards the use of social media in work place. Invariably, it might not really have any positive or negative effect on the use of social media by library personnel in universities for delivering of information service. Ajuwon (2013) carried out a study on the Internet accessibility, demographic and motivational factors influencing utilization of web-based health information resources by resident doctors in Nigeria and reported that marital status had significant influence on Internet accessibility.

Nyamba and Mlozi (2012) carried out a study on the factors influencing the use of mobile phones in communicating agricultural information in Tanzania. The authors revealed that marital status was found to be significant. The authors further stated that marital status had a positive predictor variable that influenced the use of mobile

phones in communicating information. In the study of Izogo *et al* (2012) on the impact of demographic variables on consumers' adoption of e-banking in Nigeria reported that marital status also had a significant relationship with consumers' e-banking adoption. These findings were in corroboration with the studies carried out by Lee and Lee (2001); Wang *et al* (2003). This could also be stated that from the extant literature, all the identified personal characteristics could be salient indicators of social media use by library personnel in universities.

2.6 Motivational factors of the library personnel and use of social media

Increasing use of Information Communication Technologies (ICTs) in librarianship has changed the library personnel's role with new technological applications being used in a variety of ways. University library personnel tend to vary in their willingness to use newer methods and innovations and to apply these innovations in their activities and service to the users usefully and practicably. Apart from the personal characteristics identified, motivational factors such as Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness have been observed to contribute significantly to the use of social media by library personnel.

Turner (1995:413) described motivation as: "voluntary use of high level self-regulated learning strategies, such as paying attention, connection, planning and monitoring". Motivation is a process of arousing and sustaining goal directed behaviour (Shadare and Hammed, 2009). Motivation often times energises, directs, and sustains behaviours positively. In the words of Malik (2010), motivation is regarded as the will to act and the willingness to apply high levels of effort towards organisational goals conditioned and accustomed by the efforts and ability to satisfy some individual needs. According to Guay, *et al* (2010:712), motivation refers to the "reasons underlying certain behaviour". Broussard and Garrison (2004:106) defined motivation as the "attribute that moves individuals to do or not to do a particular thing".

Lowry, *et al* (2013) described motivation as the inner force that drives individuals to accomplish and achieve personal and organisational goals, aims and objectives. The authors further opined that motivation is commonly applied to the entire class of drives, desires, needs, wishes and similar forces and one's direction to behaviour. Yamoah and Ocansey (2013) opined that motivation stimulates, encourages and inspires an individual to work willingly and freely with zeal, initiative, confidence

and satisfaction. They further reiterated that motivation involves motives, intention, behaviour, goals and feedback from individuals.

Motivation indicates the internal state of mind that energises, rejuvenates, activates or moves an individual and directs such individual's behaviour towards accomplishment of goals. Motivation however, has been conceptualised as a continuous flow of behaviour comprising three components such as direction (goals), energy (allocated to the pursuit of those goals), and persistence (versus a change) in goal pursuit (Petri and Govern, 2013). Motivation is driven by needs and desires which originates from within an individual (intrinsically) and from external influences (extrinsic motivators) (Howard *et al*, 2010). Motivation is an important driver of attitude. It does not affect only the cognitive factors such as perception but also affects the total performance of individuals in organisational setting (Cho and Perry, 2012).

Various attempts have been made in understanding the role motivation plays in information system use or the use of new innovation (Venkatesh, 2000; Malthro, 200/8; Soliman and Lapointe 2009). It has been observed that most university library personnel are having difficulty accepting the newly introduced technological service delivery practices. This could be attributed to certain motivational factors which include among others Perceived Ease of Use, Perceived Usefulness, Perceived Enjoyment and Computer Playfulness. Rutheford (2008) employed Diffusion of Innovation Theory of Rogers to study the implementation and use of social media tools among librarians. The study discovered that the major factor for the use of these tools is acceptance. Therefore, if the library personnel should see the new technologies as important tools that cannot be taken with levity, therefore, the tools would be used effectively in the library environment with less effort.

Motivation theorists such as Davis *et al* (1992); Teo *et al* (1999); Sanchez and Hueros (2010) classified motivation into intrinsic and extrinsic. The authors stated that both intrinsic and extrinsic motivations are two critical factors that could be employed in determining information technology use. Yoo *et al* (2012) carried out a study on the roles of intrinsic and extrinsic motivators in promoting e-learning in the workplace in South Korea. They found that extrinsic motivation on e-learning did not directly and independently impact behavioural intention to use the information system but increase behavioural intention to use e-learning when mediated and intervened with intrinsic motivation. While intrinsic motivation could influence intention to use information system directly.

Intrinsic motivation however, is the desire of an individual to achieve something because such individual truly wants to and takes pleasure or sees value in doing so (Pintrich, 2003; Huang, 2015). Teo (2001); Chang and Chin (2012) defined intrinsic motivation as the performance of an activity for no apparent reinforcement other than the process of performing the activity itself. Deci and Ryan (2000) affirmed that intrinsic motivation involves doing something because it is inherently interesting and enjoyable which also results to high quality performance and activity. By implication, intrinsic motivation does not require external reward and incentive as such before an activity could be performed. Intrinsic motivation is significantly associated with both satisfaction and intention which exists within the individual rather than relying on external pressures or a desire for reward.

In other words, when an individual is motivated intrinsically, inherently or naturally, they would with interest participate in such activity without expecting any reward or compensation afterwards. It is rather driven by interest, enjoyment, pleasure and satisfaction. Deci *et al* (1999) stated that intrinsic motivation energises and sustains activities through impulsive and spontaneous satisfactions inherent in effective volitional action. They further opined that it always manifests in behaviours such as play, exploration, and challenge rather than external rewards. Additionally, Ryan and Deci (2000:56) defined intrinsic motivation as: “the performance of an activity for its inherent satisfaction rather than for some separable consequence. When intrinsically motivated, a person is moved to act for the fun or challenge entailed rather than because of external products, pressures or reward”.

When intrinsically and innately motivated, a person is stimulated to perform for the pleasurable or challenge involved rather than for external products, pressures or reward associated with it. The researchers further stressed that the idea of intrinsic motivation was first acknowledged within experimental studies of animal behaviour where it was discovered that many organisms were driven and motivated by exploratory, experimental, playful, inquisitiveness and curiosity behaviours even when reinforcements and rewards were absent. This is because, individuals are naturally active, inquisitive, playful and curious as well as always ready to learn and explore without incentives and inducements.

This natural motivational tendency according to them is a very important element in cognitive, social and physical development because it is through acting on one's inherent interest that one grows in knowledge and skills. As dominant and

prevailing as intrinsic motivation, some antecedents have been observed to reduce intrinsic rewards such as threats, deadlines and directives. The reason is that individuals may sometimes see them as controllers and checkers of their behaviours while choice and opportunities for self-direction appear to enhance and improve intrinsic motivation because of the sense of autonomy or independence they create (Ryan and Deci, 2008). Prior researches indicated that intrinsic motivation had a significant direct impact on user's intention to use information system naturally (Baard, *et al*, 2004; Fagan *et al*, 2008; Clark and Mayer, 2011). This implies that library personnel could be motivated intrinsically to use social media in the library environment without seeking for external rewards.

Extrinsic motivation on the other hand is the performance of an activity because it is perceived to be instrumental in achieving valued outcomes that are distinct and separate from the activity itself (Moon and Kim, 2001). Extrinsic motivation varies considerably in its characteristics and thus can either reflect external control or influence self-regulation. By implication, extrinsic motivation would influence and impact behaviour because of reinforcement, rewards and recompenses. It is a construct that relates whenever an activity is done in order to attain some distinguishable and separable outcome. Unlike intrinsic motivation, extrinsic motivation varies greatly in the degree to which it is independent, self-regulated and self-directed. For instance, library personnel who fears management or library head's sanctions for her inability and incapability to carry out work activities as expected of her is extrinsically motivated.

Therefore, such library personnel could carry out the function invariably to attain the separable outcome of avoiding sanctions. Similarly, if library personnel carry out a function because of the valuable outcome afterwards, such personnel is also extrinsically or externally motivated. Both examples are contributory and instrumental. The latter case entails personal endorsement and validation as well as a feeling of choice, whereas the former involves mere agreement with an external control. Extrinsic motivation also emerges from the influences outside of the individuals in the performance of a behaviour which is described as either verbal reinforcement, threat of punishment for non-performance of duty, competition, monetary rewards among others. The use of rewards in the words of Lai (2011) could to a large extent encourage or diminish motivation depending on the context in which they are given.

Some of the identified motivational factors that could influence the use of social media by library personnel in library environment are Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Perceived Enjoyment (PE) and Computer Playfulness (CP). Empirical studies have shown that people use new information technology due to the fact that they feel it is easy, vital and beneficial to them for the achievement of set goals (Tan and Teo, 2000; Hwa *et al*, 2015; Elkaseh *et al*, 2016) and as well as the enjoyment that could be derived from using it (Ramayah *et al*, 2003). TAM has argued that information system use is determined by two key factors: Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) (Davis 1989; Venkatesh *et al*, 2003).

Perceived Ease of Use is however a form of intrinsic motivation. It has received much attention from several researchers (Gefen and Straub, 2000; Venkatesh *et al*, 2003; Bugembe, 2010; Suki and Suki, 2011; Zafiropolous *et al*, 2012; Khayati and Zouaoui, 2013). It is the degree to which a person believes that using a particular system is free from efforts (Moore and Benbasat, 1991; Yulihastri and Daud, 2011). They researchers identified Perceived Ease of Use as an important determinant of system use through Perceived Usefulness. Abou-Shouk and Hewedi (2016) affirmed that Perceived Ease of Use represents the degree to which an innovation is perceived to be easy and not difficult to understand, learn or to operate. The authors further stated that it is the degree to which individuals perceived a new information system as better than its substitutes or alternatives. Jahangir and Begun (2008) see Perceived Ease of Use as the degree to which the user expects an information system to be user friendly, pleasant and responsive.

Therefore, it implies that an application that is perceived to be user friendly or easier to use and understand would be accepted more likely and used by users as compared to a more complicated and complex one because using such information system will require a minimum and less effort. However, in this context, Perceived Ease of Use is the extent to which library personnel perceived that using social media for performance of work activities will be free from mental and physical efforts. By implication, any new information system that users perceive to be easier and less complex to use would increase the likelihood of its use. Studies over the past decades provided evidences of the significant effect of Perceived Ease of Use on use intention, either directly or indirectly (Davis *et al*, 1992; Igbaria *et al*, 1997; Venkatesh and Morris, 2000; Wang *et al*, 2009; Eriksson *et al*, 2005; Guriting and Ndubisi, 2006; Hernandez and Mazzon, 2007; Juniwati, 2014).

Al-Haderi (2014) carried out a study on the influence of system characteristics on the acceptance of information technology in Middle East through the use of basic constructs of Technology Acceptance Model 2 and Unified Theory of Acceptance and Use of Technology (UTAUT). The study focused on use issues among public employees at the Republic of Yemen. The study revealed that Perceived Ease of Use had a significant positive effect on information system use. The study further established that the employees and managers used an information system when they perceived that it was easy to use and that it could help them in achieving organisational stated goals.

In the same vein, Huang (2008) found the impact of e-consumers' Perceived Ease of Use to be mediated by their behavioural attitude on their satisfaction to use new information system. Those findings are in consistent with several previous studies such as Chang and Tung (2008); Almarashdeh *et al* (2011), Farahat (2012); Sharma and Chandel (2013); Alatawi *et al* (2014); Baleghi-zadeh *et al* (2014) among others.

Thus, previous studies on Perceived Ease of Use have shown significant effect on Perceived Usefulness either directly or indirectly in the majority of studies (Taylor and Todd, 1995; Agarwal and Prasad, 1997; Venkatesh and Davis, 2000; Plouffe *et al*, 2001; Van Schaik *et al*, 2002; Hardgrave and Johnson, 2003; Henderson and Divett, 2003). In addition to direct effects of Perceived Ease of Use, an indirect effect through Perceived Usefulness has been reported for technology acceptance (Plouffe *et al*, 2001; Devaraj *et al*, 2002). This direct path indicates that Perceived Ease of Use motivates users when the system is easy to use and learn.

The indirect effect is explained as coming from a situation where less effort would be required to use a system. This implies that a system that is easier to use will facilitate more system use and task accomplishment than systems that are very difficult to use (Venkatesh and Morris, 2000). The researchers also indicated that although the direct effect of PEOU was very important over time, the indirect effect seemed to be stronger.

Perceived Ease of Use could be an antecedent of Perceived Usefulness rather than a direct determinant of actual use (Davis, 1989). However, many other studies carried out by previous researchers found no empirical evidence to support the relationship between Perceived Ease of Use and Perceived Usefulness (Jackson *et al*, 1997; Bajaj and Nidumolu, 1998; Hu *et al*, 1999; Chau and Hu, 2002). Agarwal and Prasad (1997) reported that Perceived Ease of Use, which has been observed to be a

significant predictor of acceptance in a wider variety of research (Davis, 1989; Mathieson, 1991), did not appear as a significant element and determinant.

Therefore, in the library environment, it is presumed that the information system such as social media tools could be used for delivering service and other work activities. Hence, the indirect effect of PEOU through PU could be more significant for existing social media users. An exception was found in the study by Ndubisi *et al* (2001), Chau and Hu (2002) where Perceived Ease of Use showed no significant effect on Perceived Usefulness. Perceived Ease of Use could be an antecedent of Perceived Usefulness rather than a direct determinant of actual use (Davis, 1989).

Perceived Usefulness on the other hand is a form of extrinsic motivation (Deci and Ryan, 1985) and one of the motivational factors that could influence library personnel use of social media. Perceived Usefulness is defined as the degree to which an individual believes that using a particular system would enhance her job performance (Davis, 1989). The author also sees Perceived Usefulness as the extent to which a technology is expected to improve a potential adopter's performance. It is an important determinant decision information system use and a central concept of TAM Model (Davis *et al*, 1989) which has been shown to be highly predictive of information technology adoption and use.

Perceived Usefulness has been found to be a determinant of actual behaviour which encourages users to use new technologies with greater autonomy to perform their work activities (Hu *et al*, 1999; Venkatesh, 2000; Gerrard and Cunningham, 2003). Davis *et al* (1989) argued that in a real work environment, behavioural intentions are based primarily on the performance related elements rather than on the individual's attitude towards behaviour. The importance of Perceived Usefulness has been widely recognised in the concept of information system use (Jaruwachirathanakul and Fink, 2005; Laforet and Li, 2005; Gurriring and Ndubisi, 2006; Jahangir and Begun, 2008).

According to the researchers, usefulness is the subjective probability which argued that using a particular technology would improve the way an individual completes a given task. In library context, it could be presumed that the level of usefulness of social media tools over traditional service could affect intentions of the library personnel towards usage. This implies that social media tools are perceived to be useful in enhancing and improving library personnel's work activities. Invariably, the greater the Perceived Usefulness of social media, the more likely the use of the

tools for library service delivery. Therefore, within the context of this study, Perceived Usefulness is defined as the degree to which library personnel in universities perceive that using social media would value and enhance their job performances.

Khalid (2014) carried out a study on the role of Perceived Usefulness and Perceived Enjoyment in accessing students' intention to use Learning Management System (LMS) using Three-tier user model (3-TUM) in Malaysia. 3-TUM was employed to examine Perceived Usefulness of LMS, the study revealed that Perceived Usefulness had a direct effect to use LMS. Suki and Suki (2011) examined the relationship among Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment, attitude and subscribers' intention towards using 3-G mobile service in Malaysia. Results showed that subscribers' intention to use 3-G mobile service is determined by their perception on its usefulness and how convenient it is to use and access 3-G mobile service function. Thus, Perceived Usefulness significantly influenced the behavioural intention of the students to use the system since they perceived the system to be useful in achieving their academic performances.

Mardikyan *et al* (2012) analysed the influence of behavioural intention towards the use of 3G technologies in Turkey with reference to Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) constructs. Their result indicated that Perceived Usefulness, variety of 3G service, service quality and social influence are factors influencing the behavioural intention towards the use of 3G technology. Yoo *et al* (2012) examined the roles of intrinsic motivator (PEOU) and extrinsic motivator (PU) in promoting e-learning in the workplaces in South Korea. The study revealed that intrinsic motivator (PEOU) affected employees' intention to use e-learning in the workplace more strongly than the extrinsic motivator (PU).

Liu, Tsai and Jang (2013) also carried out a study on patients' acceptance of a web-based personal health record system in Taiwan. The study reported that Perceived Usefulness was directly related to Perceived Ease of Use. Their results indicated that patients may not experience complete function and usage of the system if the system is not easy to use and understand. In a related study Jian *et al* (2012) investigated factors influencing consumer adoption of USB-based personal health records in Taiwan. The study also showed that Perceived Usefulness was found to be the most significant factor influencing the use of USB-based personal health records. Khayati and Zouaoui (2013) explored the effect of Perceived Usefulness and use of information

communication technology on subcontractors towards contractors companies. They found that Perceived Usefulness had a positive effect on Information Communication Technology use.

Similarly, Hamid *et al* (2016) examined the effect of Perceived Usefulness and Perceived Ease of Use on continuance intention to use e- government in Malaysia. The study indicated that both Perceived Usefulness and Perceived Ease of Use positively related to continuance intention to use e- government. This is in consistent with the studies of Wang *et al* (2011); Lin and Wang (2012); and Abass and Handy (2015) that Perceived Usefulness and Perceived Ease of Use positively associated with continuance intention to use new information system. Luo *et al* (2010) analysed the determinants of user acceptance of Enterprise Instant Messaging (EIM).

The study enlightened the critical antecedents of employees' intention to use Enterprise Instant Messaging (EIM). The study found that Perceived Usefulness is a predictor of intention to use enterprise instant messaging. In line with previous information system adoption and use research, the significant relationship between Perceived Usefulness and intention to use EIM among employees implied that EIM is useful and that users are always willing to accept and use the technology because of its relevance in work place.

Prior studies by Venkatesh and Davis (2000); Venkatesh, *et. al.* (2003) indicated that Perceived Usefulness is the strongest predictor of intention to use among TAM related variables for productivity oriented system. By implication, it could be presumed that Perceived Usefulness is as important as Perceived Ease of Use. Both are instrumental in the use of any information system. Hence, the library personnel who perceived social media tools to be useful in their work related activities and as well easy to use would likely adopt and use the system more frequently.

It is assumed that the relevance and usefulness of social media could be the main driving force in the intention to use the system by library personnel. However, earlier researchers such as Jackson *et al* (1997) found no relationship between Perceived Usefulness and attitude. Lucas and Spitler (1999) as well found no empirical evidence to support the relationship between Perceived Usefulness and behavioural intention. Szajna (1996), Lucas and Spitler (1999), and Bajaj and Nidumoulu (1998) also did not find any empirical support for the relationship between Perceived Usefulness and actual use.

Perceived Enjoyment (PE) is another motivational factor that could affect library personnel's use of social media. It is a form of intrinsic motivation that explains motives of users to use information technology (Moon and Kim, 2001; van der Heijden, 2004; Luo *et al*, 2010). Prior empirical studies have shown that individuals tend to use technology because they feel it is important and beneficial to their work activities and also the enjoyment being derived from using it (Igbaria *et al*, 1995; Teo, 2001; Ramayah *et al*, 2003).

Perceived Enjoyment is defined as the extent to which the activity of using the computer is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated (Davis *et al*, 1992). They further opined that enjoyment is the extent to which the activity of using a computer system is perceived to be personally enjoyable in its own right aside from the instrumental and contributory value of the technology. Similarly, van der Heijden (2004) see Perceived Enjoyment as the extent to which the activity or service offered by the information system is perceived to be enjoyable in its own right rather than the consequences that may be anticipated from using the system.

Perceived Enjoyment according to Praveena and Thomas (2014) is an intrinsic motivation that emphasises on the use process and reflects the pleasure and enjoyment associated with using an information system. Perceived Enjoyment however, is one of the main reasons people choose to use social networking sites (Hart *et al*, 2008) and it significantly influences the intentions to use any new information system (Davis *et al*, 1992; Igbaria *et al*, 1995). It has been employed in different settings and has been found to be a strong determinant of the behavioural intention in the context of voluntary use of technology and its impact on system use has been widely studied (Davis *et al*, 1992; Igbaria *et al*, 1995; MaryAnne and Christine, 1997; Moon and Kim, 2001; Lin *et al*, 2005; Ha *et al*, 2007).

Thus, in this context, Perceived Enjoyment is defined as the extent to which library personnel use of social media is perceived to be enjoyable and pleasurable in its own right apart from the performance consequences that may be anticipated. Previous studies have reported the effect of Perceived Enjoyment on user behaviour to use information systems (Moon and Kim, 2001; Koufaris 2002; van de Heijden, 2004; Nysveen *et al*, 2005; Hsu and Lin, 2007; Dickinger *et al*, 2008; Balog and Pribeanu, 2010). Praveen and Thomas (2014) investigated the continuance intention of using Facebook through an extension of TAM. A survey method was adopted and the sample

constituted both undergraduates and post graduate students. The result showed that Perceived Enjoyment was seen to be a strong determinant of attitude towards using Facebook but also found to be insignificant in the continuance intention to use Facebook.

Nysveen *et al* (2005) investigated the intention to use mobile chat service using data from a survey of 684 mobile chat service users in Norway. The result showed that Perceived Enjoyment is an important determinant of intention to use mobile chat service. According to them, mobile chat service was easy to operate and enjoyable. Lin *et al* (2005) also carried out a study on the intention to use web portal from a survey of 300 undergraduate and post graduate students in Taiwan. They reported that Perceived Enjoyment significantly influenced web portal use. Similarly, MaryAnne and Christine (1997) investigated World Wide Web (www) usage for entertainment purposes using data from a sample of 78 undergraduate business students and 84 graduate MBA students. The result revealed that Perceived Enjoyment significantly influenced the use of World Wide Web (www).

Van der Heijden (2004) also indicated that Perceived Enjoyment has been found to be a significant construct and even more important than Perceived Usefulness in information technology use. Dickenger *et al* (2008) studied the role of Perceived Enjoyment and social norm in the adoption of technology with network externalities in Austria. The study indicated that Perceived Enjoyment is an important antecedent for the adoption of information technology. Balog and Pribeanu (2010) correspondingly studied the role of Perceived Enjoyment on the students' acceptance of an augmented reality teaching tools (ARTP) using a structural equation modeling tools in Romania. The result showed that Perceived Enjoyment has a significant impact on behavioural intention to use ARTP.

Alenezi *et al* (2010) investigated the role of Perceived Usefulness, Perceived Ease of Use and Perceived Enjoyment on the intention to use the Internet in Saudi Arabia. The findings indicated that Perceived Usefulness had no significant effect to use the Internet, while Perceived Enjoyment had a strong relationship with Internet usage. On the contrary however, Pikkarainen *et al* (2004) previously investigated online banking service from a sample of 268 online banking users. The researchers reported that Perceived Enjoyment did not affect the use of online banking in Finland. In another related study by Igbaria *et al* (1995) on computer usage using 450 users

sampled from 81 companies in Finland was revealed that Perceived Enjoyment had no significant effect on use of data processing system.

The rationale behind Perceived Enjoyment is that individuals who experience pleasure or enjoyment from using an information system are more likely to use it extensively and comprehensively than others hence, enjoyment can also make users to overlook the difficulty associated with the technology since they enjoy the process and do not perceive it to be too difficult. The above studies thus, suggested that the influence of Perceived Enjoyment in an effective information system is not as striking and remarkable as that of traditional information system use. Therefore, in the library context, upon use, library personnel could be more likely to use social media that offer enjoyment while delivering service to library users than traditional methods which is presumed to have no enjoyment to offer but unadventurous in nature.

Computer Playfulness (CP) is another motivational factor that could influence the use of social media by library personnel. Computer Playfulness represents the intrinsic motivation associated with using a new system (Venkatesh and Bala, 2008; Davis *et al*, 1992) and it has been found to have influence on the use of new technology (Chen *et al*, 2002). Computer Playfulness according to Lin, Wu and Tsai (2005) is a situational characteristics of the interaction between individuals and situation. It also explains an individual's tendency to interact freely, openly, and creatively with computers without stress (Serenko and Turel, 2007).

Moon and Kim (2001) described perceived playfulness as the extent to which an individual perceives that her attention is focused on the interaction with the information system. It can also be considered to be either a state of mind or an individual trait (Webster and Martocchio, 1992; Moon and Kim, 2001). A state of mind according to the authors is a short-lived cognitive experience felt by an individual while a trait represents a characteristic of the individual which tends to be stable but also fluctuates or changes slowly overtime or a degree of mental freedom in microcomputer interaction.

Similarly, Hackbarth *et al* (2003) defined playfulness as being a system specific trait that can change because having experience in using technology increases overtime. Venkatesh (2000) stated that playfulness could be used synonymously as exploration, discovery, curiosity and challenge. The author further reiterated that individual's playfulness is critical in the early stages of system acceptance and use and tend to normalise with time. Atkinson and Kydd (1997) stated that playfulness is

significantly related to total web use especially for entertainment purposes. According to Zolkepli and Kamarulzahan (2014), playfulness is the degree to which a current or potential user believes that the social media sites would bring a sense of pleasure and enjoyment.

Computer Playfulness is a critical factor that reflects the users' intrinsic acceptance of the web which affects the flow of human interaction and communication; also could be influenced by users' experience with the World Wide Web (Moon and Kim, 2001). It also measures how users experience fun when using and experiencing information technology system (van der Heijden, 2004). By implication, when a user first interacts with a computer system, such individual could typically feel intimidated and stressed up and as a result, her degree of playfulness would be little and low.

On the other hand, when such individual attends some level of familiarity with the computer system, the anxiety, tension, nervousness apprehension and fretfulness would disappear giving room for free interaction with the system. Therefore, Computer Playfulness in this context is defined as the extent to which library personnel interact freely, openly, and creatively with computers and other related telecommunication devices without exhibiting any form of anxiety. Past studies have reported that the use of information system is influenced by perceived playfulness (Davis *et al*, 1992; Igbaria *et al*, 1996; Agarwal and Karahanna, 2000; Venkatesh, 2000; Chung and Tan, 2004).

The rationale is that library personnel who experience pleasure or enjoyment from using social media tools are more likely to use computers and other related devices extensively than those who do not. Davis and Wong (2007) studied the influence of measuring learners' acceptance of an e-learning system using three constructs from TAM 3 (Perceived Usefulness, ease of use and playfulness).

The result showed that among the three suggested variables, playfulness was the strongest determinant of behavioural intention to use e-learning management system. On the other hand, Al-Aulamie (2013) reported that Perceived Usefulness was the strongest determinant of behavioural intention followed by playfulness for the South Korean learners. Adetimirin (2015) carried out an empirical study of online discussion forums by library and information science post-graduate students in Nigerian universities using Technology Acceptance Model 3 and found that Computer Playfulness had a significant relationship with the Online Discussion Forum.

Furthermore, Padilla- Melendez *et al* (2013) investigated the effect of perceived playfulness on gender differences using technology acceptance model in a blended learning scenario in Taiwan. They found out that learners' overall perception towards playfulness was high; playfulness did not indicate any positive significance towards intention to use learning management system. Rather, playfulness made learners to perceive the system as easy to use. The non-significance of playfulness towards behavioural intention according to them was as a result of learners' strong perception towards Perceived Usefulness and Perceived Ease of Use.

The researchers argued that students' perception towards e-learning systems can be improved by incorporating the sense of amusement in the system design. However, some studies have also indicated that Computer Playfulness does not have any potential to improve users' perception to use an information system (Saade *et al* 2008; Saade *et al*, 2009; Al-Aulamie, 2013). Therefore, it could be presumed that Computer Playfulness could influence library personnel's use of social media in the university libraries.

However, Dumpit and Fernandez (2017) also carried out a study on the use of social media in higher institutions in Philippines using the Technology Acceptance Model. They reported that Perceived Usefulness, Perceived Enjoyment and Computer Playfulness were the most predictors of technology usage behaviour. Likewise, Wamba (2014) in his study on Perceived Usefulness, ease of use and risk in social media adoption in work place reported that Perceived Usefulness, Perceived Ease of Use and Computer Playfulness had a significant impact on social media adoption and use in UK, US, Canada, India and Australia.

2.7. Personal characteristics and motivational factors of library personnel and use of social media

The use of various social media tools has become every day routine for many library personnel in universities all over the world. Personal characteristics are also very important in determining technology use (Venkatesh *et al*, 2000). Personal characteristics such as age, gender, level of education, experience and marital status have received much attention in information system use literature (Gefen and Straub, 1997; Sun and Zhang, 2006).

In respect to age, studies have shown that age is one of the personal characteristics that has a direct effect on information system use (Venkatesh *et al*,

2003; Akhter, 2003; King and He, 2006; Porter and Donthu, 2006; Sun and Zhang, 2006; Yousafzai *et al*, 2010; McCoy, Everard and Jones, 2005; Chung *et al*, 2010). Venkatesh *et al* (2003) reported that age was an important variable within UTAUT model. They found that performance expectancy which is similar to Perceived Usefulness, facilitating conditions and behavioural intentions was stronger for younger employees while the relationship between effort expectancy which is similar to Perceived Ease of Use and social norms was stronger for older employees in accepting and using new information technology. For them, increase in age was shown to be associated with difficulty in processing complex motivations and giving attention to information on job performance.

In the contrary, Chung *et al* (2010) found no effect of age on the relationship between Perceived Ease of Use, Perceived Usefulness and behavioural intention to engage in online communities. Wang *et al* (2009) also did not find any effect of age on the relationship between performance expectancy which is similar to Perceived Usefulness and intention to use a mobile learning system. Other previous studies on the effect of age in system use indicated that younger adults valued Perceived Usefulness of any new technology more than the older adults on the use intention (Venkatesh *et al*, 2003).

While the older adults emphasised on the issue of Perceived Ease of Use more when assessing the usefulness of a given system (Czaja, *et al*, 2006; Arning and Ziefle, 2007). As age increases, learning to use new devices or service may become a more time consuming process. With age, the adjustment between Perceived Ease of Use and Perceived Usefulness becomes relevant (Melenhorst *et al*, 2001; Kovisto and Hamari, 2014). Sun and Zhang (2006) also found that the relationship between Perceived Usefulness and behavioural intention was stronger for young adults in the use of technology. This is possible particularly in organisations where younger adults may want to be independent more than the older adults.

However, the effect of age on Perceived Enjoyment in information system use has also been reported. For instance, Odumeru (2012) investigated on the influence of acceptance of e-banking by customers in Nigeria using TAM as a research framework. The study showed that age, level of education and experience influenced Perceived Enjoyment and all positively determined acceptance of e-banking in Nigeria. The above was confirmed by similar studies carried out in India, Malaysia, New Zealand

among others (Tan and Teo 2000; Chung and Paynter, 2002; Kamakodi and Khan, 2008).

Enjoyment is however, an efficient reaction that encourages and inspires performance. Therefore, library personnel could have fun while delivering online service to the users. In the same line of thought, Hsu and Lu (2004) stressed that enjoyment affects system use, that pleasure and joy have an impact on individuals' behaviour to use information systems. Yong (2016) investigated the determinants of smartphone adoption among older adults in Malaysia. The result indicated that Perceived Enjoyment had influence on older adults than the younger adults.

With regards to gender, past studies have reported that gender variable differs when making a decision and in information processing (Sun and Zhang, 2006; Venkatesh and Morris, 2000). Kovisto and Hamari (2014) stated that men display more instrumental, contributory and influential behaviour as well as more task and achievement oriented than women. They maintained that women are more interpersonal and interactive oriented than men. In online context, it has been indicated that women are more socially and communally motivated than men (Haferkamp *et al*, 2012; Muscanell and Guadagno, 2012).

Many prior empirical studies have confirmed that men were more motivated and influenced by the usefulness and relevance of information technology (Gefen and Straub, 1997; Venkatesh and Morris, 2000; Ong and Lai, 2006; Terzis and Economides, 2011) while women were more motivated and influenced by Perceived Ease of Use and user friendliness of the information system (Venkatesh, *et al*, 2003; Amin, 2007; Riquelme and Rios, 2010; Goh, 2011). Okazaki and Santos (2012) employed extended TAM to study 446 faculty members in Brazil in adoption of e-learning tools using structural modeling analysis. The result showed that Perceived Usefulness was stronger in men while Perceived Ease of Use was stronger in women.

With respect to Perceived Enjoyment on gender variable, Brad Sago (2013) carried out a study on the factors influencing the adoption and use of various social media service among undergraduate university students in the U.S. The study reported that influence of Perceived Enjoyment was higher for males than for females. Consequently in the library context, it could be presumed that Perceived Enjoyment and Computer Playfulness might have influence on both males and females in the use of social media in delivering of services to library users.

With regards to Computer Playfulness, Wang and Wang (2008) affirmed that men's perception to Computer Playfulness was higher than that of the females. According to Lin *et al* (2005), individuals with higher degree of playfulness or pleasure in information system use could have positive perception about the Perceived Ease of Use which could motivate use. This implies logically and plausible that Computer Playfulness could have a positive significant relationship with technostress because low level of computer self-efficacy could lead to technostress and vice versa.

Library personnel could be motivated to use social media tools if the tools are able to bring fun and pleasure when using them with little or no computer anxiety. Social media tools however can facilitate communication and efficient service delivery beyond physical library boundary. The tools have rich entertainment functions and library personnel can as well derive fun and pleasure while using the information system. Therefore, it is presumed that Perceived Enjoyment and Computer Playfulness would influence the library personnel's attitude towards the intention to use social media tools in the library for service delivery.

In relation to level of education and computer use experience, Mathieson, Peacock and Chin (2001) argued that both could reflect users' level of internal capabilities, skills and competences such as knowledge of the technology and task. While Perceived Ease of Use may partially mediate and facilitate this effect (Venkatesh, 1999), the theory of planned behavior suggests that education and experience have a positive direct effect on use over and above perceived ease of use and Perceived Usefulness (Igbaria *et al*, 1995; Mathieson *et al*, 2001). System experience should also have an additional effect through habit formation. This implies that the longer library personnel use social media tools, the more likely social media will become routine tools for service delivery in consideration of both Perceived Usefulness and ease of use of the information system.

Taylor and Todd (1995) argued that increased experience with information system allows a stronger relationship to form attitudes to use any information system. It has been observed that experience could increase Perceived Ease of Use and Perceived Usefulness by enabling users to become familiar with the structure of the system and understand how the system can be used to increase and enhance job performance. Past studies have found a positive effect of system experience on performance (Dishaw and Strong, 1999; Agarwal and Prasad, 1999).

Some empirical studies have also supported the benefits and advantages of level of education on system use. The level of education in previous studies was related to knowledge and skills which would affect use of new technologies. The level of education was found to influence both Perceived Ease of Use and Perceived Usefulness (Rogers, 2003; Porter and Donthu, 2006). Venkatesh and Davis (2000) as well found a positive correlation between the level of education and Perceived Usefulness. Similarly, Burton-Jones and Hubona (2006) affirmed that higher educational level would influence Perceived Usefulness and they are less sensitive to Perceived Ease of Use since it could reduce the computer anxiety and improve intention to use while individuals with lower educational level would regard Perceived Ease of Use as being important and imperative.

In contrast, Agarwal and Prasad (1999) found no relationship between level of education and Perceived Usefulness. Similarly, Venkatesh *et al* (2003) did not find any significant effect of experience on Perceived Usefulness. The rationale is that when individuals have prior knowledge in using any information system, it would provide a more opportunity to learn new applications. This implies that experienced individuals would regard Perceived Ease of Use as not being too significant and substantial but would always consider the usefulness of the information system. On the other hand, few empirical studies have reported that marital status had significant influence on information technology use (Lee and Lee, 2001; Nyamba and Mozi, 2012; Izogo *et al*, 2012; Ajunwo, 2013).

Generally, there are few studies on information system in general and specifically on social media that had considered the effect or the influence of personal characteristics such as age, gender, level of education, experience and marital status on Perceived Enjoyment and Computer Playfulness. However, based on the previous related literature reviewed, it could be presumed that library personnel's personal characteristics could influence both Perceived Enjoyment and Computer Playfulness on social media tools. This is because, if they derive pleasure and fun in using social media in their work activities and in the performance of their jobs, they would be intrinsically motivated and as well perceive using social media as being easy to use and user friendly without much effort.

2.8 Challenges to social media use by library personnel

It is evident that social media tools are becoming widespread and their value is recognised in various fields. Social media applications have been observed to be effective in information management and delivery of service by information and library professionals. Scholars have identified some of the benefits that come with the use of social media tools in academic libraries. For instance Penzhorn and Pienaar (2009) stated that social media tools allow innovative library service, provide users with news and events as well as up to date information relating to materials and service developments. Some libraries have produced promotional videos for YouTube, which are inexpensive to make and to reach out to large groups. As such, these tools can enrich the information service with multimedia experience (Hosseini and Hashempour, 2012).

Kwanya *et al* (2012) investigated the application of Web 2.0 in Kenyan libraries. They reported that Kenyan librarians affirmed that social media tools enhance and boost interactivity between library users and librarians and consequent upon this, facilitating continuous communication, interaction and feedback. Xu *et al* (2009) made similar remark that social media tools can enable collaboration, offer improved section management through facilitation of instant communication, teamwork and also improve accessibility of information easily. Chu and Du (2012) equally reported some of the benefits associated with the use of social networking tools to include: fast spread of information with simple steps, effective communication and promotion, enhanced interaction between library personnel and library users; and access to users' comments and suggestions on how services could be improved.

Despite the benefits embedded and rooted in the use of social media in the library system, there have been several challenges associated with its use in the literature. Some of the obstacles to the use of social media tools as identified by earlier researchers such as Hosseini and Hashempour (2012); Arif and Mahmood (2012) include inadequate ICT infrastructure (low bandwidth), lack of knowledge as well as technical skills. Mundt (2013) identified lack of staff resources and competences, privacy issue and lack of social media policies as barriers to the use of social media in the library. Mabweazara and Zinn (2016) reported that lack of financial support, absence of social media policies, poor Internet access and time constraint created a barrier to social media use.

Abou-Shouk and Hewedi (2016) identified lack of reliability of information sources, lack of skills and knowledge, uncertainty over the benefits of social media, absence of adequate infrastructure and unproductive past experiences as perceived barriers to social media use. Some other challenges could be related to limited resources, capabilities of library personnel, lack of awareness about several types of social media tools that could be used in the library for the improvement of their job performances, limited access to wireless service, technological infrastructures, difficulty in securing funds and training opportunities, lack of interest, lack of social media policies, lack of time among others (Wolcott *et al*, 2008; Collins and Quan-Haase, 2012).

Mosha *et al* (2015) investigated on the use of social media tools to enhance knowledge sharing among knowledge workers in Nelson Mandela African Institution of Science and Technology (NM-AIST), Arusha, Tanzania. The study identified institutional factors such as low level of management support for the implementation of social media use, lack of knowledge sharing strategies, training and organizational culture to support the policies; technological factors such as lack of adequate power supply, low Internet bandwidth, lack of technical support and high cost of Internet connectivity; and individual factors such as lack of awareness and adequate training challenges to the use of social media. The findings collaborated with the studies done by Paroutis and Al Saleh (2009); Makori (2011); Muneja and Abungu (2012) and Lwoga (2012).

Ezeani and Igwesi (2012) also identified lack of awareness of social media tools, lack of trained staff, lack of government intervention, bandwidth problem, technophobia, and unreliable power supply among others as factors facilitating non-use of social media in the library. In support of the above, Ossai-Ugbah (2012) affirmed that the consistent power failure has increased the cost of running the library making it difficult for library personnel to use social media effectively and efficiently as required. Similarly, Shehu *et al* (2015); Adewojo and Adebara (2016) identified challenges to the use of social media tools such as poor Internet access, irregular power supply, lack of management support and lack of awareness of social media tools.

Agyekum *et al* (2016) also revealed the factors hindering the effective use of social media tools in the academic libraries as inadequate computers, lack of Internet connectivity or network failure, unstable power supply, abuse of networking tools

specified usage, and lack of requisite knowledge and community acceptance. This corroborates with the study by Ramzan and Singh (2009) in Pakistan academic library who affirmed that lack of computers and Internet connectivity hindered the use of social networking tools.

The study also reiterated that the major challenge to effective utilisation of social networking tool in the four well-resourced public university libraries in Ghana was lack of knowledge and community acceptance of the networking tools with (40.6%). This finding is backed by Nazim (2015) who found lack of requisite knowledge in the social networking tool among Kerman academic librarians. Nazim (2015) exposed that the librarians were either ignorant about the social networking tool or had little idea about them which hindered their use. The study found out that the universities do not offer any education in social networking tools and therefore the only hope is to learn on the job training.

Taylor and Francis Group (2014) reported some challenges to the use of social media by librarians to be considerable time that is required to maintain an active social media presence, the pressure to respond instantly to service queries, the variability of skills across library personnel for using social media effectively, striking the right tone between professional and personal, coordinating activities across the institution to avoid duplication, maintaining visibility for the library brand and copyright issues relating to hosting library resources on social media sites.

Akporhonor and Nwanne (2015) examined the challenges associated with the use of social media for benefit conveyance in academic libraries in the South-south, Nigeria. The study revealed that privacy of users was the major concern pointed out by the respondents to be an inhibitor to the use of social media. Apart from that, the study also posited that network and connectivity issues, low finance and low level of awareness were part of the challenges to the use of social media by librarians.

It has been observed that the use of social media can help build the image of the university libraries in Nigeria if constraints are addressed. It is evident from the literature reviewed that lack of skills and poor infrastructure, bandwidth constraints and limited resources, power failure, poor Internet access, lack of management support were the major impeding factors mentioned in most of the studies which need to be addressed urgently.

2.9 Theoretical framework

There are series of theories and models explaining and describing factors influencing individuals' acceptance and use of technologies. Theories give the theoretical background to the study and they are principles used in explaining a phenomenon. The constructs and the variables could be picked from the theories and models and they give methodological guidelines to the study. Theories play a vital role in research. They provide explanations, understanding and meaningfulness to research being carried out. Theories help to predict facts and to identify unexplored research areas. They help in determining the contributions to knowledge in the area of theoretical framework.

Theories enable a researcher to establish the relationship among attributes and variables or data. They allow researchers to make links between the abstract and concrete as well observational statements. They provide simplified representation or abstraction of reality and aid the researcher by identifying the important variables, constructs, and relationships to be explored during the course of investigation. Theories act as a conceptual base for understanding and analyzing the research of any nature, and they also give intellectual personality to a research. Theories have high degree of explanatory power which give meaning to the numerical data and afterward give splendor to research (Mehrad and Tajer, 2016).

On the other hand, models are also theory based. Models help researchers to communicate ideas, understand processes and finally make predictions. Research models are graphical representations and theoretical images of the object of study describing or explaining interrelationships of ideas. Hence, this study was guided by Uses and Gratification Theory by Katz *et al* (1974), and Technology Acceptance Model 3 by Venkatesh and Bala (2008). The theory and model have shown that technological innovations, acceptance and use are determined by certain beliefs, attitudes and characteristics towards information system technologies. They have also been developed and evolved through rigorous validations, authentications and extensions over the years. The reason for using them is due to their interconnectedness and to give a clearer explanation and understanding of the effect of personal characteristics and motivational factors on the use of social media by library personnel.

2.9.1 Uses and Gratification Theory (UGT)

Uses and Gratification Theory (UGT) also known as ‘need seeking’ is regarded as one of the influential theories in Mass Communication that helps to explain and elucidate individuals’ relationship with mass media (Ruggiero, 2000; Kamhawani and Weaver, 2003). Katz *et al* proposed the Uses and Gratification Theory (UGT) in 1974. The theory explains why people use certain media and the benefits they get from the media (Musa, Azmi and Ismail, 2015). It also describes the relationships formed between the media and its active audience. Uses and Gratification Theory (UGT) is grounded on the idea that media audiences are active rather than passive (Peirce, 2007). UGT posited that individuals seek and strive to use a media or innovation which will provide them with the maximum information, satisfaction and enjoyment (Luo *et al*, 2010).

The rudimentary principle of Uses and Gratifications Theory according to Lariscy *et al* (2011) is that individuals seek out media that would fulfill their needs and gratification. The theory states that media’s most important role is to fulfill the needs and motivations of the audience. Therefore, the more these needs are met, the more satisfaction the audience would have. Such needs include cognitive, affective, personal integrative, social integrative and tension-free needs among others. Instead of focusing on media content, Katz *et al* (1974) sought to shift attention to the media audience. Generally, the theory explains the social and psychological motives that drive individuals to use the identified technologies which motivate them to select certain technologies in order to satisfy a set of needs behind those motives (Katz *et al*, 1974; Rubin, 1994). An assumption of this approach is that media users are aware of their needs and they select the appropriate media to gratify those needs.

Thus, Uses and Gratifications Theory may be used to explain individuals’ motivation for choosing a specific technology such as social media tools (Ruggiero, 2000). The theory proposes that individuals use media to fulfill a variety of needs, such as escapism, entertainment, relaxation, and learning. The assertion is that people will choose media according to their expectations and their drive to attain gratifying experiences. The theory proposes five assumptions.

The first assumption is that the audience is conceived as active users of mass media; second, media choice depends on the audience link between media and needs gratification; that is, each audience member must determine which medium will best satisfy her needs; third, media compete with other sources, both interpersonal and

other media for satisfaction; fourth, audience members can describe their needs and motives; and fifth, value judgements of mass media content should be suspended until motives and gratifications are understood. This implies that the final decisions about the cultural relevance of mass media must be withheld in order to avoid assumptions on common cultures.

Apart from the assumptions UGT proposed, the theory also has some objectives which include to: explain the psychological needs that shape why people use the media and what motivates them to engage in certain media-use behaviours for gratification; explain how individuals use mass communications to gratify their needs; and identify the consequences of media use. Uses and gratification are the motivations behind why an individual makes a media selection and the satisfaction that the individual obtains from this choice (Joinson, 2008; Basilisco and Jin, 2015). According to Daniel (2010), the uses and gratification theory posited that audience members have certain needs or drives that can be satisfied by using both non-media and media sources emphasising on what people do with the media rather than what the media do to people.

However, Uses and Gratification Theory has been applied to a variety of mass media and media contents. The theory is better suited and appropriate for the study of information technology/Internet use due to its interactive and communicative nature (Ruggerio, 2000; Parker and Plank, 2000), hence, users are more actively and energetically engaged than in other traditional media (Ruggerio, 2000). The extension of uses and gratification theory from television to the Internet, and in recent time social media has provided a basis for researchers (Joinson, 2008). There has been few studies that investigated the uses and gratifications of social media and they indicated that social media can be used for interaction, escapism, entertainment, seeking and sharing of information, socialisation, self-expression, education, surveillance, communication, among others (Gallion, 2010; Dunne *et al*, 2010; Papacharissi and Mendelson, 2011; Smock *et al*, 2011; Edegoh *et al*, 2013; Omekwu *et al*, 2014; Papoola, 2014; Musa *et al*, 2015).

Other scholars have used UGT to investigate various social media applications such as Myspace and Facebook (Raacke and Bond-Raacke, 2008); Twitter (Johnson and Yang 2009; Chen, 2011); blogs (Hollenbaugh, 2011); social networking sites (Dunne *et al*, 2010; Pai and Arnott, 2013; Tazghini and Siedlecki, 2013). The gratification which Johnson and Yang (2009) found for using twitter was categorised into social and information motives which include getting and sharing information,

giving and receiving advice, fun, entertainment, meeting new people, relaxation and passing time, communication, escapism and alleviation of boredom, identity creation and management as well as interaction. Dunne *et al* (2010); Pai and Arnott (2013); Tazghini and Siedlecki (2013) employed UGT to study the adoption of social networking sites among Taiwan's Facebook users and found that sense of belonging, hedonism, increasing self-esteem and reciprocity contributed to users gratification and fulfillment.

Additionally, the gratification found by Hollenbaugh (2011) as reasons why different bloggers posted items on blogs were for information, passing time, creating social connection, professionalism and getting feedback. Uses and gratification theory often focuses on the gratifications that result from use and does not consider use as a motive. It focuses on the needs of the audience in assessments related to audience cognition. Since individuals use media for different purposes, the accurate recognition of media is possible only by identifying the purpose of use. With the advent of ICTs, library services delivery have considerably changed.

Thus, the responsibility of libraries and library personnel is to attract users and fulfill their needs as quickly as possible. A user who is satisfied with the services of the library will eventually return again and this process would increase the dynamics of the library (Mehrad and Tajer, 2016). Identifying users needs and the level of satisfaction from the library services delivery has always been the priority of libraries and the theoretical foundations could be improved using Uses and Gratification Theory.

The uses and gratification approach is therefore, a way to analyse the motivations and satisfaction of the library personnel in the university libraries in Nigeria. Based on the uses and gratification perspective, social media tools have a wide range of benefits and functions that would be able to satisfy various needs. Uses and Gratification Theory would therefore, be relevant to this study because it could be applied to library and information studies' field as regards how library personnel can effectively target audiences based on their needs.

It will also be relevant to this study because of its approach to user-centeredness. User-centered because the audience is somewhat free to choose any media based on the expected and anticipated benefits that could be derived from the media. It also considers the satisfaction and enjoyment that the audience could derive as a result of using the media since the use of media is goal directed. The theory also will be

relevant to this study since motivation is one of the important factors identified to understand information system use behaviour.

Moreover, it will be relevant to the study because of its usefulness for predicting continuance intention. UGT will be suitable for this study to understand library personnel's attitudes and perception towards the use of social media in carrying out their activities and in performing their jobs. It as well fittingly captures the gratifications and satisfactions library users and library personnel in universities experience due to the use of social media tools. Furthermore, little or no study has applied UGT in social media use in the library environment in Nigerian university libraries. Therefore, library personnel would be motivated to use social media if they feel that the tools will satisfy their intentions to delivery of service to the users. The Uses and Gratification Theory in all the positions upholds that the audience is the key, and takes the critical decision of what to do with the media rather than what the media can do.

The theory however, is not without limitations. It is exceedingly individualistic in nature, taking into consideration only the individual psychological gratification derived from individual media use. The theory tends to focus too much attention on individual motivation and ignoring the media's ability to influence the audience. The theory pays no attention to the media's social context; for instance, the condition, as well as the environment of media user. In spite of the diverse choices available for users, they do not have control over mass media and what it can do

Rubin (1994) identified four limitations of Uses and Gratification Theory. The author suggested that UGT is by nature in compartments and as a result making it difficult to predict social or cultural implications of media use. That is, the individualistic approach neglects media use's broader social and cultural contexts. UGT fails to account for how structural factors, such as race, class, and gender, could influence media usage patterns.

By implication, Rubin (1994) additionally stressed that media use is often determined by certain elements such as people's needs and drives to communicate in order to satisfy their needs, emotional and social environment, functional alternatives to media use, communication behaviour, and the consequences that could emerge as a result of such behaviour; the author also posited that there is lack of clarity of the central constructs and how researchers attached different meanings to motives, uses, gratifications and functional alternatives.

Lin (2003) noted that audience factor contains four constructs which include innovative attributes, need for innovativeness such as willingness to take risks in adopting new information system, self-efficacy and belief/attitude of individuals towards acceptance of new technology. This implies that library personnel who are very innovative, pioneering and creative would have the inclination and disposition to use social media more frequently than their counterparts who are not innovative and inventive; no consideration on the nature of the audience being treated to be too active or rational in the behaviour; and the methodological reliance on self-report data.

Similarly, as Ruggiero (2000) put it succinctly that the theory failed to define clearly some central concepts such as psychological backgrounds, motives, behaviour and needs. Applying this to social media use, it is expected that individuals' emotional experiences, intentions, conducts and needs that induce consequences ought to be considered. One of the resilient criticisms that differed on some of the ideas of the theory as stated by Habib (2012) is that some individuals do not expose themselves to the media intentionally and deliberately, they do not choose which media to use; they only use the media conceivably because they have formed the habit of using the media or they are used to the media. The author also maintained that the theory is too individualistic and distinct as it focuses on the individual's psychological, mental or emotional status disregarding the social context and perspective.

The theory also failed to consider some factors that could hinder or encourage choice making such as lack of awareness, external influence, personal influence and the consequences of choosing a particular information system. Thus, wrong choices could be made at the long run if there exist a limited knowledge over what to choose. However, the current position of this study concerning the theory is that the theory still remains valid despite the shortfalls. The trends as a result of new technologies have made individuals to have more options, opportunities and preferences regarding which media to choose.

As a result, it has allowed them to have more control over the media, hence, the theory still remains valid in communication literature and it can still be used successfully in the understanding and explaining the information system use and acceptance. As there are few studies to revalidate the Uses and Gratification Theory in relations with social media on the part of library personnel, therefore, this study intends to apply Uses and Gratification Theory to help explain whether the library

personnel are using social media and why, and the gratifications they would derive from using the new information system.

Uses and gratifications theory is a significant concept in communication studies. It offers insight into the role of media in fulfilling the needs of users. It proposes that people actively consume specific media channels to satisfy their needs. Through UGT, researchers have explored how individuals use media for entertainment, social interaction, information, emotional release, surveillance, escapism or tension free, education, persuasion, and a sense of belonging. The theory has undergone several development and validation over the years, with researchers studying how different variables affect individual's media use. At present, UGT remains an essential framework for analysing the media's role in individual's lives and is necessary for understanding the relationship between the media and its audiences.

2.9.2 Technology Acceptance Model 3 (TAM 3)

Technology Acceptance Model 3 (TAM3) was developed by Venkatesh and Bala in 2008. They updated TAM 2 to TAM 3 by combining TAM 2 with Venkatesh (2000) model of determinants of Perceived Ease of Use to create a new integrated model. They added additional constructs to the existing model. The additional constructs are anchor and adjustment factors as the main constructs of TAM 3. Anchor factors suggested by Venkatesh and Bala (2008) are computer self-efficacy, perception of external control, computer anxiety and Computer Playfulness while the adjustment factors are Perceived Enjoyment and Objective Usability. These constructs were proposed to determine the actual use of an information system. Combining the determinants of the second and third model together added more richness and understanding to the extended model (Venkatesh and Bala, 2008).

Computer Self-Efficacy is the degree to which an individual believes that she has the ability to perform a specific task/job using the computer. Perception of External Control is the degree to which an individual believes that organisational and technical resources exist to support the use of the computer system. Computer Anxiety can be defined as the degree of an individual's apprehension, uneasiness or even fear, when she is faced and confronted with the possibility of using computers. Computer Playfulness is the degree of cognitive spontaneity in microcomputer interactions (that is, the ability of an individual to interact with the computer freely without showing any form of apprehension).

Perceived Enjoyment is the extent to which the activity of using a specific system is perceived to be enjoyable, pleasurable and gratifying in its own right, aside from any performance consequences resulting from system use. Objective Usability can be defined as a comparison of systems based on the actual level (rather than perceptions) of effort required to complete specific tasks (Venkatesh and Bala, 2008). The expanded TAM model such as TAM 3 has demonstrated a more dominant and prevailing percent of the variance in user intention than the original model and had an explanatory power of between 43% and 67% of use intention (Venkatesh and Bala, 2008; Baker, 2012).

The theory is relevant to this study because it has been empirically validated, endorsed and applied over the years to variety of technologies as a predictor of users' acceptance, adoption and use of information technology. It explains the influence of the antecedents of Perceived Usefulness and Perceived Ease of Use on actual information system use. Therefore, it is chosen as a theoretical foundation to be applied to this study to examine the perceptions of the factors (personal characteristics and motivational factors) influencing social media use by library personnel in university libraries in southwestern Nigeria. The key strength of TAM still remains its popularity and reputation in analysing information system acceptance and adoption in all fields.

TAM has been widely used as a theoretical framework in previous studies to explain technology acceptance including the Internet and social media (Moon and Kim, 2001; Koufaris, 2002; McClosky, 2006; Leong *et al*, 2013; Fagih and Jaradat, 2015). Others include its ability to explain the determinants of information technology acceptance that would aid in explaining user behaviour on the use of information technology. It also gives room for expansion, extension and replication in order to bring more factors to explain how users perceive information technology; it gives room for elaboration and extension better than other competing models (Taylor and Todd, 2001).

However, despite the strength associated with TAM, there still exist some prevalent criticisms of the model. One of the limitations of TAM 3 is in its explanatory and descriptive power which has been rated low consistently. The model is regularly explaining 40% of the variance in behavioural intention to use any new information technology (Davis *et al*, 1989; Taylor and Todd, 1995; Venkatesh and Davis, 2000; Sun and Zhang, 2005). TAM's parsimonious nature has been argued by Benbasak and

Barki (2007) who stated that TAM based research has provided a very limited investigation of the full range of the important consequences of information technology use and this has led to the creation of illusion and misconception of progress in accumulation of knowledge.

The ability of TAM to be changed or expanded in order to adapt it to the constantly changing IT scenario has made the theoretical foundation very confusing (Priyanka and Kumar, 2013). TAM's original model did not initially consider the influence of the external variables on use behaviour, although, it was later considered by Venkatesh and Davis (2000). It did not also consider personal characteristics variables such as experience, age, gender, marital status among others that could influence information technology use. These personal characteristics were included by Venkatesh and Davis (2000) and Venkatesh and Bala (2008) as moderating factors in TAM 2 and TAM 3 respectively.

Lee *et al* (2003) found that the major limitation of TAM in their research was based on the self-reported usage. They posited that the study did not measure actual use but relied on the subject to indicate use. Taylor and Todd (2001) stressed that TAM failed to determine the barriers that could hinder technology acceptance and the simplicity of TAM as well as its ease of application has resulted to replications, repetitions and overuse by researchers. The present study maintains that TAM still remains the most popular model for determining information system use.

TAM as discovered by this study failed to consider factors such as cognitive, facilities, resources, availability and accessibility of these resources which could pose barriers in information system use and thus has added personal characteristics to the model. TAM 3 is relevant to this study because it is able to encapsulate the role of Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness on the acceptance and use of new technology such as social media. TAM 3 has also become a robust model for predicting employees' acceptance and adoption of innovations in information technology realm. TAM 3 model is shown in fig. 2.1.

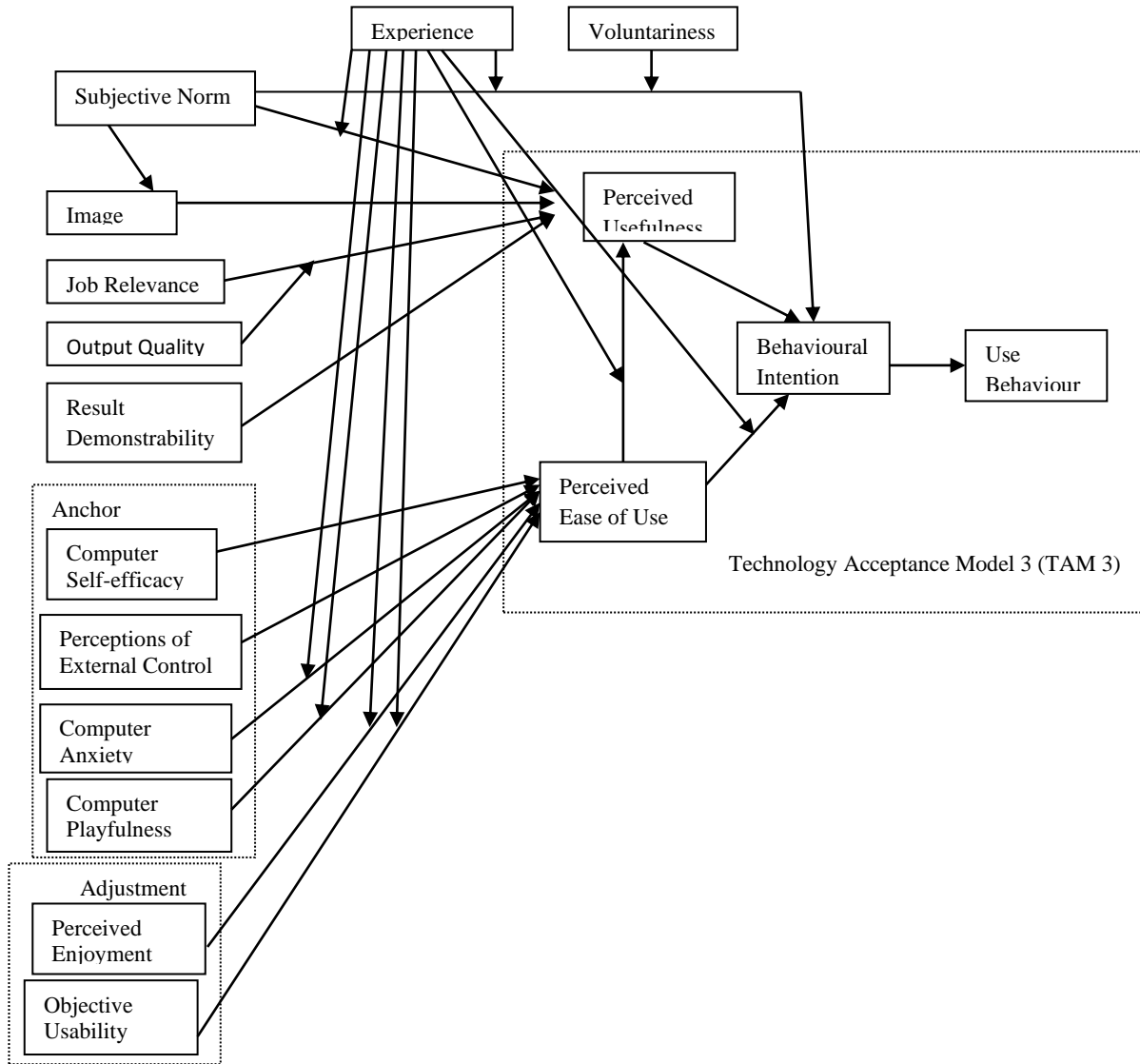


Fig. 2.1. Technology Acceptance Model 3 (TAM 3)
Source: Venkatesh and Bala (2008).

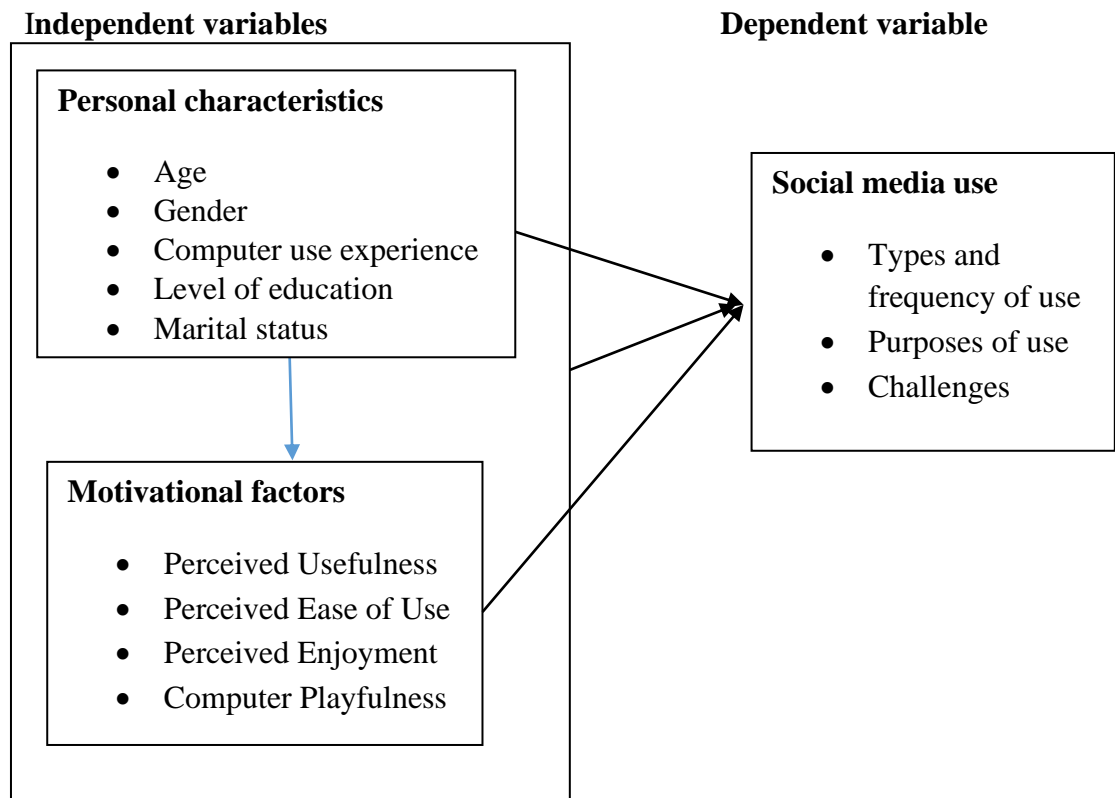
2.10 Conceptual model

The conceptual model driving this study was drawn based on the extensive literature reviewed and from the various theoretical models particularly from Motivational Model of computer usage (MM) and Technology Acceptance Model 3 (TAM 3). Some constructs such as personal characteristics and motivational factors were selected from these models to predict social media use by library personnel as proposed by this study. Library personnel are expected to deliver effective and quick services to their users and this could be done with the deployment of new information technology tools such as social media which could be influenced by certain factors.

The conceptual model of this study therefore, is structured into three parts with two independent variables and one dependent variable: the first part is personal characteristics with sub constructs (age, gender, computer experience, level of education and marital status). The second part is motivational factors (Perceived Ease of Use, Perceived Usefulness, Perceived Enjoyment and Computer Playfulness) and finally the use section (social media use) which consists of frequency of use, types and purpose of use (Davis *et al*, 1992; Venkatesh and Bala, 2008).

The conceptual model of this study (fig. 2.2) proposed a number of relationships that could exist among the variables studied. The conceptual model proposed that personal characteristics of library personnel could influence library personnel's use of social media in the library environment. It also proposed that motivational factors could influence use of social media by library personnel. This implies that library personnel could plan to use social media tools more frequently if the system is easy to use and to understand. Additionally, the study proposed that there could be independent and joint relationship between personal characteristics and motivational factors on the use of social media by library personnel in Nigerian universities. Therefore, personal characteristics and motivational factors could be determinants of social media use by library personnel in universities in southwestern Nigeria. The self-constructed model is shown in Fig. 2.2.

Conceptual Model



*Fig. 2. 2. Self-constructed model of factors affecting the use of social media
Source: Researcher (2018)*

2.11 Appraisal of the literature reviewed

The extant literature reviewed indicated that the use of information technology tools such as social media in rendering library service has received a considerable attention. The literature reviewed indicated that academic libraries across the globe are increasingly using and implementing social media tools for various purposes including marketing and promoting library information products and service, Current Awareness Service (CAS), reference service, Selective Dissemination of Information (SDI), library updates and news. The most dominant concern in the literature appears to be the use and integration of social media in the delivery of library service particularly in the developed countries.

It was indicated that libraries in the developed parts of the world have deployed the use of social media for marketing and promoting library information products and services, reference services such as Selective Dissemination of Information (SDI) and provision of Current Awareness Service (CAS), library updates and news among others. The integration and application of the social media in the library environment for effective service delivery particularly in the developing countries has also been reported. The extant literature reviewed indicated that only few developing countries have fully integrated social media tools for service delivery in their libraries. Countries such as Kenya and South Africa have been reported to have a full integration of social media in their libraries for effective service delivery.

Prominent in the literature is the use of social media tools by library personnel in university libraries for enhancing quality performance, promotion of service delivery and work activities as well as effective communication between the library personnel and the users. The adoption of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) as sub-constructs of Technology Acceptance Model 3 including Perceived Enjoyment and Computer Playfulness in order to understand the use of social media tools have been extensively and expansively reported. The literature reviewed also indicated that personal characteristics such as age, gender, computer use experience and marital status could influence the use of new technology.

Despite all this, little or no study has been carried out to examine the influence of personal characteristics and motivational factors on social media use by library personnel in particular. This study therefore, aimed to bridge this gap.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the procedures employed in carrying out the study under the following headings: the research design, population of the study, sampling techniques and sample size, research instrument, validity and reliability of the research instrument, data collection procedure, method of data analysis and ethical considerations.

3.2 Research design

Descriptive survey research design of the correlational type was adopted for the study. This is because it does not encourage the manipulation of the variables of interest in the study. The researcher could only report what had happened on the field. It was also to discover relationships among variables and to allow the prediction of future events. Furthermore, the use of this research design is in consonance with the position of Leedy and Ormrod (2010) who posited that the purpose of correlational study is to establish whether two or more variables are related in the same population or between the same variables in two populations. This design enabled the researcher to establish the relationship between personal characteristics and motivational factors on social media use for service delivery by library personnel in universities in southwestern Nigeria.

3.3 Population of the study

The study covered all universities in southwestern Nigeria (federal, state and private). As at the time when data was collected, there were 42 accredited universities in southwestern geo-political zone of Nigeria (federal, state and private). These include: seven (7) federal universities, eight (8) state universities and 27 private universities. The population of the study comprised library personnel in the 42 universities in southwestern Nigeria. Based on the preliminary study carried out, there were 112 librarians and 92 library officers totalling 204 library personnel in federal universities (Tables 3.1 and 3.2).

In the state universities, there were 63 librarians and 67 library officers totalling 130 library personnel (Table 3.2). In the private universities, there were 125

librarians and 97 library officers totalling 222 library personnel (Tables 3.1 and 3.3). The total population of the library personnel in universities in southwestern Nigeria as at the time of this study was 556. The population of all universities and library personnel in southwestern Nigeria is presented in Tables 3. 1., 3.2 and 3.3.

Table 3.1: Summary of the total population of library personnel in federal, state and private universities

University Status	No of librarians	No of library officers	Total
Federal	112	92	204
State	63	67	130
Private	125	97	222
Total	300	256	556

Table 3.2a: Population of library personnel in federal and state universities

S/N	Federal universities	No. of librarians	No. of library officers	Total
1	Federal University of Agriculture Abeokuta	25	13	38
2	Federal University of Technology Akure	8	13	21
3	Federal University Oye Ekiti	5	5	10
4	National Open University, Lagos	5	1	6
5	Obafemi Awolowo University, Ile-Ife	22	14	36
6	University of Ibadan, Ibadan	30	32	62
7	University of Lagos, Lagos	17	14	31
	Total	112	92	204
State universities				
1	Adekunle Ajasin University Akungba, Akoko	2	13	15
2	Ekiti State University, Ekiti, Ado Ekiti	8	13	21
3	Ladoke Akintola University, Ogbomoso	8	16	24
4	Lagos State University, Lagos	11	4	15
5	Olabisi Onabanjo University, Ago-Iwoye	14	15	29
6	Ondo State University of Science and Technology, Igbokoda	2	1	3
7	Osun State University, Osogbo	9	4	13
8	Tai Solarin University of Education, Ijagun, Ijebu Ode	9	1	10
	TOTAL	63	67	130

Table 3.2b: Population of library personnel private universities

Private universities				
	Universities	No of librarians	No of library officers	Total
1	Achievers University, Owo	2	6	8
2	Adeleke University, Ede	6	6	12
3	Afe Bablola University, Ado Ekiti	10	3	13
4	Ajayi Crowther University, Oyo	6	9	15
5	Augustine University, Ilara Epe, Lagos	4	2	6
6	Babcock University, Illisan, Remo	11	8	19
7	Bells University of Technology, Ota, Lagos	1	8	9
8	Bowen University, Iwo	9	12	21
9	Caleb University, Lagos	4	1	5
10	Chrisland University, Owode, Abeokuta	2	2	4
11	Christopher University, Mowe	1	-	1
12	Covenant University, Ota, Lagos	20	3	23
13	Crawford University, Igbesa	2	3	5
14	Crescent University, Abeokuta	1	6	7
15	Elizade University, Ilara Mokin	3	1	4
16	Fountain University, Osogbo	2	-	2
17	Hall Mark University, Ijebu-Itele	2	2	4
18	Joseph- Ayo Bablola University, Ikeji-Arakeji	2	3	5
19	Kings University, Ode-Omu, Osun	2	1	3
20	Lead City University, Ibadan	12	4	16
21	McPherson University, Serik Sotayo Ajebo, Ogun	2	1	3
22	Mountain Top University, Mowe	2	2	4
23	Oduduwa University, Ipetumodu, Ogun	2	4	6
24	Pan-Atlantic University, Lagos	4	2	6
25	Redeemers University, Ede	6	3	9
26	University of Medical Science, Ondo	5	1	6
27	Wesley University of Science and Technology, Ondo	2	4	6
	TOTAL	125	97	222

Source: National Universities Commission (NUC) Website, 2018. The number of library personnel was obtained from the various universities' websites, personal contacts and visits to the institutions.

3.4 Sampling technique and sample size

For the purpose of this study, total enumeration was adopted to cover 556 library personnel in order to ensure a robust participation of all the library personnel in the study area. The use of total enumeration is as a result of the manageable number of library personnel involved (the population is not large). This is in line with Bryman (2006) who posits that the use of this technique occurs when the respondents for the study are not too many. Consequently, since the total number of library personnel in universities in southwestern Nigeria as at the time of study was 556, therefore, total enumeration is appropriate.

3.5 Research instrument

Questionnaire was the research instrument used for this study. The justifications for the use of the research instrument are: the cost effectiveness, ability to cover a large area of population, respondents' convenience and time. The questionnaire was tagged: Personal Characteristics and Motivational Factors on social Media Use (PCMFSM). The questionnaire on Technology Acceptance Models as developed by Davis (1989) and Venkatesh and Bala (2008) was adapted with minor modifications. Researchers such as Serenko and Turel (2007); Wang and Wang (2008); Rudito (2010); Jia and Jia (2012); Tarhini *et al* (2014) among others had adapted this instrument with significant modifications in order to obtain information in their studies. Hence, the present study added personal characteristics and motivational factors to the original instrument.

The questionnaire had four sections, A-D and they are:

Section A: Socio-demographic/personal characteristic;

Section B: Motivational factors for social media use;

Section C: Social Media Use for service delivery and point/location of access; and

Section D: Challenges to social media use.

Section A: contained 11 items aimed at eliciting socio-demographic/personal characteristic data such as age, gender, level of education, computer use experience, marital status, etc. with open and close ended questions.

Section B: is a modified version of the scale developed by Davis (1989); Venkatesh and Bala (2008). It contained 38 items and it was tagged motivational factors and social media use. These motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Experience) were measured on 4-point Likert type scale with (Strongly Agree =4, Agree =3, Disagree =2

and Strongly Disagree =1). Some of the items include: Perceived Usefulness -I find social media tools more useful in rendering service than the traditional ways of rendering service to users; Perceived Ease of Use - Interaction with social media is very easy; Perceived Enjoyment - the use of social media is enjoyable; and Computer Playfulness - social media use stimulates my curiosity.

Section C was tagged Social Media Use for service delivery and point/location of access which consisted of types, frequency, purpose, and devices for the use of social media. Types and frequency of social media use contained 18 items and was measured using daily, weekly, monthly, occasionally and never. Purpose of social media use contained 24 items and was equally measured on 4-point Likert Scale of Likelihood (with Very True =4, True=3, Sometimes True =2 and Not True =1). These items were self-developed based on literature. Points of access to the use of social media by library personnel contained 7 items and the respondents were instructed to tick the best options that could suit them. The items include cell phone, smart phone, iPad, Tablet other than iPad, personal computers (laptop, desktop), public computer, others, please specify.

Section D: contained 10 items and sought information on challenges to social media use. The items were self-generated based on literature. The items were measured on 4-point Likert scale: Strongly Agree = 4; Agree =3; Disagree = 2; Strongly Disagree = 1.

3.6 Validity and reliability of research instrument

To ascertain the face validity of the research instrument (questionnaire), it was given to the researcher's supervisors and two other experts in the Department of Library, Archival and Information Studies, related fields such as information science and one in the Department of psychology for a critical review. Thereafter, corrections were made on the research instrument based on their comments and suggestions. The researcher thereafter subjected the questionnaire for a pre-test at the University of Ilorin Library in North Central geographical region of the country. This was considered appropriate because the study focused on library personnel in universities in southwestern Nigeria. Thirty copies of the questionnaire were distributed among the library personnel in the selected university for the pre-test exercise and all were completely filled, retrieved and used for analysis.

Thereafter, the Cronbach Alpha method was used to determine the reliability coefficients of the questionnaire items, with the following results: Section B-

Motivational factors to use Social media is 0.82 (Perceived Usefulness = 0.81, Perceived Ease of Use = 0.84, Perceived Enjoyment = 0.79, and Computer Playfulness = 0.83); Section C- Social media use is 0.73 (types and frequency = 0.72; purpose = 0.79); Points of accessing social media is 0.83, Section D- Challenges to social media use is 0.75. The reliability coefficient from all the values showed that the research instrument was reliable to elicit the needed data for the study. The reliability coefficient obtained for the study's instrument on one hand was consistent with the psychometric properties of Perceived Usefulness reported by Davis (1989) to be $\alpha = 0.98$ and Perceived Ease of Use $\alpha = 0.94$. On the other hand, the reliability coefficient obtained for the study's instrument was consistent with the psychometric properties of Perceived Enjoyment reported by Venkatesh and Bala (2008) to be $\alpha = 0.91$ and Computer Playfulness $\alpha = 0.79$.

3.7 Data collection procedure

The data collection procedure involved collection of a letter from the Head of Department of Library, Archival and Information Studies to the respondents introducing the survey and the researcher. It described the reasons for the survey as well solicited the help of library personnel in filling and returning the questionnaire. The questionnaire was administered by the researcher with the aid of three (3) trained research assistants and with the help of colleagues in different universities in southwestern Nigeria. The research assistants were trained on the significance of each of the sections of the research instrument as well as method of administering and retrieving the completed instruments from the respondents.

Copies of the questionnaire were thereafter administered on the respondents by the researcher and the research assistants in each of the universities for a period of eight months. The prolonged questionnaire administration was as a result of nationwide strike embarked upon by Academic Staff Union of Universities (ASUU) that lasted for over Six (6) months. The delay was also caused by the timing of the annual leave of library personnel of the universities particularly private universities. Thus, 556 copies of the questionnaire were administered to library personnel in universities in Southwestern Nigeria. Out of which 469 copies were returned giving 84.3% response rate.

3.8 Method of data analysis

The data collected for this study were collated and analysed using descriptive statistics of frequency counts, percentages, mean and standard deviation for the research questions while the hypotheses 1, 2, 3 and 4 were tested using Pearson Product Moment Correlation method. Then, multiple regression method was used to test hypothesis 5. The Statistical Package for Social Sciences (SPSS) was used for computing and analysing the data generated from the study.

3.9 Questionnaire administration and response rate of the respondents

The population of the study consisted of 556 librarians and library officers in the 42 universities in Southwestern Nigeria (federal, state and private universities). Out of 556 copies of the questionnaire administered, 469(84.3%) copies were returned and found usable for analysis as shown in Tables 3.3a, 3.3b and 3.3c respectively. The response rate achieved is 84.3% and this makes the data collected valid for analysis.

Table 3.3a: Questionnaire administration and response rate of the respondents (Federal Universities)

S/N	University	Name of library	No of questionnaire administered	No. of questionnaire returned
1	Federal University of Agriculture Abeokuta	Nimbe Adedipe Library	38	27
2	Federal University of Technology, Akure	Albert Ilemobade Library	21	21
3	Federal University, Oye Ekiti	Federal University, Oye Ekiti Library	10	10
4	National Open University of Nigeria, Lagos	National Open University of Nigeria Library	6	6
5	Obafemi Awolowo University, Ile Ife	Hezekiah Oluwasanmi Library	36	31
6	University of Ibadan, Ibadan	Kenneth Dike Library	62	54
7	University of Lagos, Lagos	University of Lagos Main Library	31	23
Total			204	172
Response rate 84.3%				

Table 3.3b: Questionnaire administration and response rate of the respondents (State universities)

S/N	University	Name of library	No of questionnaire administered	No. of questionnaire returned
1	Adekunle Ajasin University	Adekunle Ajasin University Library	15	15
2	Ekiti State University, Ado Ekiti (EKSU)	Ekiti State University Main Library	21	19
3	Ladoke Akintola University (LAUTECH), Ogbomoso	Olusegun Oke	24	21
4	Lagos State University, Lagos	Fatiu Ademola Akesode Library	15	10
5	Olabisi Onabanjo University, Ago-Iwoye	Olabisi Onabanjo University Library	29	24
6	Ondo State University of Science and Technology	OSUTECH Library	3	2
7	Osun State University	Sola Akinrinade Library	13	12
8	Tai Solarin University of Education (TASUED)	Gbenga Daniel Library	10	10
Total			130	113
Response rate 86.5%				

Table 3.3c: Questionnaire administration and response rate of the respondents (Private universities)

S/N	University	Name of library	No of copies distributed	No. of copies returned
1	Achievers University, Owo	Achievers University Library	8	7
2	Adeleke University, Ede	Adeleke University Library	12	12
3	Afe Babalola University, Ado Ekiti (ABUAD)	Afe Babalola University Library	13	13
4	Ajayi Crowther University, Oyo	TY Danjuma	15	13
5	Augustine University, Illara Ekpe Lagos	Augustine University Library	6	6
6	Babcock University, Illisan Remo	Babcock University Library	19	14
7	Bells University of Technology, Lagos	Bells University of Technology Library	9	9
8	Bowen University, Iwo	Timothy Olagbemi Library	21	15
9	Caleb University, Imota, Lagos	Caleb University Library	5	4
10	Chrisland University, Owode, Abeokuta	Chrisland University Library	4	4
11	Christopher University, Mowe	Nelson Mandela Library	1	1
12	Covenant University, Sango Ota Lagos	Centre for Learning Resources	23	13
13	Crawford University, Igbesa	Crawford University Library	5	5
14	Crescent University, Abeokuta	Saliat Adebutu Library	7	7
15	Elizade University, Ilara Mokin	Elizade University Library	4	4
16	Fountain University, Oshogbo	Fountain University Library	2	2
17	Hallmark University, Ijebu-Itele	Hallmark University Library	4	3
18	Joseph Ayo Babalola University, Ikeji-Arakeji	Joseph Ayo Babalola University Library	5	5
19	Kings University, Ode-Omu, Osun	Kings University Library	3	1
20	Lead City University, Ibadan	Lead City University Library	16	13

Table 3.3ci: Questionnaire administration and response rate of the respondents (Private universities)

21	McPherson University, Serik Sotayo, Ajibo, Ogun	McPherson University Library	3	2
22	Mountain Top University, Mowe	Mountain Top University Library	4	4
23	Oduduwa University, Ipetumodu, Ogun	Oduduwa University Library	6	4
24	Pan-Atlantic University (PAU), Ajaa, Lagos	PAU Library	6	5
25	Redeemer's University, Ede	Tekrna Tamuno Library	9	7
26	University of Medical Sciences, Ondo	University of Medical Sciences Library	6	5
27	Wesley University of Science and Technology, Ondo	Wesley University Library	6	6
Total			222	184
	Response rate 82.9%			

Table 3.3d. Summary of response rate of respondents in federal, state and private universities

Summary of response rate

Type of university	No of copies administered	No of copies returned	Response rate
Federal University	204	172	84.3
State University	130	113	86.9
Private University	222	184	82.9
Overall	556	469	84.3%

It could be observed from the summary provided in Table 3.3d that in federal universities, 204 copies of questionnaire were administered to the respondents across the 7 federal universities in southwestern Nigeria. However, 172 copies were returned giving 84.3% response rate. Similarly, in state universities, 130 copies were administered to the respondents while 113 copies were returned with 86.9% overall response rate. More so, in private universities, 222 copies of questionnaire were administered and 184 copies were returned giving an overall response rate of 82.9%.

Thus, the overall return rate across the universities was 84.3% which was valid for the analysis. It could be observed that the highest number of respondents was from private universities 184(82.9%) while the least number of respondents was from the state universities 113(86.9%). This is obvious as there were more private universities in the Southwestern Nigeria than public owned universities put together. However, the overall return rate of 84.3% used for the study is far higher than the proposal of Peterson and Demark-Wahnefried (2004) that 60% is acceptable standard for most research.

3.10 Ethical considerations

This involves informed consent, anonymity of the respondents and seeking approval from the respective institutions and from the respondents. The researcher sought the consent and permission of the respondents without any monetary reward and they were allowed to withdraw if they were no longer agreeable to participate in the study. Hence, the ethical considerations that guided the researcher in this study are discussed under the following sub headings:

- a. Informed consent:** The opinions of the participants were highly respected. More so, participation of the respondents (library personnel) was voluntary and the participants were informed of the purpose of the study which was basically for academic purpose. Their identities and information provided were treated confidentially as they were promised anonymity. Additionally, the researcher ensured the capacity of the respondents to consent hence selection was centered on all universities in southwestern Nigeria which had been in existence for the upward of at least 4 years and above.
- b. Respect for persons and confidentiality:** The respondents quite understood what they were asked to do. They made reasoned judgment about the effect of participating in the study and finally decided to participate. The researcher provided the participants with full information about the nature, purpose and

benefits of data collection. The researcher also assured them of their security and confidentiality of any information supplied. Participation was voluntary and their anonymity was guaranteed while their responses were for academic purposes.

- c. **Plagiarism:** In order to ensure the originality of the study, it was subjected to Turnitin software which must be within the limit of 24% which was specified by University of Ibadan. Additionally, all cited materials were duly referenced which was in compliance with the Manual of Style for Referencing, University of Ibadan.
- d. **Falsification of data:** This refers to the act of creating false data to suit an expected data. In this study, there was no forgery of data, the researcher personally visited the institutions for the administration of the data with the aid of research assistance and also with the help of colleagues in different universities in southwestern Nigeria. The researcher also ensured the originality of the study and the outcome of the study was from the data collected from the respondents and not a replicated or copied work. There were no falsification of data during data collection hence, the results got from the analysis were reported accordingly and not manipulated.
- e. **Beneficence:** This refers to the obligation in the part of the researcher to maximize benefits or the individual participant and the society while minimizing risk of harm. The researcher in addition ensured that the general principle of “do not harm” and “maximize possible benefits and minimize possible harms” to academic and society as a whole were adhered to. The outcome of the study would benefit library personnel, users, library management, university authorities, the government and other stakeholders.

CHAPTER FOUR RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the data analysis and interpretation of the results. The data gathered through the use of a questionnaire were analysed with the aid of frequency counts, percentages, mean, Standard Deviation (SD), Pearsons' Product Moment Correlation (PPMC) and multiple regression. The study was carried out in all universities (federal, state and private universities) in southwestern Nigeria. The chapter is divided into four sections. Section one reports on the demographic variables of the respondents. Section two discusses answers to the research questions. Section three reports the hypotheses tested and section four discusses the findings of the study.

4.2 Socio-demographic profile/personal characteristics of the respondents

Socio demographic/ Personal characteristics such as religion, gender, age, marital status, educational qualification, current designation, length of working experience and computer use experience were analysed using descriptive statistics of frequency counts and percentages and the result is as presented in Tables 4.1a and 4.1b.

Table 4.1a: Socio-demographic profile/personal characteristics of library personnel in universities in southwestern Nigeria

Background Information	Categories	Aggregate (N=469)		Federal Universities (n=172)		State Universities (n=113)		Private Universities (n=184)	
		Freq	%	Freq	%	Freq	%	Freq	%
Religion	Christianity	398	84.9	146	84.9	95	84.1	157	85.3
	Islam	71	15.1	26	15.1	18	15.9	27	14.7
Gender	Male	243	51.8	87	50.6	69	61.1	87	47.3
	Female	226	48.2	85	49.4	44	38.9	97	52.7
Marital status	Married	375	80.0	143	83.1	105	92.9	127	69.0
	Single	89	19.0	26	15.1	8	7.1	55	19.0
	Separated	2	0.4	1	0.6	0	0.0	1	0.4
	Widowed	3	0.6	2	1.2	0	0.0	1	0.6
Age range	20 – 30	64	13.6	13	7.6	7	6.2	44	13.6
	31 – 40	162	38.8	54	31.4	34	30.1	94	51.1
	41 – 50	144	30.7	66	38.4	41	36.3	37	20.1
	51 – 60	69	14.7	35	20.3	28	24.8	6	3.3
	61- 70	10	2.1	4	2.3	3	2.7	3	1.0

Table 4.1b: Socio-demographic profile/Personal characteristics of library personnel in universities in southwestern Nigeria

Background information	Categories	Aggregate (N= 469)		Federal Universities (n=172)		State Universities (n=113)		Private Universities (n=184)	
Educational Qualification	Doctoral degree	34	7.2	22	12.8	4	3.5	8	4.3
	MLS	193	41.2	68	39.5	50	44.2	75	40.8
	M.Phil.	10	2.1	2	1.2	3	2.7	5	2.7
	BLS	106	22.6	40	23.3	15	13.3	51	27.7
	Diploma in LIS	90	19.2	29	16.9	36	31.9	25	13.6
	Others	36	7.7	11	6.4	5	4.4	20	10.9
Current designation	Librarian	238	50.7	79	45.9	63	55.8	96	52.2
	Library Officer	231	49.3	93	54.1	50	44.2	88	47.8
Length of working experience	1 – 4 years	118	25.2	27	15.7	16	14.2	75	40.8
	5 – 8 years	125	26.7	50	29.1	21	18.6	54	29.3
	9 – 12 years	96	20.5	41	23.8	21	18.6	34	18.5
	13 years and above	130	27.7	54	31.4	55	48.6	21	11.4
Computer use experience	1 – 4 years	95	20.3	27	15.7	26	23.0	42	22.8
	5 – 8 years	127	27.1	60	34.9	12	10.6	55	29.9
	9 – 12 years	103	22.0	36	20.9	32	28.3	35	19.0
	13 years and above	144	30.6	49	28.5	42	38.1	52	28.3

Result on gender indicated that majority of the respondents were males 243(51.8%) as against their female counterparts which was 226(48.2%). In addition, it could be observed that there were more male respondents than their female counterparts in federal and state universities, but the case was different in private universities as the number of female respondents 97(52.7%) were more than that of male respondents 87(47.3%). This suggests that there was no gender imbalance in the composition of library personnel in universities in southwestern Nigeria since the trend in gender distribution could twist to either side.

The distribution according to age indicated that the highest number of respondents were found in the age bracket of 31-40 years with population of 162(38.8%), followed by 41-50 age bracket with population of 144(30.7%), 51-60 years 69(14.2%) and only 10 (2.1%) respondents were found in the age range of 61-70. In addition, federal and state universities had majority of their library personnel within the age brackets of 41-50 years (federal: 66, 38.4%; state: 41, 36.3%) while private universities had 94(51.1%) of the respondents within the age of 31-40 years.

Data on marital status of respondents showed that 375(80.0%) were married, 89(19.0%) claimed to be single while the remaining 5(1.0%) were either separated or widowed. A close observation of this result indicated that among 89 respondents who were single, 55 of them were from private universities 26 in federal and only 8 were from state universities. The implication of the result on marital status points to the fact that most of the library personnel in universities in southwestern Nigeria were married and matured enough to understand the use of social media responsibly.

On educational qualification of the respondents, result showed that 193 (41.2%) which constituted the majority had MLIS certificate, 106(22.6%) had BLIS while only 10(2.1%) of the library personnel had M.Phil. More so, 34(7.2%) of the respondents had doctoral degree. Specifically, 22(12.8%) of the respondents in federal had doctoral degree while 4(3.5%) and 8(4.3%) of the respondents had same in state and private universities respectively. This shows that state universities in southwestern Nigeria had the least number of doctorate degree holders among library personnel while federal universities had the highest. Furthermore, the result shown in Table 4.1 revealed that 238 (50.7%) of the respondents were librarians while the remaining 231(49.3%) were library officers. The trend is the same in all the three types of universities (federal, state and private) as there were more librarians than library officers. This implies that although there were more librarians than library officer

cadres in the population, it could be deduced that library personnel in universities in southwestern Nigeria were highly qualified to carry out library and information services expected of them.

The data provided on computer use experience further showed that 144(30.7%) of the respondents which constituted majority claimed to have been using computer for 13 years and above. This was followed by 127(27.1%) respondents who indicated that they had computer use experience of 5-8 years. While 103(22.0%) of the respondents indicated that they had computer use experience of 9-12 years. The least number of respondents 95(20.3%) noted that their computer use experience was between 1-4 years.

In federal universities, most of the respondents 60(34.9%) claimed they had computer use experience spanning 5-8 years, while 27(15.7%) of the respondents claimed they had computer use experience of 1-4 years. Similarly, in state universities, 42(38.1%) of the respondents had 13 years and above in the use of computer, 32(28.3%) had 9-12 years of experience in computer, 26(23.0%) had 1-4 years of computer use experience while only 12(10.6%) of the respondents claimed they had only used computer for 5 to 8 years.

It could also be noted from the result that majority of the respondents in private universities 55(29.9%) claimed that their computer use experience was between 5-8 years, 52(28.3%) indicated computer use experience of above 13 years, 42(22.8%) had computer use experience between 1-4 years while only 35(19.0%) of the respondents had computer use experience ranging between 9- 12 years. From these results, it is obvious that most of the library personnel in universities in southwestern Nigeria had computer use experience between 5-8 years. In other words, library personnel in federal, state and private universities in southwestern Nigeria had moderate level of computer use experience. In all, it could be inferred that irrespective of the different levels of computer use experience of the respondents, the level of computer use experience of library personnel in universities in Southwestern Nigeria was found to be moderate (appendix 11).

4.3 Answers to the research questions

Five research questions were posed in the study and answers to the research questions are discussed as follows:

4.3.1 Research question 1: What are the types and frequency of use of social media by library personnel in universities in southwestern Nigeria?

The results of the types and frequency of use of social media are presented in Tables 4.2a, 4.2b, 4.2c and 4.2d.

Table 4.2a: Types and frequency of use of social media tools by the library personnel for service delivery in universities in southwestern Nigeria

Items: I use:	Daily		Weekly		Monthly		Occasionally		Never		Mean	St.d
	N	%	N	%	N	%	N	%	N	%		
Information sharing sites:												
Facebook	305	65.0	29	6.2	47	10.0	62	13.2	26	5.5	4.12	0.330
Google +	226	48.2	101	21.5	84	17.9	45	9.6	13	2.8	4.03	0.139
MySpace	80	17.1	37	7.9	93	19.8	91	19.4	168	35.8	2.51	0.467
QQ	45	9.6	77	16.4	71	15.1	72	15.4	204	43.5	2.33	0.414
Ozone	32	6.8	17	3.6	136	29.0	47	10.0	237	50.5	2.06	0.247
WeChat	170	36.2	46	9.8	30	6.4	169	36.0	54	11.5	3.23	0.523
WhatsApp	314	67.0	62	13.2	61	13.0	32	6.8	0	0	4.40	0.955
Blackberry Messenger	136	29.0	16	3.4	16	3.4	124	26.4	177	37.7	2.59	0.676
Media sharing sites												
YouTube	123	26.2	103	22.0	42	9.0	82	17.5	119	25.4	3.06	0.568
Flickr	72	15.4	105	22.4	71	15.1	60	12.8	161	34.3	2.72	0.504
Instagram	166	35.4	100	21.3	47	10.0	46	9.8	110	23.5	3.35	0.595
Pinterest	9	1.9	48	10.2	0	0.0	99	21.1	313	66.7	1.59	0.043
Slide Share	16	3.4	25	5.3	44	9.4	59	12.6	325	69.3	1.61	0.076
Social bookmarking/Tagging												
Delicious	32	6.8	30	6.4	48	10.2	83	17.7	276	58.8	1.85	0.241
Diigo	32	6.8	32	6.8	25	5.3	86	18.3	294	62.7	1.76	0.231

Table 4.2ai: Types and frequency of use of social media tools by the library personnel for service delivery in universities in southwestern Nigeria

Items: I use:	Daily		Weekly		Monthly		Occasionally		Never		Mean	St.d.
	N	%	N	%	N	%	N	%	N	%		
Content Aggregation sites/awareness site												
StumbleUpon	64	13.6	29	6.2	30	6.4	57	12.2	289	61.6	1.98	0.469
Reddit	77	16.4	50	10.7	38	8.1	102	21.7	202	43.1	2.36	0.514
Weblogs/ Microblogging												
Blogs	112	23.9	86	18.3	23	4.9	71	15.1	177	37.7	2.75	0.657
LinkedIn	101	21.5	88	18.8	88	18.8	66	14.1	126	26.9	2.94	0.505
Paient Like Me	80	17.1	16	3.4	80	17.1	96	20.5	197	42.0	2.33	0.469
Tumblr	49	10.4	48	10.2	57	12.2	104	22.2	211	45.0	2.19	0.374
Twitter	180	38.4	76	16.2	45	9.6	88	18.8	80	17.1	3.40	0.553
Content Delivery												
RSS feed	64	13.6	77	16.4	66	14.1	45	9.6	217	46.3	2.42	0.523
Google reader	128	27.3	66	14.1	42	9.0	56	11.9	177	37.7	2.81	0.683
Feed reader	80	17.1	96	20.5	50	10.7	62	13.2	181	38.6	2.64	0.562
Vodcast	64	13.6	44	9.4	77	16.4	68	14.5	216	46.1	2.30	0.464
Podcasts	80	17.1	61	13.0	64	13.6	78	16.6	186	39.7	2.51	0.527
Weighted mean = 2.66					SD= 1.418							
Arithmetic mean	71.84										S.D. = 38.309	

Result on types and frequency of use of social media tools by library personnel in universities in southwestern Nigeria revealed that information sharing sites such as WhatsApp ($\bar{x}=4.40$), Facebook ($\bar{x}=4.12$) and Google+ ($\bar{x}= 4.03$) were tools mostly used by the respondents. Similarly, social media tools such as media sharing sites like Instagram ($\bar{x}=3.35$) and You Tube ($\bar{x}=3.06$) were moderately used by the library personnel. Weblogs/microblogging such as twitter ($\bar{x}=3.40$), LinkedIn ($\bar{x}=2.94$) and Google reader ($\bar{x}=2.81$) were also moderately used by library personnel.

On the other hand, social media tools such as RSS feed ($\bar{x}=2.42$), Vodcast (2.30) were not significantly used by library personnel as reflected in the mean scores recorded for content delivery. In addition, bookmarking/tagging also recorded low mean scores which showed that such tools were hardly used by library personnel in universities in southwestern Nigeria. From these results, it could be concluded that social media tools used by library personnel in universities in southwestern Nigeria were information sharing sites (WhatsApp, Facebook and Google +), media sharing sites (Instagram, YouTube), weblogs (Twitter, Blogs, LinkedIn), and content delivery such as (Google reader) while content aggregation sites (StumbleUpon, Reddit), other content delivery such as (RSS feed, feed reader, Podcast, Vodcast) and bookmarking and tagging tools (Delicious, Digg) were not significantly used.

More so, result of the frequency of social media use by library personnel in universities in southwestern Nigeria revealed that the most frequently used social media in terms of mean ranking were WhatsApp ($\bar{x} = 4.40, \delta = 0.955$), Facebook ($\bar{x} = 37.54, \delta = 4.03$) and Google+ ($\bar{x} = 4.03, \delta = 1.139$). It could be noted that these three most frequently used social media by library personnel in universities in southwestern Nigeria are all categorised under information sharing sites. The frequency of use of media sharing sites such as Instagram $\bar{x} = 37.54, \delta = 11.691$ and You Tube were moderate.

To further determine the level of frequency of use of social media by library personnel, the use of test norm was adopted. The lower bound and the upper bound indicated the lowest and the highest mean scores obtainable for each of the items listed (see appendix II). It could be observed that the weighted mean score of 25.27 ($\delta = 10.751$) was recorded in the use of information sharing sites which was a little above the mid-point of 20.00. It could therefore, be stated that the frequency of use of information sharing sites was moderate. Furthermore, frequency` of use of media sharing sites such as You Tube and Instagram had a weighted mean of 12.33 ($\delta =$

6.786) which was far below the upper bound. It therefore, follows that the use of media sharing sites by library personnel was low. In the same vein, the frequency of use of social bookmarking/tagging ($\bar{x}=12.33$, $\delta = 6.687$), content aggregation ($\bar{x}=4.34$, $\delta = 2.983$) and content delivery ($\bar{x}=12.68$, $\delta = 7.759$) was low. Similarly, the frequency of use of weblogs/Micro blogging ($\bar{x}=13.61$, $\delta = 7.558$) was moderate (see appendix II). Overall, it could be deduced that the frequency of use of social media by library personnel in universities in southwestern Nigeria was moderate.

However, further results on types and frequency of use of social media by library personnel in universities in southwestern Nigeria according to types of universities are presented in Tables 4.2b, 4.2c and 4.2d.

Table 4.2b: Types and frequency of use of social media tools used for service delivery by library personnel according to type of universities

Items: I use:	Federal universities										State universities									
	Daily		Weekly		Monthly		Occasionally		Never		Daily		Weekly		Monthly		Occasionally		Never	
Information sharing sites:	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Facebook	103	59.9	12	7.0	20	11.6	26	15.1	11	6.4	85	75.2	6	5.3	8	7.1	10	8.8	4	3.5
Google +	77	44.8	37	21.5	35	20.3	18	10.5	5	2.9	62	54.9	23	20.4	18	15.9	7	6.2	3	2.7
MySpace	26	15.1	17	9.9	33	19.2	33	19.2	63	36.6	25	22.1	6	5.3	22	19.5	23	20.4	37	32.7
QQ	17	9.9	22	12.8	31	18.0	30	17.4	72	41.9	13	11.5	27	23.9	12	10.6	13	11.5	48	42.5
Ozone	13	7.6	4	2.3	51	29.7	17	9.9	87	50.6	7	6.2	6	5.3	32	28.3	12	10.6	56	49.6
WeChat	59	34.3	16	9.3	14	8.1	63	36.6	20	11.6	47	41.6	10	8.8	4	3.5	42	37.2	10	8.8
WhatsApp	112	65.1	22	12.8	25	14.5	13	17.6	0	.0	82	72.6	14	12.4	10	8.8	7	6.2	0	.0
Blackberry Messenger	52	30.2	5	2.9	7	4.1	42	24.4	66	38.4	30	26.5	6	5.3	4	3.5	33	29.2	40	35.4
Media sharing sites																				
YouTube	43	25.0	35	20.3	20	11.6	28	16.3	46	26.7	32	28.3	28	24.8	5	4.4	23	20.4	25	22.1
Flickr	28	16.3	36	20.9	29	16.9	23	13.4	56	32.6	15	13.3	31	27.4	14	12.4	11	9.7	42	37.2
Instagram	58	33.7	42	24.4	17	9.9	16	9.3	39	22.7	45	39.8	20	17.7	7	6.2	13	11.5	28	24.8
Pinterest	5	2.9	14	8.1	0	.0	34	19.8	119	69.2	1	0.9	18	8.7	0	.0	26	23.0	68	60.2
Delicious	15	8.7	13	7.6	13	7.6	31	18.0	100	58.1	6	5.3	5	4.4	18	15.9	18	15.9	66	59.8
Diigo	9	5.2	11	6.4	10	5.8	33	19.2	109	63.4	12	10.6	10	8.8	7	6.2	17	15.0	67	59.3

Table 4.2bi: Types and frequency of use of social media tools used for service delivery by library personnel according to type of universities

Content Aggregation sites/awareness site	Federal universities										State universities									
	Daily		Weekly		Monthly		Occasionally		Never		Daily		Weekly		Monthly		Occasionally		Never	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
StumbleUpon	24	14.0	11	6.4	11	6.4	21	12.2	105	61.0	18	15.9	8	7.1	8	7.1	12	10.6	67	59.3
Reddit	25	14.5	18	10.5	16	9.3	40	23.3	73	42.4	25	22.1	13	11.5	7	6.2	21	18.6	47	41.6
Weblogs/ Microblogging																				
Blogs	42	24.4	28	16.3	11	6.4	29	16.9	62	36.0	29	25.7	25	22.1	3	2.7	14	12.4	42	37.2
LinkedIn	36	20.9	34	19.8	35	20.3	24	14.0	43	25.0	27	23.9	22	19.5	19	16.8	11	9.7	34	30.1
Patient Like Me	26	15.1	5	2.9	29	16.9	38	22.1	74	43.0	25	22.1	6	5.3	22	19.5	16	14.2	44	38.9
Tumblr	16	9.3	15	8.7	23	13.4	40	23.3	78	45.3	16	14.2	14	12.4	12	10.6	22	19.5	49	43.4
Twitter	71	41.3	25	14.5	15	8.7	30	17.4	31	18.0	44	38.9	17	15.0	12	10.6	24	21.2	16	17.9
Content Delivery																				
RSS feed	21	12.2	28	16.3	25	14.5	16	9.3	82	47.7	17	15.0	22	19.5	13	11.5	11	9.7	50	44.2
Google reader	42	24.4	24	14.0	14	8.1	22	12.8	70	40.7	39	34.5	16	14.2	12	10.6	11	9.7	35	31.0
Feed reader	28	16.3	32	18.6	22	12.8	23	13.4	67	39.0	21	18.6	31	27.4	6	5.3	13	11.5	42	37.2
Vodcast	24	14.0	16	9.3	27	15.7	27	15.7	78	45.3	15	13.3	10	8.8	22	19.5	14	12.4	52	46.0
Podcasts	28	16.3	21	12.2	26	15.1	29	16.9	68	39.5	31	18.6	18	15.9	13	11.5	16	14.2	45	39.7

Table 4.2c: Types and frequency of social media use in private universities

Items: I use:	Daily		Weekly		Monthly		Occasionally		Never	
	N	%	N	%	N	%	N	%	N	%
Information sharing sites:										
Facebook	117	63.6	11	6.0	19	10.3	26	14.1	11	6.0
Google +	87	47.3	41	22.3	31	16.8	20	10.9	5	2.7
MySpace	29	15.8	14	7.6	38	20.7	35	19.0	68	37.0
QQ	15	8.2	28	15.2	28	15.2	29	15.8	84	45.7
Ozone	12	6.5	7	3.8	53	28.8	18	9.8	94	51.1
WeChat	64	34.8	20	10.9	12	6.5	64	34.8	24	13.0
WhatsApp	120	65.2	26	14.1	26	14.1	12	6.5	0	0.0
Blackberry Messenger	54	29.3	5	2.7	5	2.7	49	26.6	71	38.6
Media sharing sites										
YouTube	48	26.1	40	21.7	17	9.2	31	16.8	48	26.1
Flickr	29	15.8	38	20.7	28	15.2	26	14.1	63	34.2
Instagram	63	34.2	38	20.7	23	12.5	17	9.2	43	23.4
Pinterest	3	1.6	16	8.7	0	0.0	39	21.2	126	68.5
Slide Share	7	3.8	8	4.3	18	9.8	23	12.5	128	69.6
Social bookmarking/ Tagging										
Delicious	11	6.0	12	6.5	17	9.2	34	18.5	110	59.8
Diigo	11	6.0	11	6.0	8	4.3	36	19.6	118	64.1
Content Aggregation sites/awareness site										
StumbleUpon	22	12.0	10	5.4	11	6.0	24	13.0	117	63.6
Reddit	27	14.7	19	10.3	15	8.2	41	22.3	82	44.6
Weblogs/Micro blogging										
Blogs	41	22.3	33	17.9	9	4.9	28	15.2	73	39.7
LinkedIn	38	20.7	32	17.4	34	18.5	31	16.8	49	26.6
Patient Like Me	29	15.8	5	2.7	29	15.8	42	22.8	79	42.9
Tumblr	17	9.2	19	10.3	22	12.0	42	22.8	84	45.7
Twitter	65	35.3	34	18.5	18	9.8	34	18.5	33	17.9
Content Delivery										
RSS feed	26	14.1	27	14.7	28	15.2	18	9.8	85	46.2
Google reader	47	25.5	26	14.1	16	8.7	23	12.5	72	39.1
Feed reader	31	16.8	33	17.9	22	12.0	26	14.1	72	39.1
Vodcast	25	13.6	18	9.8	28	15.2	27	14.7	86	46.7
Podcasts	21	11.4	22	12.0	25	13.6	33	17.9	73	39.7

Table 4.2d: Summary of Mean and Standard Deviation scores showing types and frequency of social media use according to types of universities

Items: I use:	Federal		State		Private	
Information sharing sites:	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD
Facebook	3.19	1.137	3.31	0.463	3.60	0.49
Google +	2.88	0.828	3.12	0.487	2.57	1.05
MySpace	2.68	0.754	2.48	0.502	2.85	0.95
QQ	2.17	0.760	1.43	0.497	2.05	0.71
Ozone	2.10	0.780	1.44	0.499	3.02	0.81
WeChat	2.12	0.658	2.39	0.603	2.10	0.75
WhatsApp	3.20	0.565	3.61	0.490	3.18	0.86
Blackberry Messenger	2.51	0.736	1.91	0.463	3.23	0.86
Media sharing sites						
YouTube	2.64	0.689	3.29	0.463	2.62	0.13
Flickr	2.53	0.763	2.82	0.525	2.53	0.09
Instagram	2.55	0.863	2.41	0.362	3.00	0.85
Pinterest	2.08	0.893	2.68	0.567	2.84	0.83
Slide Share	2.22	0.792	1.79	0.412	2.71	0.91
Social bookmarking/Tagging						
Delicious	2.47	0.735	3.59	0.494	2.16	0.82
Diigo	2.57	0.825	3.76	0.432	2.12	0.77
Content Aggregation sites/awareness site						
StumbleUpon	2.52	0.743	1.83	0.381	2.43	0.95
Reddit	2.48	1.077	1.38	0.496	2.54	0.00
Weblogs/Microblogging						
Blogs	3.21	0.736	2.60	0.49	2.81	0.63
LinkedIn	3.05	0.842	2.57	1.05	2.66	0.62
Patient Like Me	2.51	0.707	2.85	0.95	2.78	0.76
Tumblr	2.49	0.734	2.05	0.71	3.06	0.64
Twitter	2.43	0.594	3.02	0.81	2.96	0.84
Content Delivery						
RSS feed	2.22	0.747	3.19	0.75	2.76	0.86
Google reader	2.42	0.785	3.08	0.86	2.79	0.81
Feed reader	2.40	0.492	3.23	0.86	2.65	0.80
Vodcast	2.31	0.499	2.83	0.99	2.73	0.80
Podcasts	2.09	0.502	2.62	1.13	2.89	0.73
Arithmetic mean	68.04	20.24	71.28	16.74	73.64	22.32
Weighted mean	2.52	0.75	2.64	0.62	2.73	0.83

Generally, in order to determine the level of frequency of social media use by library personnel in universities in southwestern Nigeria, the use of test norm was adopted. The mean score range of 1.00 – 45.0 represents low use, the mean score range of 45.01 – 90.00 represents moderate use while mean score range of 90.01-135.00 denotes high level of use. It could be noted from Table 4.3d that the arithmetic mean recorded for federal, state and private universities were 68.04, 71.28 and 73.64 respectively; which fall within the moderate range. Hence, it could be deduced that the level of use of social media by library personnel in universities in southwestern Nigeria was moderate. Overall, the mean score recorded was 71.84 ($\delta = 38.309$) which also falls within the moderate range. Therefore, in general, this attests to the fact that the level of frequency of social media use by library personnel in universities in southwestern Nigeria was moderate.

4.3.2 Research question 2: For what purposes do library personnel use social media in universities in southwestern Nigeria?

In order to provide answer to this research question, respondents were asked to indicate how true each of the statements on purpose of use of social media was. The results are presented in Tables 4.3a, 4.3b and 4.3c.

Table 4.3ai: Purpose of use of social media by library personnel in universities in southwestern Nigeria

Items	VT		T		ST		NT		Mean	St.d
	N	%	N	%	N	%	N	%		
Purposes of use: I use social media for:										
sharing of information and knowledge to users	251	53.5	111	23.7	62	13.2	45	9.6	3.31	0.004
promoting and marketing of library information products and services	210	44.8	212	45.2	31	6.6	16	3.4	3.27	0.744
communicating and interacting with users	244	52.0	153	32.6	56	11.9	16	3.4	3.33	0.817
advertising library's new collections and acquisition	230	49.0	166	35.4	57	12.2	16	3.4	3.25	0.812
alerting users on the upcoming events in the library	175	37.3	241	51.4	37	7.9	16	3.4	3.23	0.734
provision of alert services such as new additions	197	42.0	184	39.2	46	9.8	42	9.0	3.14	0.926
reservation and cancelling of documents online	103	22.0	260	55.4	74	15.8	32	6.8	2.93	0.804
granting request for renewal of loan services	126	26.9	228	48.6	58	12.4	57	12.2	2.90	0.933
posting of overdue details and notices	106	22.6	272	58.0	58	12.4	33	7.0	2.96	0.794
sending article alert service	126	26.9	184	39.2	118	25.2	41	8.7	2.84	0.920
advertising library's new collections and acquisitions	122	26.0	260	55.4	61	13.0	26	5.5	3.02	0.783
User education services/virtual library tour	164	35.0	272	58.0	17	3.6	16	3.4	3.25	0.681
exhibition of library materials and newly acquired materials	114	24.3	232	49.5	63	13.4	60	12.8	2.85	0.932
inter library loan service	146	31.1	206	43.9	91	19.4	26	5.5	3.01	0.854
acquisition list of new arrivals	128	27.3	242	51.6	37	7.9	62	13.2	2.93	0.937
uploading of videos and pictures for users	125	26.7	207	44.1	75	16.0	62	13.2	2.84	0.966
reference services (answering users' queries, SDI/CAS, Document Delivery)	128	27.3	221	47.1	62	13.2	58	12.4	2.89	0.944
library outreach services	135	28.8	251	53.5	25	5.3	58	12.4	2.99	0.915
collaborative delivery of services with colleagues	141	30.1	246	52.5	54	11.5	28	6.0	3.07	0.807
keeping track with professional current trends	115	24.5	236	50.3	86	18.3	32	6.8	2.93	0.835

Table 4.3aii: Purpose of use of social media by library personnel in universities in southwestern Nigeria

Items	VT		T		ST		T		Mean	St.d
	N	%	N	%	N	%	N	%		
Purposes of use: I use social media for:										
alerting users about the availability of booked materials	119	25.4	226	48.2	62	13.2	62	13.2	2.85	0.947
uploading videos and pictures for users	153	32.6	180	38.4	58	12.4	78	16.6	2.87	0.049
personal purposes	135	28.8	190	40.5	111	23.7	33	7.0	2.91	0.894
entertainment and for escapism	143	30.5	180	38.4	84	17.9	62	13.2	2.86	0.998
I use social media because it is very much applicable to my services to users	160	34.1	190	40.5	57	12.2	62	13.2	2.96	0.996
Weighted mean = 3.02									SD=0.881	
Arithmetic mean = 75.39									SD= 22.026	

Key: VT= Very True, T= True, ST= Sometimes True, NT= Not True

Table 4.3bi: Purpose of use of social media by library personnel in Federal and State universities

Items	Federal								State								
	VT		T		ST		NT		VT		T		ST		NT		
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
Purposes of use: I use social media for:																	
sharing of information and knowledge to users	90	52.3	37	21.5	37	21.5	28	16.3	61	54.0	34	30.1	11	9.7	7	6.2	
promoting and marketing of library information products and services	83	48.3	70	40.7	13	7.6	6	3.5	44	38.9	61	54.0	5	4.4	3	2.7	
communicating and interacting with users	89	51.7	53	30.8	24	14.0	6	3.5	57	50.4	43	38.1	10	8.8	3	2.7	
advertising library's new collections and acquisition	89	51.7	56	32.6	21	12.2	6	3.5	52	46.0	44	38.9	14	12.4	3	2.7	
alerting users on the upcoming events in the library	60	34.9	90	52.3	16	9.3	6	3.5	48	42.5	56	49.6	5	4.4	4	3.5	
provision of alert services such as new additions	72	41.9	66	38.4	17	9.9	17	9.9	46	40.7	48	42.5	12	10.6	7	6.2	
reservation and cancelling of documents online	38	22.1	91	52.9	30	17.4	13	7.6	25	22.1	70	61.9	11	9.7	7	6.2	
granting request for renewal of loan services	44	25.6	82	47.7	24	14.0	22	12.8	34	30.1	59	52.2	9	8.0	11	9.7	
posting of overdue details and notices	39	22.7	97	56.4	24	14.0	12	7.0	24	21.2	73	64.6	10	8.8	6	5.3	
sending article alert service	46	26.7	69	40.1	40	23.3	17	9.9	30	26.5	48	42.5	28	24.8	7	6.2	
advertising library's new collections and acquisitions	49	28.5	88	51.2	23	13.4	12	7.0	25	22.1	74	65.5	11	9.7	3	2.7	
user education services/virtual library tour	66	38.4	94	54.7	6	3.5	6	3.5	33	29.2	74	65.5	3	2.7	3	2.7	
exhibition of library materials and new acquired materials	43	25.0	80	46.5	24	14.0	25	14.5	24	21.2	65	57.5	14	12.4	10	8.8	
inter library loan service	56	32.6	68	39.5	38	22.1	10	5.8	31	27.4	58	51.3	18	15.9	6	5.3	
acquisition list of new arrivals	47	27.3	87	50.6	16	9.3	22	12.8	28	24.8	63	55.8	6	5.3	16	14.2	
uploading of videos and pictures for users	45	26.2	78	45.3	27	15.7	22	12.8	30	26.5	50	44.2	17	15.0	16	14.2	

Table 4.3bii: Purpose of use of social media by library personnel in Federal and State universities

Items	Federal								State							
	VT		T		ST		NT		VT		T		ST		NT	
Purposes of use: I use social media for:	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
reference services (answering users' queries, SDI/CAS, Document Delivery)	50	29.1	78	45.3	22	12.8	22	12.8	27	23.9	56	49.6	17	15.0	13	11.5
library outreach services	54	31.4	88	51.2	9	5.2	21	12.	26	23.0	65	57.5	7	6.2	15	13.3
collaborative delivery of services with colleagues	55	32.0	87	50.6	20	11.6	10	5.8	32	28.3	61	54.0	13	11.5	7	6.2
keeping track with professional current trends	39	22.7	87	50.6	35	20.3	11	6.4	31	27.4	57	50.4	16	14.2	9	8.0
alerting users about the availability of booked materials	45	26.2	84	48.8	21	12.2	22	12.8	26	23.0	54	47.8	17	15.0	16	14.2
uploading videos and pictures for users	56	32.6	65	37.8	23	13.4	28	16.3	35	13.0	46	40.7	13	11.5	19	16.8
personal purposes	52	30.2	70	40.7	39	22.7	11	6.4	31	27.4	43	38.1	30	26.5	9	8.0
entertainment and for escapism	54	31.4	67	39.0	29	16.9	22	12.8	29	25.7	45	39.8	23	20.4	16	14.2
I use of social media because it is very much applicable to my services to users	62	36.0	66	39.5	20	11.6	22	12.8	32	28.3	53	46.9	13	11.5	15	13.3

Key: VT= Very True, T= True, ST= Sometimes True, NT= Not True

Table 4.3c: Purpose of use of social media by library personnel in private universities

Items	VT		T		ST		NT	
	N	%	N	%	N	%	N	%
Purposes of use: I use social media for:								
sharing of information and knowledge to users	100	54.3	40	21.7	14	7.6	45	5.4
promoting and marketing of library information products and services	83	45.1	81	44.0	13	7.1	10	3.8
communicating and interacting with users	98	53.3	57	31.0	22	12.0	7	3.8
advertising library's new collections and acquisition	89	48.4	66	35.9	22	12.0	7	3.8
alerting users on the upcoming events in the library	67	36.4	95	51.6	16	8.7	7	3.3
provision of alert services such as new additions reservation and cancelling of documents online	79	42.9	70	38.0	17	9.2	6	9.8
granting request for renewal of loan services	40	21.7	99	53.8	33	17.9	18	6.5
posting of overdue details and notices	48	26.1	87	47.3	25	13.6	12	13.0
sending article alert service	43	23.4	102	55.4	24	13.0	24	8.2
advertising library's new collections and acquisitions	50	27.2	67	36.4	50	27.2	15	9.2
user education services/virtual library tour	48	26.1	98	53.3	27	14.7	17	6.0
exhibition of library materials and new acquired materials	65	35.3	104	56.5	8	4.3	11	3.8
inter library loan service	47	25.5	87	47.3	25	13.6	7	13.6
acquisition list of new arrivals	59	32.1	80	43.5	35	19.0	25	5.4
uploading of videos and pictures for users	53	28.8	92	50.0	15	8.2	10	13.0
reference services (answering users' queries, SDI/CAS, Document Delivery)	50	27.2	79	42.9	31	16.8	24	13.0
library outreach services	51	27.7	87	47.3	23	12.5	24	12.5
collaborative delivery of services with colleagues	55	29.9	98	53.3	9	4.9	23	12.0
keeping track with professional current trends	54	29.3	98	53.3	21	11.4	22	6.0
alerting users about the availability of booked materials	45	24.5	92	50.0	35	19.0	11	6.5
uploading videos and pictures for users	48	26.1	88	47.8	24	13.0	12	13.0
personal purposes	62	33.7	69	37.5	22	12.0	24	16.8
entertainment and for escapism	52	28.3	77	41.8	42	22.8	31	7.1
I use of social media because it is very much applicable to my services to users	60	32.6	68	37.0	32	17.4	13	13.0
	66	35.9	71	38.6	24	13.0	24	13.6

Key: VT= Very True, T= True, ST= Sometimes True, NT= Not True

Table 4.3d: Summary of Mean and Standard Deviation scores on purpose of use of social media by library personnel according to type of universities

Items	Federal		State		Private	
	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD
Purposes of use: I use social media for:						
sharing of information and knowledge to users	2.73	0.80	2.88	0.83	3.51	0.707
promoting and marketing of library information products and services	2.89	0.73	2.83	0.63	3.55	0.734
communicating and interacting with users	2.97	0.67	2.71	0.65	3.55	0.594
advertising library's new collections and acquisition	2.95	0.65	2.79	0.69	3.56	0.747
alerting users on the upcoming events in the library	2.95	0.72	3.10	0.62	3.42	0.785
provision of alert services such as new additions	3.04	0.73	3.18	0.62	3.40	0.492
reservation and cancelling of documents online	3.27	0.86	3.09	0.57	3.44	0.499
granting request for renewal of loan services	3.17	1.28	2.99	0.65	3.49	0.502
posting of overdue details and notices	3.42	0.93	2.93	0.82	3.31	0.463
sending article alert service	3.50	0.94	2.88	0.83	3.62	0.487
advertising library's new collections and acquisitions	3.55	0.93	2.83	0.63	3.48	0.502
user education services/virtual library tour	3.18	0.98	2.71	0.65	3.43	0.497
exhibition of library materials and new acquired materials	3.64	0.76	2.79	0.69	3.44	0.499
inter library loan service	3.50	1.07	3.10	0.62	3.39	0.603
acquisition list of new arrivals	3.51	1.03	3.18	0.62	3.61	0.490
uploading of videos and pictures for users	3.35	1.15	3.09	0.57	3.69	0.463
reference services (answering users' queries, SDI/CAS, Document Delivery)	2.86	1.50	2.99	0.65	3.82	0.525
library outreach services	3.10	1.47	2.93	0.82	3.85	0.362
collaborative delivery of services with colleagues	2.96	1.57	2.88	0.83	3.68	0.567
keeping track with professional current trends	3.06	1.72	2.83	0.63	3.79	0.412
alerting users about the availability of booked materials	3.18	1.63	2.71	0.65	3.59	0.494
uploading videos and pictures for users	3.12	1.55	2.79	0.69	3.76	0.432
personal purposes	3.15	1.56	3.10	0.62	3.83	0.381
entertainment and for escapism	2.41	1.01	3.18	0.62	6.38	10.226
I use social media because it is very much applicable to my services to users	2.47	1.04	3.09	0.57	3.83	0.381
Arithmetic mean	77.93	27.28	73.58	16.77	92.42	22.84
Weighted mean	3.12	1.09	2.94	0.67	3.70	0.91

Results on purpose of social media use by library personnel are presented in Tables 4.3a, 4.3b, 4.3c and 4.3d respectively. The results indicated that majority of the respondents used social media tools for communicating and interacting with users as indicated by 244(52.0%). This item ranked the highest in terms of mean score ($\bar{x} = 3.33, \bar{a} = 0.817$). Additionally, sharing of information and knowledge to users was another purpose for which most of the respondents claimed they made use of social media. This item ranked second with a mean score of 3.31($\bar{\delta}=1.004$). Similarly, the result indicated social media was used for promoting and marketing of library information products and services by library personnel in universities in southwestern Nigeria with a mean score of ($\bar{x} = 3.27, \bar{a} = 0.744$).

Other purposes for which library personnel in universities in southwestern Nigeria use social media were advertising library's new collections and acquisitions ($\bar{x} = 3.25, \bar{a} = 0.812$), user education services/virtual library tour ($\bar{x} = 3.25, \bar{a} = 0.681$) and alerting users on the upcoming events in the library ($\bar{x} = 3.23, \bar{a} = 0.734$), alerting users about new additions ($\bar{x} = 3.14, \bar{a} = 0.926$), collaborative delivery of services with colleagues ($\bar{x} = 3.07, \bar{a} = 0.807$) and inter-library loan services ($\bar{x} = 3.01, \bar{a} = 0.854$). Purposes such as reference services (answering users' queries, SDI/CAS, Document Delivery), uploading of videos and pictures for users, sending article alert service as well as exhibition of library materials and newly acquired materials were ranked least in terms of mean score of responses. Thus, it could be deduced that library personnel made use of social media for library and information services but mainly to communicate, interact, information sharing and to send alerts on certain aspects of library services such as acquisitions and new arrivals.

Further result presented in Table 4.3b showed that in federal universities, majority of the respondents 90 (52.3%) pointed out that they made use of social media for sharing of information and knowledge to users as well as advertising library's new collections and acquisition had which had 89 (51.7%) from the respondents in federal universities. Another prominent purpose for which library personnel in federal universities in southwestern Nigeria use social media was for communicating and interacting with users where 89(51.7%) of library personnel indicated that the statement was very true (VT), 53(30.8%) true (T), 24(4.0%) sometimes true (ST) and 6(3.5% not true) (NT). By implication, majority of the respondents used social media for communication and interacting with users most probably because, they are user friendly and mostly based on communicating and interacting. Similarly, in Table 4.3b, it could be noted that in state universities, 61(54.0%) of the respondents claimed that they used social media for sharing of information and knowledge to users. In the same way, 57(50.4%) of the respondents in state universities specified that they

use social media for communicating and interacting with users while only 3(6.2%) did not concur with this.

In private universities, the trend is similar to those in federal and state universities. For instance, social media tools are being used for sharing of information and knowledge to users with 100(54.3%) for very true (VT); 40(21.7%) true (T); 14(7.6%) sometimes true (ST); 45(5.4%) not true (NT); communicating and interacting with users 98(53.3%) for very true (VT); 57(31.0%) true (T); 22(12.0%) sometimes true (ST); 7(3.8%) not true (NT); advertising library's new collections and acquisitions 89(48.4) very true (VT); 66(35.9%) true (T); 22(12.0%) sometimes true (ST); 7(3.8%) not true (NT); promoting and marketing of library information products and services with 83(45.1%) for very true (VT); 81(44.0%) true (T); 13(7.1%) sometimes true (ST); 10(3.8%) not true (NT), see (Table 4.3c).

Further result on Table 4.3d showed the summary of the Mean and Standard Deviation of scores on purpose of use of social media by library personnel according to type of universities. The result indicated that in federal universities, the arithmetic mean was 77.93 and the weighted mean was 3.12; state universities had arithmetic mean of 73.58 and weighted mean of 2.94 while in private universities, the arithmetic mean was 92.42 and weighted mean of 3.70 was recorded.

4.3.3 Research question 3: What are the motivational factors of social media use by library personnel in universities in southwestern Nigeria?

Results on motivational factors affecting the use of social media by library personnel in universities in southwestern Nigeria are presented in Tables 4.4a and 4.4b.

Table 4.4ai: Motivational factors of social media use by library personnel in universities in southwestern Nigeria

Items	SA		A		D		SD		Mean	St.d
	N	%	N	%	N	%	N	%		
Perceived Usefulness (mean = 37.54, St.D=11.691)										
I find social media tools more useful in rendering services than the traditional ways of rendering services to users	242	51.6	111	23.7	72	15.4	44	9.4	3.18	0.008
It is comparatively cheaper to use social media platform than the traditional ways of rendering services	127	27.1	202	43.1	77	16.4	63	13.4	2.84	0.974
Using social media enables me to accomplish my job tasks more quickly	188	40.1	172	36.7	67	14.3	42	9.0	3.08	0.947
Using social media have the potentials of improving my job performance	155	33.0	210	44.8	71	15.1	33	7.0	3.04	0.874
Using social media enhances my effectiveness when communicating with users	180	38.4	197	42.0	60	12.8	32	6.8	3.12	0.879
I am not sure if using social media will increase my job productivity	67	14.3	197	42.0	125	26.7	80	17.1	2.54	0.937
Social media is not useful to me in terms of service delivery	51	10.9	97	20.7	247	52.7	74	15.8	2.27	0.854
Social media helps me to carry out my online service delivery more effectively	193	41.2	172	36.7	58	12.4	46	9.8	3.09	0.960
Social media use could improve the quality of work that I do	198	42.2	198	42.2	29	6.2	44	9.4	3.17	0.912
My job would be more difficult to perform with social media	43	9.2	92	19.6	215	45.8	119	25.4	2.13	0.896
Social media is useful for my communication and knowledge sharing with colleagues and users	143	30.5	247	52.7	54	11.5	25	5.3	3.08	0.792
Social media addresses my job related needs for effective and efficient service delivery	92	19.6	248	52.9	104	22.2	25	5.3	2.87	0.784
Overall, I find social media useful for my work	181	38.6	197	42.0	60	12.8	31	6.6	3.13	0.874
Arithmetic mean									37.54	11.691
Weighted mean									2.58	0.899

Table 4.4aii: Motivational factors of social media use by library personnel in universities in southwestern Nigeria

Items	SA		A		D		SD		Mean	St.d
	N	%	N	%	N	%	N	%		
Perceived Ease of Use (mean = 18.92, St.D=6.348)										
Interaction with social media is very easy	59	12.6	271	57.8	85	18.1	54	11.5	2.71	0.829
It is easy for me to become more skillful at using social media for my work activities	115	24.5	266	56.7	45	9.6	43	9.2	2.97	0.842
Use of social media tools requires a lot of mental effort	76	16.2	182	38.8	130	27.7	81	17.3	2.54	0.959
Social media use does not allow me to make the best use of my time	49	10.4	146	31.1	150	32.0	124	26.4	2.26	0.964
It is not easy for me to get social media tools that is compatible to do what I want to do	40	8.5	184	39.2	160	34.1	85	18.1	2.38	0.878
I find it easy using social media to obtain information and to deliver information to users	163	34.8	185	39.4	80	17.1	41	8.7	3.00	0.933
Over all, I find social media easy to use	188	40.1	159	33.9	86	18.3	36	7.7	3.06	0.943
Overall mean									2.70	0.907
Perceived Enjoyment (mean = 22.37, St.D=7.085)										
The use of social media is enjoyable	191	40.7	208	44.3	37	7.9	33	7.0	3.19	0.857
It is very pleasant to use social media in the library environment	203	43.3	184	39.2	57	12.2	25	5.3	3.20	0.853
Social media is exciting to use	156	33.3	176	37.5	104	22.2	33	7.0	2.97	0.915
The use of social media for my work makes me happy	156	33.3	225	48.0	55	11.7	33	7.0	3.07	0.853
Social media use is boring to my work	32	6.8	105	22.4	199	42.4	133	28.4	2.08	0.881
Use of social media is very frustrating in my work	48	10.2	48	10.2	207	44.1	166	35.4	1.95	0.930
Use of social media is pleasurable to my work	99	21.1	237	50.5	76	16.2	57	12.2	2.81	0.907
Over all, using social media for my work is wise	169	36.0	218	43.5	41	8.7	41	8.7	3.10	0.889
Arithmetic mean = 22.37; SD= 7.85										
Weighted mean =2.80; SD = 0.885										

Table 4.4aiii: Motivational factors of social media use by library personnel in universities in southwestern Nigeria

Items	SA		A		D		SD		Mean	St.d
	N	%	N	%	N	%	N	%		
Computer Playfulness (mean = 29.01, St.D=8.485)										
Social media use stimulates my curiosity	91	19.4	273	58.2	72	15.4	33	7.0	2.90	0.788
Using social media leads to my exploration	144	30.7	249	53.1	43	9.2	33	7.0	3.07	0.822
Use of social media gives me enjoyment in my work	100	21.3	252	53.7	76	16.2	41	8.7	2.88	0.843
Use of social media makes me to be creative and flexible	172	36.7	196	41.8	55	11.7	46	9.8	3.05	0.936
Use of social media does not allow me to be original	82	17.5	180	38.4	144	30.7	63	13.4	2.60	0.928
Social media use makes me feel unimaginative	48	10.2	151	32.2	170	36.2	100	21.3	2.31	0.921
Social media use does not make my work boring	120	25.6	237	50.5	70	14.9	42	9.0	2.93	0.872
Social media use arouses my inventiveness in my work activities	130	27.7	263	56.1	61	13.0	15	3.2	3.08	0.728
Social media use makes me feel swift in answering queries	145	30.9	235	50.1	56	11.9	33	7.0	3.05	0.842
using social media makes me feel efficient	172	36.7	205	43.7	76	16.2	16	3.4	3.14	0.805
Arithmetic mean = 29.01; SD= 8.485										
Weighted mean= 2.90; SD= 0.849										
Overall mean= 2.75; SD= 0.683										

Result presented in Table 4.4a revealed that Perceived Usefulness ranked highest in terms of mean score with a mean of 37.54 (St. Dev= 11.69). Similarly, Computer Playfulness recorded the next highest mean score of 29.01 with standard deviation of 8.46. Perceived Enjoyment ranked third in terms of mean score with 22.37 and Standard Deviation of 7.09. However, in terms of the weighted mean, the result revealed that computer playfulness had the highest score of 2.90. This was followed by perceived enjoyment with a weighted mean score of 2.80 and perceived usefulness with a weighted mean of 2.70 respectively. This implies that the most dominant motivational factors affecting social media use by library personnel in universities in southwestern Nigeria were computer playfulness, perceived enjoyment and perceived usefulness. Hence, perceived ease of use ranked the least with a mean score and standard deviation of 18.92 (6.648). By implication, the more library personnel interact with computers creatively and without any form of apprehension, the more they perceive social media to be pleasurable and the more they perceive social media to be useful in enhancing job performance, the more they are likely to use social media effectively for service delivery.

Further result is presented in Table 4.4b showing the summary of Mean and Standard Deviation scores including the arithmetic and weighted mean of motivational factors of social media use by library personnel according to types of universities in southwestern Nigeria.

Table 4.4bi: Summary of Mean and Standard Deviation scores of motivational factors of social media use by library personnel according to types of universities in southwestern Nigeria

Items	Federal		State		Private	
	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD
I find social media tools more useful in rendering services than the traditional ways of rendering services to users	3.47	1.077	2.88	0.657	3.12	0.830
It is comparatively cheaper to use social media platform than the traditional ways of rendering services	3.21	0.736	3.37	0.567	3.53	0.630
Using social media enables me to accomplish my job tasks more quickly	3.05	0.842	2.71	0.412	3.37	0.650
Using social media have the potentials of improving my job performance	3.02	0.707	3.18	0.494	2.79	0.690
Using social media enhances my effectiveness when communicating with users	3.10	0.734	3.51	0.432	3.10	0.620
I am not sure if using social media will increase my job productivity	2.50	0.594	3.26	0.381	3.18	0.620
Social media is not useful to me in terms of service delivery	1.32	0.747	3.36	0.622	3.09	0.570
Social media helps me to carry out my online service delivery more effectively	3.14	0.785	3.25	0.381	2.99	0.650
Social media use could improve the quality of work that I do	3.20	0.492	3.69	0.362	2.93	0.820
My job would be more difficult to perform with social media	3.13	0.499	3.37	0.567	2.88	0.830
Social media is useful for my communication and knowledge sharing with colleagues and users	3.48	0.502	3.57	0.412	2.83	0.630
Social media addresses my job related needs for effective and efficient service delivery	3.30	0.463	3.18	0.494	2.71	0.650
Overall, I find social media useful for my work	3.62	0.487	3.51	0.432	2.79	0.690

Table 4.4bii: Summary of Mean and Standard Deviation scores of motivational factors of social media use by library personnel according to types of universities in southwestern Nigeria

	Federal		State		Private	
	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD
Perceived Ease of Use						
Interaction with social media is very easy	3.43	0.497	2.62	1.134	2.60	0.492
It is easy for me to become more skillful at using social media for my work activities	3.44	0.499	2.53	1.089	2.57	0.046
Use of social media tools requires a lot of mental effort	3.39	0.603	3.00	0.848	2.85	0.949
Social media use does not allow me to make the best use of my time	3.61	0.490	2.84	0.828	3.05	0.706
It is not easy for me to get social media tools that is compatible to do what I want to do	3.69	0.463	2.71	0.909	3.02	0.808
I find it easy using social media to obtain information and to deliver information to users	3.82	0.525	2.81	0.801	3.19	0.746
Over all, I find social media easy to use	3.48	1.077	3.16	0.819	3.08	0.861
Perceived Enjoyment						
The use of social media is enjoyable	3.05	0.842	3.09	0.672	3.23	0.858
It is very pleasant to use social media in the library environment	3.51	0.707	2.43	0.949	2.83	0.995
Social media is exciting to use	3.55	0.734	2.54	0.997	2.62	0.134
The use of social media for my work makes me happy	3.55	0.594	2.83	0.827	2.53	0.089
Social media use is boring to my work	3.56	0.747	2.81	0.628	1.73	0.883
Use of social media is very frustrating in my work	3.42	0.785	2.66	0.618	3.27	0.857
Use of social media is pleasurable to my work	3.40	0.492	2.78	0.757	3.17	0.283
Over all, using social media for my work is wise	3.44	0.499	3.06	0.636	3.42	0.933

Table 4.4biii: Summary of Mean and Standard Deviation scores of motivational factors of social media use by library personnel according to types of universities in southwestern Nigeria

	Federal		State		Private	
	\bar{x}	SD	\bar{x}	SD	\bar{x}	SD
Computer Playfulness						
Social media use stimulates my curiosity	3.31	0.463	2.80	0.855	3.50	0.940
Using social media leads to my exploration	3.62	0.487	2.76	0.857	3.55	0.933
Use of social media gives me enjoyment in my work	3.48	0.502	2.79	0.812	3.18	0.983
Use of social media makes me to be creative and flexible	3.43	0.497	2.65	0.799	3.64	0.755
Use of social media does not allow me to be original	2.44	0.499	2.73	0.802	2.96	0.837
Social media use makes me feel unimaginative	1.39	0.603	2.89	0.729	3.12	0.768
Social media use does not make my work boring	3.21	0.490	2.97	0.671	3.14	0.896
Social media use arouses my inventiveness in my work activities	3.09	0.463	2.95	0.648	2.983	0.031
Social media use makes me feel swift in answering queries	2.12	0.525	2.95	0.721	2.825	0.803
using social media makes me feel efficient	3.48	1.077	3.04	0.727	2.311	0.994
Arithmetic mean	121.45	23.83	113.24	26.35	113.68	31.46
Weighted mean	3.20	0.63	2.98	0.69	2.99	0.83

Tables 4.4b and 4.4bi showed the summary of Mean and Standard Deviation scores of motivational factors of social media use by library personnel according to types of universities in southwestern Nigeria. The result indicated that in federal universities, the arithmetic mean is 121.45(23.83) and the weighted mean is 3.20(0.63). In state universities, the arithmetic mean is 113.24(26.35) and the weighted mean is 2.98(0.69) while in private universities, the arithmetic mean is 113.68(31.46) and the weighted mean is 2.99(0.83). This implies that library personnel in private universities had more favourable motivational factors to use social media for service delivery than their counterparts in private and state universities.

4.3.4 Research question 4: What is the relative influence of personal characteristics (age, gender, marital status, computer use experience and level of education) and motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer playfulness) and social media use by library personnel in universities in southwestern Nigeria? The results are presented in Tables 4.6a, 4.6b and 4.6c respectively.

Table 4.5a: Relative influence of personal characteristics (age, gender, marital status, computer use experience and educational qualification) on social media use for service delivery by library personnel in universities in southwestern Nigeria

Mode 1	Unstandardized Regression Coefficients		Standardized Regression Coefficients	T	Sig. P
	B	Std. Error	Beta		
1 (Constant)	1.244	.218		5.611	.000
Age	.182	.064	.169	2.855	.004
Gender	.340	.053	.280	6.434	.000
Marital Status	.048	.064	.046	.754	.451
CUE	.434	.056	.378	7.768	.000
EQ	.011	.043	.010	.248	.805

A Dependent measure: Social media use

Key: CUE= Computer use experience, EQ= Educational qualification

Result in Table 4.5a revealed the relative contributions of the five sub-constructs of personal characteristics (age, gender, computer use experience, educational qualification and marital status) on social media use for service delivery, expressed as beta weights, viz: Age; ($\beta = -.169$, $P < .05$); Gender ($\beta = -.280$, $P < .05$); Computer use experience: ($\beta = .378$, $P < .05$); Educational qualification ($\beta = .010$, $P < .05$). It could be noted that only computer use experience, gender and age were the most three significant values of β . Hence, computer use experience had highest contribution to social media use for service delivery by library personnel in universities in southwestern Nigeria. Similarly, the result to show the summary of multiple regression analysis of social media use for service delivery by library personnel in universities in southwestern Nigeria is presented in Table 4.5b.

Table 4.5b: Summary of multiple regression analysis of social media use by library personnel in universities in southwestern Nigeria

ANOVA						
R	R²	Adj.R²		SEE		
0.47	346	0.331		0.5814		
Sources of variation	Sum of squares	Df	Mean square	F	Sig. p	
Due to regression	349.232	9	38.814	23.340	0.000	
Due to residual	763.431	459	1.663			
Total	1112.663	468				

The result of the multiple regression analysis shown in Table 4.5b revealed that the analysis of variance for the regression yielded F-ratio of 23.34 ($P < 0.05$). This implied that the joint influence of all the sub constructs of personal characteristics (age, gender, level of education, marital status and computer use experience) and motivational factors (perceived usefulness, perceived ease of use, perceived enjoyment and computer playfulness) on social media use by library personnel in universities in southwestern Nigeria was significant as they jointly contributed 33.1% to the prediction of social media use for service delivery. Other variables not included in this study may have accounted for the remaining variance of 66.9%. Nonetheless, the result of the relative influence of personal characteristics and motivational factors on social media use by library personnel in universities in southwestern Nigeria is presented in Table 4.5c.

Table 4.5c: Relative influence of personal characteristics and motivational factors on the use of social for service delivery by library personnel in universities in southwestern Nigeria.

Model	Unstandardized Regression Coefficients		Standardized Regression Coefficients	T	Sig. P
	B	Std. Error	Beta		
(Constant)	.764	.243		3.138	.002
Age	-.306	.067	-.250	4.557	.000
Gender	-.028	.073	-.014	.385	.700
Marital status	-.106	.053	-.093	1.991	.047
Computer use experience	.407	.059	.355	6.949	.000
Educational Qualification	.037	.024	.055	1.517	.130
Perceived Usefulness	.411	.056	.386	7.382	.000
Perceived Ease of Use	.010	.079	.004	.121	.904
Perceived Enjoyment	.276	.050	.266	5.513	.000
Computer Playfulness	.089	.062	.077	1.429	.154

a Dependent Variable: Social media use

Table 4.5c revealed the relative influence of the two independent variables to the dependent variable, expressed as beta weights, viz: Personal characteristics (age: $\beta = -0.250$ and computer use experience: $\beta = .355$ that is 35%), and motivational factors (Perceived Usefulness $\beta = .386$ that is 39%, Perceived Enjoyment: $\beta = .266$, that is 27%; Computer Playfulness $\beta = .077$ that is 08%). It was evident from the result that motivational factors had higher influence on the use of social media than personal characteristics. Specifically, for motivational factors, Perceived Usefulness had highest influence, followed by Perceived Enjoyment while Computer Use Experience had highest influence followed by age, gender for personal characteristics.

4.3.5 Research question 5: What are the challenges to the use of social media for service delivery by library personnel in universities in southwestern Nigeria?

In order to identify the challenges to the use of social media for service delivery by library personnel in universities in southwestern Nigeria, respondents were asked to indicate their level of agreement with some identified factors affecting the use of social media for service delivery. The result is presented in Table 4.6.

Table 4.6: Challenges of social media use for service delivery by library personnel in universities in southwestern Nigeria

Factors	Federal University				State universities				Private universities				Aggregate				Mean	St.d
	Agreement score		Disagreement score		Agreement score		Disagreement score		Agreement score		Disagreement score		Agreement score		Disagreement score			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Absence of social media policies	110	64.0	62	36.0	80	70.8	33	29.2	118	64.1	66	35.9	308	65.7	161	34.3	2.63	0.908
Inadequate financial support	102	59.3	70	40.7	75	66.4	38	33.6	114	62.0	70	38.0	291	62.1	178	37.9	2.64	1.125
Lack of management support	93	54.1	79	45.9	63	55.7	50	44.3	101	55.9	81	44.0	259	55.2	210	44.8	2.31	0.927
Poor Internet access	140	81.4	32	18.6	98	86.7	15	13.3	151	82.1	33	17.9	389	83.0	80	17.0	3.08	0.656
Inadequate facilities	106	61.6	66	38.4	81	71.7	32	28.3	118	64.1	66	35.9	305	65.1	164	34.9	2.65	1.134
Low bandwidth	100	58.2	72	41.8	77	68.2	36	31.8	109	59.2	75	40.8	286	60.9	183	39.1	2.67	0.946
Erratic power supply	95	55.2	77	44.8	78	69.0	35	31.0	107	58.1	77	41.9	280	59.7	189	40.3	2.58	0.994
Staff unwillingness to change	38	22.1	134	77.9	40	35.4	73	64.6	61	33.2	123	66.8	113	24.1	356	75.9	2.02	0.773
Lack of staff commitment and cooperation	76	44.2	96	55.8	61	54.0	52	46.0	84	45.7	100	54.3	158	33.7	311	66.3	2.18	0.773
Lack of patron demand	48	27.9	124	72.1	34	30.1	79	69.9	47	25.6	137	74.4	221	47.1	248	52.9	2.35	0.863
Lack of personal knowledge and skills	42	24.4	130	75.6	24	21.2	89	78.8	43	23.4	141	76.6	129	27.5	340	72.5	2.01	0.822
Tools are not easy to use	35	20.3	137	79.7	20	17.7	93	82.3	38	20.7	146	79.3	109	23.3	360	76.7	2.03	0.829
Tools are not useful for my work activities	72	44.2	96	55.8	61	54.0	42	46.0	84	45.7	100	54.3	93	19.8	376	80.2	1.81	0.830

Table 4.6 revealed the challenges to the use of social media by library personnel in universities in southwestern Nigeria. The result revealed that poor internet access ($\bar{x} = 3.08 \pm 0.656$) was identified as the most prominent challenge of social media use for service delivery by majority of the library personnel in universities in southwestern Nigeria. This was followed by low bandwidth ($\bar{x} = 2.67 \pm 0.946$) and Inadequate facilities ($\bar{x} = 2.65 \pm 1.134$). Other dominant challenges identified were Inadequate financial support ($\bar{x} = 2.64 \pm 1.125$) and absence of social media policies ($\bar{x} = 2.63 \pm 0.908$). This means that the top three challenges of social media use for service delivery by library personnel in universities in southwestern Nigeria were poor Internet access, low bandwidth and inadequate facilities. By implication, it can be deduced that effective services delivery by library personnel could be hindered consequent upon the challenges and as such obstruct the motivation to integrate social media tools for services delivery. Therefore, there is the need for the provision of necessary facilities to encourage library personnel in universities in southwestern Nigeria to integrate social media tools into the library environment for services delivery.

More specifically, it was revealed that poor Internet access 140(81.4%); absence of social media policies 110(64.0%); inadequate facilities 106(61.6%); lack of financial support 102(59.3%); low bandwidth 100(58.2%); and erratic power supply 95(55.2%) were identified as the most ranking challenges militating against the use of social media for service delivery by library personnel in federal universities in southwestern Nigeria. While 32(18.6%) of the respondents disagreed that poor Internet access; absence of social media policies 62(36.0%); inadequate facilities 66(38.4%); lack of financial support 70(40.7%); low bandwidth 72(41.8%); and erratic power supply 77(44.8%) were major challenges to the use of social media use by library personnel in federal universities in southwestern Nigeria.

In state universities, poor Internet access 98(86.7%), inadequate facilities 81(71.7%) and absence of social media policies 80 (70.8%) were the three most prominent challenges militating against the use of social media for service delivery. In private universities, the trend is the same as poor Internet access 151(82.1%), inadequate facilities 118(64.1%) and absence of social media policies 118(64.1%) were pointed out as the three major challenges faced by library personnel in the use of social media tools for service delivery. Lastly, it could be stated that the prominent challenges inhibiting the use of social media for service delivery by library personnel in universities in southwestern Nigeria were poor Internet access, inadequate facilities, low bandwidth and absence of social media policies.

4.4: Test of hypotheses

This section reports the results of the null hypotheses tested in the study. Five hypotheses were developed and tested using Pearson's Product Moment Correlation for hypotheses one, two, three and four while multiple regression was used to test hypothesis five. All the hypotheses were tested at 0.05 level of significance and the results are hereby presented.

4.4.1 Hypothesis 1: There is no significant relationship between personal characteristics (age, gender, computer use experience, level of education and marital status) and social media use for service delivery by library personnel in universities in southwestern Nigeria.

Result of hypothesis one is presented in Table 4.7.

Table 4.7: Correlation matrix showing relationship between personal characteristics and social media use of the respondents

Variables		Sub-Construct	\bar{x}	δ		1	2	3	4	5	6
						Age	Gender	Marital Status	Educ. Qual.	Computer Use Experience	Social media use
Personal characteristics	1	Age	39.27	6.321	Pearson Correlation	1.000	0.094	0.090	0.037	0.068	0.427
					Sig. (2-tailed)		0.041	0.051	0.427	0.143	0.001
					N	469	469	469	469	469	469
	2	Gender	1.23	0.931	Pearson Correlation	0.094	1.000	0.428	0.146	0.281	0.281
					Sig. (2-tailed)	0.041		0.000	0.001	0.000	0.010
					N	469	469	469	469	469	469
	3	Marital Status	3.49	1.009	Pearson Correlation	0.090	0.428	1.000	0.100	0.211	0.238
					Sig. (2-tailed)	0.051	0.000		0.031	0.000	.004
					N	469	469	469	469	469	469
	4	Educational Qualification	17.35	3.642	Pearson Correlation	0.037	0.146	0.100	1.000	0.215	0.314
					Sig. (2-tailed)	0.427	0.001	0.031		0.000	0.020
					N	469	469	469	469	469	469
	5	Computer Use Experience	26.35	7.030	Pearson Correlation	0.068	0.281	0.211	0.215	1.000	.503
					Sig. (2-tailed)	0.143	0.000	0.000	0.000		.000
					N	469	469	469	469	469	469
Social media use	6	Social Media Use	71.84	38.309	Pearson Correlation	0.427	0.281	.058	0.014	.503	1.000
					Sig. (2-tailed)	0.001	0.010	.094	0.090	.000	
					N	469	469	469	469	469	469

Sig p values: 0.000, 0.010, 0.001, 0.014 at p<0.05

The result shown in Table 4.7 revealed that all the indices of personal characteristics such as age ($\bar{x} = 39.27, \delta = 6.32, r = 0.427, p = 0.001$), gender ($\bar{x} = 1.23, \delta = 0.931, r = 0.281, p = 0.001$), marital status ($\bar{x} = 3.49, \delta = 1.009, r = 0.238, p = 0.004$), educational qualification ($\bar{x} = 17.35, \delta = 3.642, r = 0.314, p = 0.020$) and computer use experience ($\bar{x} = 26.35, \delta = 7.030, r = 0.503, p = 0.000$) have strong positive correlations with the use of social media for service delivery by library personnel in universities in southwestern Nigeria. This means that age, gender, marital status, educational qualification and computer use experience had significant relationship with the use of social media for service delivery. Specifically, computer use experience had the strongest positive relationship with the use of social media by library personnel in universities in southwestern Nigeria.

This however implies that since all the indices of personal characteristics had positive linear correlations with social media use for service delivery, it could be deduced that there was a significant relationship between personal characteristics and use of social media for service delivery by library personnel in universities in southwestern Nigeria. The hypothesis 1 which states that there is no significant relationship between personal characteristics and use of social media for service delivery by library personnel in universities in southwestern Nigeria is hereby rejected. This is further summarised in Table 4.7a.

Table 4.7a: Summary of correlation matrix showing relationship between personal characteristics and social media use of the respondents

Variables	Mean	SD	N	R	Sig p	Remark
Personal characteristics	87.69	18.933	469	0.503	0.000	Significant
Social media use	71.84	38.309				

4.4.2 Hypothesis 2: There is no significant relationship between motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) and social media use for service delivery by library personnel in universities in southwestern Nigeria.

Correlation matrix was employed to determine the relationship between motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) and social media use for service delivery by library personnel and the result is presented in Table 4.8.

Table 4.8: Relationship between motivational factors and social media use by library personnel for service delivery

		Sub-Construct	\bar{x}	δ		1	2	3	4	5
						Perceived Usefulness	Perceived Ease of Use	Perceived Enjoyment	Computer Playfulness	Social media use for service delivery
Motivational factors	1	Perceived Usefulness	37.54	11.691	Pearson Correlation	1.000	0.113	0.192	0.342	0.775
					Sig. (2-tailed)		0.015	0.000	0.000	0.013
					N	469	469	469	469	469
	2	Perceived Ease of Use	18.92	6.348	Pearson Correlation	0.113	1.000	0.045	0.202	0.280
					Sig. (2-tailed)	0.015		0.326	0.000	0.000
					N	469	469	469	469	469
	3	Perceived Enjoyment	22.37	7.085	Pearson Correlation	0.192	0.045	1.000	0.174	0.337
					Sig. (2-tailed)	0.000	0.326		0.000	0.044
					N	469	469	469	469	469
	4	Computer Playfulness	29.01	8.485	Pearson Correlation	0.342	0.202	0.174	1.000	0.260
					Sig. (2-tailed)	0.000	0.000	0.000		0.032
					N	469	469	469	469	469
5	Social media use for service delivery	71.84	38.309	Pearson Correlation	0.775	0.180	0.337	0.260	1.000	
				Sig. (2-tailed)	0.013	0.000	0.044	0.032		
				N	469	469	469	469	469	

Table 4.8 presents the relationship between motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) and social media use by library personnel in universities in southwestern Nigeria. It could be observed from the result in Table 4.10 that all the four indices of motivational factors were found to have positive correlations with social media use (Perceived Usefulness $\bar{x} = 37.54$, $\delta = 11.691$, $r=0.775$; Perceived Ease of Use $\bar{x} = 18.92$, $\delta = 6.348$ $r = 0.280$; Perceived Enjoyment $\bar{x}=22.37$, $\delta = 7.085$ $r=0.337$ and Computer Playfulness $\bar{x} = 29.01$, $\delta=8.485$, $r=0.260$; $p<0.05$). This result implies that Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness which are indices of motivational factors had positive correlations and significant relationship with the use of social media for service delivery by library personnel in universities in southwestern Nigeria.

Therefore, the hypothesis two which states that there is no significant relationship between motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) and social media use for service delivery by library personnel in universities in southwestern Nigeria is hereby rejected. In other words, a significant relationship exists between motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) and social media use for service delivery by library personnel in universities in southwestern Nigeria.

4.4.3 Hypothesis 3: There are no significant relationships between personal characteristics (age, gender, marital status, educational qualification and computer use experience) and motivational factors (Perceived usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) on social media use for service delivery by library personnel in universities in southwestern Nigeria.

Pearson's Product Moment Correlation was employed to establish relationship between personal characteristics and motivational factors on social media use for service delivery by library personnel in universities in southwestern Nigeria. The result is also presented in Table 4.9. See column 1 Rows 11- 15 for more details.

It can be inferred from Table 4.9 that there are no significant relationships between gender and motivational factors (Perceived Usefulness $r = -0.011$, $P > 0.05$; Perceived Ease of Use $r = -0.037$, $P > 0.05$; Perceived Enjoyment $r = -0.024$, $P > 0.05$ and Computer Playfulness $r = 0.015$, $P > 0.05$) on social media use for service delivery of the respondents. Similarly, there are no significant relationships between age and motivational factors (Perceived Usefulness $r = -0.051$, $P > 0.05$; Perceived Ease of Use $r = -0.014$, $P > 0.05$; Perceived Enjoyment $r = -0.014$, $P > 0.05$ and Computer Playfulness $r = -0.035$, $P > 0.05$) on social media use for service delivery of the respondents.

Furthermore, there are no significant relationships between marital status and motivational factors (Perceived Usefulness $r = -0.013$, $P > 0.05$; Perceived Ease of Use $r = -0.041$, $P > 0.05$; Perceived Enjoyment $r = -0.062$, $P > 0.05$ and Computer Playfulness $r = -0.062$, $P > 0.05$) on social media use for service delivery of the respondents. Additionally, there are no significant relationships between educational qualification and motivational factors (Perceived Usefulness $r = 0.061$, $P > 0.05$; Perceived Ease of Use $r = -0.017$, $P > 0.05$; Perceived Enjoyment $r = -0.008$, $P > 0.05$ and Computer Playfulness $r = -0.001$, $P > 0.05$) on social media use for service delivery of the respondents.

Finally, there are no significant relationships between computer use experience and motivational factors (Perceived Usefulness $r = -0.061$, $P > 0.05$; Perceived Ease of Use $r = 0.023$, $P > 0.05$; Perceived Enjoyment $r = -0.018$, $P > 0.05$ and Computer Playfulness $r = -0.085$, $P > 0.05$) on social media use for service delivery of the respondents. It could be deduced from the result that no significant relationship existed between personal characteristics and motivational factors of the respondents. Therefore, it could also be inferred that the hypothesis 3 which stated that there are no significant relationships between personal characteristics and motivational factors on social media use for service delivery by library personnel in universities in southwestern Nigeria is hereby accepted.

4.4.4 Hypothesis 4: There is no significant multiple relationship among personal characteristics, motivational factors and social media use for service delivery by library personnel in universities in southwestern Nigeria.

Pearson's Product Moment Correlation was employed to establish relationship among personal characteristics, motivational factors and social media use for service delivery by library personnel in universities in southwestern Nigeria. The result is presented in Table 4.9i, 4.9ii, 4.9iii and 4.9iv.

Table 4.9i: Summary of correlation showing the relationship between personal characteristics and social media use; motivational factors and social media use by library personnel in universities in southwestern Nigeria

Variable	Mean	SD	N	R	P	Remark
Personal Characteristics	117.71	18.933	469	0.429	0.000	Sig.
Social media use	71.84	38.309				
Variable	Mean	SD	N	R	P	Remark
Motivational factors	107.84	33.609	469	0.571	0.000	Sig.
Social media use	71.84	38.309				

Table 4.9ii: Relationship among personal characteristics, motivational factors and social media use by library personnel in universities in southwestern Nigeria

Variables		Sub-Constructs	\bar{x}	SD		GENDER	AGE RANGE	MARITAL STATUS	EDUC QUAL	CUE	PU	PEOU	PE	CPL	SMU
Personal characteristics	1	GENDER	39.27	6.321	Pearson Correlation	1.000	-.094	.090	-.037	.068	-.011	-.037	-.024	.015	0.281
					Sig. (2-tailed)		.041	.051	.427	.143	.818	.424	.599	.747	0.010
					N	469	469	469	469	469	469	469	469	469	469
	2	AGE	31.23	0.931	Pearson Correlation	-.094	1.000	-.428	-.146	.281	-.051	-.014	.014	-.035	0.427
					Sig. (2-tailed)	.041		.000	.001	.000	.271	.755	.760	.453	0.001
					N	469	469	469	469	469	469	469	469	469	469
	3	MARITAL STATUS	3.49	1.009	Pearson Correlation	.090	-.428	1.000	.100	-.211	-.013	.041	-.062	-.062	0.238
					Sig. (2-tailed)	.051	.000		.031	.000	.781	.379	.177	.181	0.004
					N	469	469	469	469	469	469	469	469	469	469
	4	EDUC. QUAL.	17.35	3.642	Pearson Correlation	-.037	-.146	.100(*)	1.000	-.215	.061	-.017	-.008	.001	0.314
					Sig. (2-tailed)	.427	.001	.031		.000	.187	.706	.861	.987	0.020
					N	469	469	469	469	469	469	469	469	469	469

Table 4.9iii: Relationship among personal characteristics, motivational factors and social media use by library personnel in universities in southwestern Nigeria

Variables		Sub-Constructs	\bar{x}	SD		GENDE R	AGE RANG E	MARITA L STATUS	EDUC QUAL	CUE	PU	PEO U	PE	CPL	SMU
	5	COMPUTER USE EXPERIENCE	26.35	7.030	Pearson Correlation	.068	.281	-.211	-.215	1.000	-.061	.023	-.018	-.085	.503
					Sig. (2- tailed)	.143	.000	.000	.000		.191	.621	.691	.065	.000
					N	469	469	469	469	469	469	469	469	469	469
Motivational factors	6	PU	37.54	11.691	Pearson Correlation	-.011	-.051	-.013	.061	-.061	1.000	.113	.467	.342	0.775
					Sig. (2- tailed)	.818	.271	.781	.187	.191		.015	.000	.000	0.013
					N	469	469	469	469	469	469	469	469	469	469
	7	PEOU	18.92	6.348	Pearson Correlation	-.037	-.014	.041	-.017	.023	.113	1.000	.459	.202	0.280
					Sig. (2- tailed)	.424	.755	.379	.706	.621	.015		.000	.000	0.000
					N	469	469	469	469	469	469	469	469	469	469
	8	PE	22.37	7.085	Pearson Correlation	-.024	.014	-.062	-.008	-.018	.467	.459	1.000	.631	0.337
					Sig. (2- tailed)	.599	.760	.177	.861	.691	.000	.000		.000	0.044
					N	469	469	469	469	469	469	469	469	469	469
9	CPL	29.01	8.485	Pearson Correlation	.015	-.035	-.062	.001	-.085	.342	.202	.631	1.000	0.260	
				Sig. (2- tailed)	.747	.453	.181	.987	.065	.000	.000	.000		0.032	
				N	469	469	469	469	469	469	469	469	469	469	469

Table 4.9iv: Relationship among personal characteristics, motivational factors and social media use by library personnel in universities in southwestern Nigeria

Variables		Sub-Constructs	\bar{x}	SD		GEN DER	AGE RANG E	MARI TAL STAT US	EDUC QUAL	CUE	PU	PEOU	PE	CPL	SMU
Social media use	10	SMU	71.84	38.309	Pearson Correlation	.248	-.236	.331	-.108	.441	.239	.199	.102	.221	
					Sig. (2-tailed)	.543	0.89	.122	.090	.002	.020	.021	.110	.089	1.000
					N	469	469	469	469	469	469	469	469	469	469

Sig P Values 0.000, 0.014, 0.013, 0.024, 0.035, 0.008, 0.018, 0.020, 0.044, 0.032

Table 4.9i, 4.9ii, 4.9iii and 4.9iv present Correlation Matrix showing individual and multiple relationships among personal characteristics, motivational factors and social media use by library personnel in universities in southwestern Nigeria. The result showed that there is significant multiple relationship among personal characteristics, motivational factors and social media use by library personnel in universities in southwestern Nigeria. For instance, there is a strong positive correlation between personal characteristics and social media use (gender: $r = 0.281$, $P < 0.05$, age: $r = 0.427$, $P < 0.05$; marital status: $r = 0.238$, $P < 0.05$; educational qualification: $r = 0.314$, $P < 0.05$; computer use experience: $r = 0.503$, $P < 0.05$). This implies that all the indices of personal characteristics such as, computer use experience had the strongest positive correlation with ($r = 0.503$, $p = 0.000$); followed by age with ($r = 0.427$, $p = 0.001$), educational qualification ($r = 0.314$, $p = 0.020$), gender ((gender: $r = 0.281$, $p = 0.010$) and marital status (marital status: $r = 0.238$, $p = 0.004$).

Similarly, there is a significant multiple relationships between motivational factors and social media; hence, all the indices of motivational factors had strong positive relationship in the use of social media for service delivery by library personnel in universities in Southwestern Nigeria. For instance, Perceived Usefulness had the strongest positive relationship with ($r = 0.775$, $p = 0.013$); Perceived Enjoyment with ($r = 0.337$, $p = 0.044$) followed by Perceived Ease of Use with ($r = 0.280$, $p = 0.000$) while Computer Playfulness had the least positive correlation with ($r = 0.260$, $p = 0.032$). This implies that personal characteristics and motivational factors had a significant multiple relationships on social media use for service delivery by library personnel in southwestern Nigeria. Therefore, the hypothesis four that states that there is no significant multiple relationship among personal characteristics, motivational factors and social media use for service delivery by library personnel in universities in southwestern Nigeria is therefore, rejected.

4.4.5 Hypothesis 5: Personal characteristics (age, gender, level of education, computer use experience and marital status) and motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) will not jointly affect the use of social media by library personnel in universities in southwestern Nigeria.

Hypothesis five was tested using multiple regression analysis such that personal characteristics were regressed against social media use on one hand while motivational factors were regressed against social media use on the other hand.

Hence, the results of the joint and relative influence of personal characteristics (age, gender, marital status, computer use experience and educational qualification) and motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) on the use of social media by library personnel for service delivery are presented in Tables 4.10a, 4.10b, 4.10c and 4.10d respectively.

Table 4.10a: Joint influence of personal characteristics on social media use by library personnel in universities in southwestern Nigeria

Source of Variation	Sum of Square	Df	Mean square	F-ratio	Sig. P
Regression	150.112	5	30.022	42.698	.000(a)
Residual	325.551	463	.703		
Total	475.663	468			
R	Adjusted R	R-square	Adjusted R-Square	Std. Error of the Estimate	
0.562	0.316	0.555	0.308	0.83853	

Results in table 4.10a showed a coefficient of multiple correlation ($R=0.562$ and a multiple R^2 of 0.316). This means that 31.6% of the variance on social media use was accounted for by all the constructs of personal characteristics when taken together. The significance of the composite contribution was tested at $P<0.05$ level of significance. The result also showed that the analysis of variance for the regression yielded F-ratio of 42.698. This implied that there is a significant joint influence between personal characteristics (age, gender, marital status, computer use experience and educational qualification) and social media use for service delivery by the respondents ($R =0.555, P<0.05$).

Table 4.10b: Relative influence of personal characteristics (age, gender, computer use experience, educational qualification and marital status) on social media use

Mode 1	Unstandardized Regression Coefficients		Standardized Regression Coefficients	T	Sig. P
	B	Std. Error	Beta		
1 (Constant)	1.244	.218		5.611	.000
Age	.182	.064	.280	6.436	0.000
Gender	.340	.053	.169	.2.855	.004
Marital Status	.048	.064	.046	.754	.451
CUE	.434	.056	.378	7.768	.000
EQ	.011	.043	.010	.248	.805

A Dependent measure: Social media use

Key: CUE= Computer use experience, EQ= Educational qualification

Result in Table 4.10b revealed the relative influence of the five sub-constructs of personal characteristics (age, gender, computer use experience, educational qualification and marital status) on social media use for service delivery, expressed as beta weights, viz Age; 28% ($\beta = -.280$), Computer use experience: 37.8% ($\beta = .378$) and Gender: 16.9% ($\beta = .0169$) which shows that age had 28%, gender 16.9% and computer use experience 37.8% , educational qualification: 1.0% ($\beta = 0.01$) and marital status 0.04% ($\beta = 0.046$). It could be noted that only computer use experience, age and gender were the most three significant values of β . Hence, computer use experience had the highest relative influence on social media use for service delivery by library personnel in universities in southwestern Nigeria. Independently, there is significant influence of age ($\beta = 0.340$; $t = 6.436$; $P < 0.05$), gender ($\beta = 0.182$; $t = 2.855$; $P < 0.05$) and computer use experience ($\beta = 0.434$; $t = 7.768$; $P < 0.05$) on social media use for service delivery by library personnel in universities in southwestern Nigeria while marital status ($\beta = 0.048$; $t = 0.754$) and educational qualification ($\beta = 0.011$; $t = 0.248$; $P > 0.05$) did not have much significant influence.

However, the result of the joint influence of four sub-constructs of motivational factors is presented in Table 4.10c.

Table 4.10c: Joint influence of motivational factors on social media use for service delivery by library personnel in universities in southwestern Nigeria.

Source of Variation	Sum of Square	Df	Mean square	F-ratio	Sig. P
Regression	107.688	4	26.922	33.947	.000(a)
Residual	367.975	464	.793		
Total	475.663	468			
	R-square	Adjusted R-Square		Std. Error of the Estimate	
0.702	0.476	0.226		0.89053	

Results in table 4.10c showed a coefficient of multiple correlation ($R=0.702$ and a multiple R^2 of 0.476). This means that 47.6% of the variance on social media use for service delivery of the respondents was accounted for by all the constructs of motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) when taken together. The significance of the composite contribution was tested at $P<0.05$. The result also showed that the analysis of variance for the regression yielded F-ratio of 33.947. This implies that the joint contribution of the motivational factors (PU, PEU, PE and CP) to the dependent variable (social media use for service delivery) was significant and that the other variables not included in this model may have accounted for the remaining variance. Further analysis to show relative contribution of motivational factors to the dependent variable (social media use) is presented in Table 4.10d.

Table 4.10d: Relative influence of motivational factors on social media use

Mode 1	Unstandardized Regression Coefficients		Standardized Regression Coefficients	T	Sig. P
	B	Std. Error (B)	Beta		Std. Error
1 (Constant)	1.878	.214		8.788	.000
PU	.038	.061	.036	.633	.527
PEOU	.198	.059	-.190	-3.358	.001
PE	.519	.050	.427	10.293	.000
CPL	.093	.056	.089	2.128	.034

A Dependent measure: Social media use

PU - Perceived Usefulness

PEOU - Perceived Ease of Use

PE - Perceived Enjoyment

CPL - Computer Playfulness

Result in Table 4.10d revealed the relative influence of the four sub-constructs of motivational factors namely Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness on social media use for service delivery, expressed as beta weights, viz PU; 3.6% ($\beta=-0.036$), PEOU: 19.0% ($\beta = -.190$), PE: 42.7% ($\beta = 0.427$ and CPL: 8.9% ($\beta =0.089$) of the respondents. It could be observed that Perceived Enjoyment and Computer Playfulness had highest significant relative influence followed by Perceived Usefulness to the use of social media for service delivery by library personnel in universities in southwestern Nigeria while Perceived Ease of Use had the least. Hence, all the sub-constructs of motivational factors had relative influence on social media use. Further analysis to show joint and relative contributions of the independent variables on the dependent variable (social media use) is presented in Table 4.11 a and b.

Table 4.11a: Joint influence of personal characteristics (age, gender, marital status, computer use experience and educational qualification) and motivational factors (perceived usefulness, perceived ease of use, perceived enjoyment and computer playfulness) on social media use

Model	Sum of Square	Df	Mean Square	F	Sig. (<i>p</i> value)	Remark
Regression	68.689	9	7.632			
Residual	128.829	459	.281	27.192	.000	Sig.
Total	197.518	468				
R= .590 R ² = .348 Adj. R ² = .335 Std. Error = .52979						

Table 4.11a presents result of the joint influence of personal characteristics (age, gender, level of education, marital status, computer use experience) and motivational factors (perceived usefulness, perceived ease of use, perceived enjoyment, and computer playfulness) on social media use for service delivery by library personnel in universities southwestern Nigeria. The result revealed that personal characteristics and motivational factors have significant joint influence on social media use for service delivery by library personnel in universities in southwestern Nigeria. The result also shows that the analysis of variance (ANOVA) for the regression yielded an F-value of 27.192 and p-value of 0.000 (significant at 0.05 level). This implies that the joint influence of the independent variables (personal characteristics and motivational factors) on the dependent variable (social media use) was significant. Hence, personal characteristics and motivational factors had combined influence on social media use for service delivery by library personnel in universities in southwestern Nigeria.

Furthermore, the result shows a coefficient of multiple correlation $R = 0.590$, coefficient of multiple determination ($R^2 = 0.348$) and Adjusted $R^2 = 0.335$. This implies that personal characteristics and motivational factors jointly accounted for 33.5% of variation in social media use for service delivery by library personnel in universities in southwestern Nigeria. In other words, about 34% of variability on social media use for service delivery by library personnel in university libraries was accounted for by personal characteristics and motivational factors. The remaining variance maybe due to other factors not included in the model for this study. It could therefore, be concluded that the hypothesis which states that personal characteristics and motivational factors will not jointly influence the use of social media by library personnel in universities in Southwestern Nigeria is rejected. This means that the two independent variables (personal characteristics and motivational factors) had a joint influence on the dependent variables (social media use) by library personnel in universities in southwestern Nigeria.

Further result to show the relative influence of the independent variables on the dependent variable is presented in Table 4.11b.

Table 4.11b: Relative influence of personal characteristics and motivational factors on social media use for service delivery of the respondents

Coefficients^a

Model	Unstandardised Regression Coefficients		Standardised Regression Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	.680	.220		3.905	.002
Age	.109	.040	.123	2.718	.007
Gender	-.179	.049	-.196	-3.644	.000
Marital Status	.079	.046	.102	1.709	.088
EQ	-.320	.051	-.030	-.640	.523
CUE	.213	.054	.224	3.939	.000
PU	-.142	.044	-.174	-3.207	.001
PEOU	.265	.043	.288	6.187	.000
PE	.423	.052	.404	8.205	.000
CPL	.106	.035	.132	3.055	.002

A Dependent measure: SM USE

EQ - Educational Qualification

CUE - Computer Use Experience

PU - Perceived Usefulness

PEOU – Perceived Ease of Use

PE - Perceived Enjoyment

CPL - Computer Playfulness

Table 4.11 b shows relative contributions of the dependent variables on social media use for service delivery by library personnel in universities in Southwestern Nigeria. It is clearly seen from the result that individually, the dependent variables had significant influence on social media use expressed as beta weights viz: personal characteristics: Age ($\beta = 0.109$, $t = 2.718$, $P < 0.05$); gender ($\beta = -0.179$, $t = 3.614$, $P < 0.05$), marital status ($\beta = -0.079$, $t = 1.709$, $P > 0.05$), educational qualification ($\beta = -0.032$, $t = 0.640$, $P > 0.05$), computer use experience ($\beta = -0.213$, $t = 3.94$, $P < 0.05$); perceived ease of use ($\beta = 0.265$, $t = 6.18$, $P > 0.05$), perceived usefulness ($\beta = -0.142$, $t = 3.207$, $P < 0.05$), perceived enjoyment ($\beta = -0.423$, $t = 8.205$, $P < 0.05$) and computer playfulness ($\beta = 0.106$, $t = 3.055$, $P < 0.05$). More importantly, age (Beta = 0.123); gender (Beta = 0.196); marital status (Beta = 0.102); educational qualification (Beta = 0.030); computer use experience (Beta = 0.224); perceived usefulness (Beta = 0.174); perceived ease of use (Beta = 0.288); perceived enjoyment (Beta = 0.404); and computer playfulness (Beta = 0.132) had relative influence on social media use for service delivery of the respondents.

4.5. Respondents' suggestions on how social media use can be improved for service delivery in the library

The suggestions of respondents from open-ended question on suggestions on ways of improving social media use in the library by library personnel for service delivery were collated and summarised as follows:

1. There should be improvement in the Internet system so that the use of social media can be adequately utilized for library services delivery;
2. There should be provision of a continuous and regular power (electricity) supply in the library environment; this is because, use of the Internet would not be effective without a regular power supply, hence alternative power such as solar energy should be installed in university libraries for better services delivery;
3. Availability of Internet facility, enhanced bandwidth, improved networking system with unvarying electricity supply will inspire library personnel to effectively use social media for better service delivery;
4. Library personnel should be trained and retrained through regular workshops, seminars and conferences on the use of different types of social media tools for effective library services delivery;
5. Accessibility to the use of social media in the library for service delivery should be strengthened;
6. Introduction of social media use into the curriculum of all library schools will equip and prepare librarians in training for the task ahead;
7. Implementation of the full use of social media into various library housekeeping functions to attract users of the library; and
8. All the categories of library personnel should be constantly encouraged to use social media for service delivery.

4.6 Discussion of the findings

This section discussed the findings of the study in line with results from previous studies.

4.6.1 Socio-demographic data /personal characteristics of library personnel

Socio-demographics/Personal characteristics of the respondents captured in this study are religion, gender, age, level of education, marital status, work experience and computer use experience. The findings on personal characteristics in terms of gender of the respondents revealed that majority of the respondents were males as compared with their female counterparts. The result was in disagreement with the study of Adewojo and Adebara (2016)

who investigated social media use by library staff in academic libraries in Yaba College of Technology, Lagos State, Nigeria. The result revealed that there were more female respondents as compared with their male counterparts. In addition, it was shown that there were more male respondents than their female counterparts in federal and state universities but the case was different in private universities as the number of female respondents was more than that of male respondents which was in tandem with their study.

Additionally, Amuda and Adeyinka (2017) investigated the application of social media for innovative library services by library staff in southwestern Nigeria and found that there were more male respondents as compared with their female counterparts corroborating with the present study. In contrast, the study of Shihab (2015) on social media awareness and use among LIS professionals in India revealed that there were more male respondents 140(57%) as against the female respondents.

In this study therefore, there was no broad gender imbalance or disparity in the composition of library personnel in universities in southwestern Nigeria since the trend in gender distribution could twist to either side. This signifies that it is not a gender dominated profession indicating no gender divergence. Although in federal and state universities, the results pointed out that there were more male library personnel than their female counterparts. Nevertheless, the situation was different in private universities as there were more female library personnel than that of male counterparts suggesting no gender discrepancy in the composition of library personnel in universities in southwestern Nigeria.

The findings from the study revealed that maximum number of respondents was found in the age bracket of 31-40 years. However, federal and state universities had majority of their library personnel within the age brackets of 41-50 years while private universities had majority of their respondents within the age of 31-40 years. The findings from the age distribution of the respondents was in agreement with the study of Booker and Bandyopadhyay (2017) who carried out a study on how academic libraries can leverage social networking to popularize their services in India. It was affirmed that majority of the respondents were young and vibrant people as compared with their older counterparts.

Data on marital status of the respondents disclosed that majority of the respondents were married as against those who indicated to be single while the least were either separated or widowed. Out of 89 respondents who indicated to be single, majority of them were from private universities and the remaining from federal universities and state universities. The inference from the result on marital status points to the fact that most of the library personnel

in universities in southwestern Nigeria were married and matured enough to understand the use of social media sensibly.

The educational qualification of the respondents showed that the majority had Master(s) Degree certificate followed by Bachelor in Library and Information Studies (BLIS), Diploma in Library and Information Studies (LIS), Doctoral Degree and M.Phil respectively. Accordingly, in federal universities, majority of the respondents had Master(s) Degree. This was followed by BLIS, Diploma in LIS, Doctoral Degree and M.Phil. The finding also revealed that in state universities, the trend appeared to be the same. The result showed that library personnel with Master(s) Degree constituted the majority. In addition, in private universities, quite a number of library personnel had Master(s) Degree, BLIS, Diploma in LIS, Doctoral Degree and M.Phil. The implication of this is that the universities in southwestern Nigeria are not lacking highly qualified and eligible library personnel and consequent upon this, effective and efficient service delivery on the use of social media would not be a problem. Moreover, the result revealed that in all the universities (federal, state and private) in southwestern Nigeria, there were more librarians than library officers, although, very few librarians hold Doctoral Degree. Therefore, it is very imperative for librarians to go for further studies in order to obtain their Doctoral degree like other profession.

This shows that state universities in southwestern Nigeria had the least number of doctorate degree holders among library personnel while federal universities had the highest. The trend is the same in all the three types of universities (federal, state and private) as there were more librarians than library officers. It therefore, implies that librarians need to brace up and ensure that the profession is engulfed with personnel with Doctoral Degrees. This therefore, indicates that irrespective of the number of professional librarians, all cadres were adequately represented. This as well proposes that the librarianship profession is not lacking competent and qualified personnel to enhance service delivery in line with global top practices. The findings corroborate the findings of Adewojo and Adebara (2016); Amuda and Adeyinka (2017) where they reported that majority of the respondents were professional librarians as compared with library officers.

Findings on years of length of work experience unveiled that library personnel in universities in southwestern Nigeria have wealth of work experience except in private universities where the years of length of work experience was low. This connotes that the respondents were experienced and skilled in the art of carrying out library activities and rendering information services. It was also revealed that majority of the respondents in

private universities had a length of work experience between 1-4 years while in federal universities; majority had a length of work experience of 13 years and above.

Similarly, in state universities, majority of the respondents also had 13 years and above work experience. This infers that the respondents were proficient and quite knowledgeable in carrying out library and information service activities and mandates which could foster effective service delivery particularly in the use of new technologies in delivering services to the users. The findings corroborate the findings of Amuda and Adeyinka (2017) who reported that respondents in universities in southwestern Nigeria had 1-5 years work experience; 6-10 years; and 11-15 years work experience.

Furthermore, findings from the computer use experience of the respondents showed that majority of library personnel in all the universities (federal, state and private) had computer use experience for 13 years. This was followed by respondents who specified that they had computer use experience of 5-8 years. While a number of the respondents showed that they had computer use experience of 9-12 years. It was also revealed that some of respondents which were the least had computer use experience between 1–4 years.

Specifically, in federal universities, quite a number of respondents indicated that they had computer use experience for 5-8 years, while some of the respondents also claimed they had computer use experience of 1-4 years. Likewise, in state universities, most of the respondents had 13 years and above in the use of computer; 9-12 years of experience in computer; 1-4 years of computer use experience; and 5 - 8 years respectively. Result showed that majority of the respondents in private universities claimed that their computer use experience was between 5-8 years; some indicated computer use experience of above 13 years, quite a number had computer use experience between 1-4 years while the least had computer use experience ranging between 9- 12 years.

From these results, it is evident that most of the library personnel in universities in southwestern Nigeria had computer use experience between 5-8 years. Therefore, it could be inferred that library personnel in federal, state and private universities in southwestern Nigeria had moderate level of computer use experience. Thus, irrespective of the different levels of computer use experience of the respondents, the level of computer use experience of library personnel in universities in southwestern Nigeria was found to be moderate. For further details (see appendix 11). By implication, this submits that library personnel in universities in southwestern Nigeria are highly skilled, competent and have the capabilities of using Information Communication tools such as social media effectively for service delivery. This is an indication that library personnel in universities in southwestern Nigeria are moving

with the trend of digital era and would not want to be irrelevant in the area of the use of new information systems.

4.6.2 Types and frequency of social media use by library personnel for service delivery

The result of the study indicated that there were different types of social media tools being used by library personnel at different levels in universities in southwestern Nigeria. The findings on the types of social media being used by library personnel in universities revealed that a significant number of the library personnel made use of different types of social media for service delivery such as information sharing sites like WhatsApp, Facebook and Google+. The result of this study corroborates the study of Xie and Stevenson (2014) who stated that librarians in United States of America made use of different social media tools frequently for their service delivery at different levels. The findings of the study showed a higher level use of WhatsApp which was ranked the highest in terms of usage for service delivery. On the contrary, the study of Quadri and Idowu (2016) on social media use for information dissemination by librarians in three federal university libraries in South-west, Nigeria revealed that Facebook, Google+, and Twitter were the mostly used for by librarians for service delivery.

From this result, it is apparent that WhatsApp was the social media tool mostly being used for service delivery by library personnel in universities in southwestern Nigeria. This is probably because WhatsApp is a free instant messenger application that can be used with mobile phones, requires less network data and also allows users to send and receive text messages and multimedia files with ease. This agrees with the positions of Shambare (2014), Ansari and Tripathy (2017) and Smith (2018) that WhatsApp's popularity has grown exponentially because of its ability to allow for easy messaging and communication despite the geographical location. Since the application of WhatsApp is compatible with iPhone, BlackBerry, Android, Nokia, and other Windows smartphones, it contributed for easy access which points to the fact that it is readily available for use.

This is in contrast to the findings of Ayu and Abrizah (2011) who investigated the use and application of Facebook among Malaysian academic libraries in rendering services to users. The researcher reported that the type of social media mostly used by academic libraries was Facebook which was mainly used for marketing and creating awareness on library information products and services. Similarly, Oyeniran and Olajide (2019) conducted a study on librarians' use of social media for service delivery in university libraries in Nigeria. It was discovered that the type of social media being used mostly by librarians was Facebook followed by YouTube, Instant Messaging and Twitter. In addition, Smeaton and Davis (2014)

carried out a study on the use of social media tools in creating a participatory library services in Australia. They reported that Facebook was a very prevalent platform being used by librarians for service delivery. Similarly, Koshy (2013) carried out a study on factors that affect the use of Facebook and Twitter as marketing tools in the UAE and reported that Facebook was the most frequently used followed by Twitter in Arab Emirates.

The result of this study showed that Facebook was ranked second as another type of social media tool being used by most library personnel for service delivery in universities in southwestern Nigeria. This finding attested to the fact that library personnel have come to terms with the use of social media tools for service delivery. The finding of this study corroborates with the finding of Aras (2015) who explored the role of social media in the promotion of university libraries in Turkey. It was found that Foursquare was ranked the highest social media tool used by librarians for service delivery followed by Facebook which was ranked second then Twitter.

Additionally, the outcome of this study was also in contrast to the study of Phillips (2011) who carried out a study on the use of social media for developing relationships among librarians and users. The study revealed that Facebook was the most prevalently used social media for service delivery. The study revealed that Facebook offered a dynamic environment for academic libraries to establish very cordial relationships with their users. This outcome also was in contrast with the results of earlier findings by Rouse (2009), Chu and Du (2013), Du Toit and Mulatiningsih, (2013) Dowd (2013) and Mundt, (2013) that Facebook as an Information Sharing Site was the largest social networking site in the world and one of the most widely and extensively used tool for rendering services.

Although, the use of Facebook for service delivery by library personnel as found in this study agreed with Wan (2011) that university libraries could use Facebook to provide updates on library services such as new reference service, document delivery, research supports among others. University libraries can also put up post related to library collections such as updates or promotions of electronic and print collections, database and other research resources. University libraries also through Facebook can create event invitations for programs as an additional forum to promote library activities (Chu and Meulemans, 2008).

By implication, it could be deduced that despite the fact that Facebook had been regarded and found to be the largest social networking site used by most libraries for communication, dissemination of information, advertisement among others by prior researchers, based on the outcome of this study, WhatsApp was found to be the most

frequently used by most university libraries in southwestern Nigeria which could be different in other regions.

In addition, bookmarking/tagging also recorded low mean scores which showed that such tools were hardly used by library personnel in southwestern Nigeria. From these results, it could be concluded that social media tools used by library personnel in universities in southwestern Nigeria were information sharing sites, media sharing sites and weblogs while content aggregation sites, content delivery and bookmarking and tagging tools were not significantly used. Other social media tools such as media sharing sites (like Instagram and You Tube) occupied the middle place and while RSS feeds, Google reader and Vodcast were not significantly used for service delivery by library personnel in universities in Southwestern Nigeria. This finding agrees to the findings of Agyekun, Arthur and Trivedi (2016) who also explored the adoption of social networking tools in public university libraries in Ghana. The researchers revealed that the most frequently used social media by librarians was Facebook followed by Instant Messaging. They also reported that social media tools such as LinkedIn, Twitter, Blogs, Wikis, Flickr, Slideshare and Youtube were not significantly used.

The result which showed that some types of social media tools such as RSS feeds, Google reader, Vodcast and LinkedIn were not significantly used for service delivery by library personnel in universities in southwestern Nigeria is in contrast with Anttriroiko and Savolainen, (2011) Sullivan (2014) that librarians can use these tools to render specialised service such as Selective Dissemination of Information (SDI) to their users. More so, the finding deviates from the claim of Makori (2012) that an RSS feed was being widely used as communication tool for efficient dissemination of information which led to effective communication and information sharing among librarians and between the library personnel and the users. Blogs is another type of social media tool not used by most of the library personnel in the study. This is contrary to what authors such as Walia and Gupta (2012), Ekoja (2011), Dickson and Holley (2010), Mazzocchi (2014) that opined that libraries are increasingly using Blogs for publishing library news and events, providing information about new acquisitions, and encouraging use of library services.

It is evident from the finding of this study that library personnel in universities in southwestern Nigeria used different types of social media tools for service delivery. This is in agreement with Baro, Ebiagbe and Godfrey (2013), Chu and Du (2013) and Penzhorn (2013) that social media tools can be very relevant to the library personnel for quality service delivery, online interactions, open distance learning as well as for information literacy programme. The finding of this study also revealed that social media tools such as

WhatsApp, Facebook, Instagram, Twitter, Google+, WeChat, Blackberry messenger, YouTube, Google reader, LinkedIn were the most popularly used by library personnel for service delivery. The finding is consistent with the findings of Atulomah and Onuoha (2011); Bradley and McDonald (2011); Hall (2011) and Ansari and Tripathi (2017) that librarians showed positive attitude towards using social media tools such as Facebook, WhatsApp, You-tube and Instant Message (IM) in rendering effective service to users for alert services, sharing of information, facilitate collaborations and promote effective communication between library personnel and their users.

In addition, the finding on frequency of use of social media for service delivery by library personnel in universities in southwestern Nigeria, revealed that WhatsApp, Facebook, google+, Twitter, YouTube and Instagram were the most frequently used social media tools for service delivery by library personnel in southwestern Nigeria while the frequency of use of social bookmarking/tagging, content aggregation, content delivery was low. This finding is in tandem with previous findings by Coelho (2011), Collins and Quan-Haase (2012), Collins and Quan-Haase (2014) and Priolkar and Kumbhar (2015) that Facebook has been the tools most libraries use frequently for selecting suitable methods to evaluate the marketing success of social media presence.

More so, the finding agrees with Akeriwa *et al* (2014) that social media tools used most often by librarians were social networking and Instant Messaging. In the same vein, this finding corroborates Makori (2012) that university libraries in Africa are using social media technologies for bridging the information gap such that RSS feeds were found to be used as communication tool. More so, the study highlighted how social media tools had helped university libraries to provide, expand, promote, support and post information service to their users. Boateng and Liu (2014) studied the use of Web 2.0 technologies and trends at the top 100 US academic libraries as exemplified through their library web sites. They found that wikis was the least used Web 2.0 tool for service delivery which corroborates the finding of this study.

Similarly, the finding affirms the results of the study by Mitchell and Wastein (2007), Adewojo and Adebara (2016) and Kumbhar and Priolkar (2015) on social media usage by library staff in academic libraries which found that majority of the library personnel used Facebook, WhatsApp, Blogs and Twitter daily for service delivery. On contrary, the finding of the present study disagrees with Chua and Goh (2010); Makori (2012) and Boateng and Liu (2014) who reported that in public and academic libraries, blogs and RSS were the most popular social media tools, followed by instant messaging (IM) while social networking sites,

wiki, and tagging were less popular. More so, the study is contrary to what Gupta *et al* (2014) and Adewoyin *et al* (2017) found that the frequency of use of social media by library personnel was low.

4.6.3 Purpose of use of social media by library personnel

Responses to the question on the purpose of use of social media by library personnel revealed that a significant number of library personnel made use of social media for sharing information and knowledge to users. This was followed by communicating and interacting with users. This is in agreement with the findings of Shihab (2015); Amuda and Adeyinka (2017) and Oyeniran and Olajide (2019) who revealed that library personnel used social media for communicating, interacting with users and creating professional connection. It is also in consonance with the opinion of Rauniar *et al* (2014) who stated that social media sites provide various tools and applications that can enhance and improve the services of library personnel to the users as they share and exchange information.

Relating purpose of using social media for service delivery, Ezeani and Igwesi (2012); Waddell and Barnes and Khan-Kernaham (2012) reported that library personnel used social media tools such as twitter, blogs to create library service alerts, express opinions, build connection with researchers, getting feedbacks, share information and links. The result is also in conformity with the submissions of Andrea and Robert (2010); Muhammad and Khalid (2012) that social media tools such as Twitter, Flickr, Facebook, Myspace and blogs are the major social media platforms being used by academic librarians in the developed world for marketing library services and for providing reference services.

In addition, the findings revealed that library personnel made use of social media tools for carrying out their activities and for delivery of services. This result is an inspiring and positive development because of the fast-paced changing nature of the society including technology and innovation hence, library personnel in the field of librarianship are expected to keep abreast of new development in order to remain relevant in the changing environment. The result corroborates the previous findings by Walia and Gupta (2012); Mazzochi (2014) Quadri and Idowu (2016); Okite-AAmughoro (2017) that librarians used social media tools for publishing library events, dissemination of information, marketing of information products and services, provision of information on new arrivals and acquisitions as well as notifications on other issues pertaining to the library activities and services.

The study also was in tandem with the study of Akporhonour and Olise (2015) that conducted a study on the librarians' use of social media for promoting library and information products and services and found that social media tools were used by librarians

for the promotion and advertisement of libraries' products and services. Adewoji and Adebara (2016) also found that social media tools were used by library personnel in Yaba College of Technology for the promotion of library services such as reference services and selective dissemination of information. The result found in this study is also in agreement with the studies of Li and Li (2013); Chu and Du (2013); Young and Rossman (2015); Kumar and Reddy (2016) and Quadri and Idowu (2016) who established that library personnel used social media for sharing of information, marketing of library information products, communicating with potential users and services.

Satya and Vairagare (2015) investigated the use and utility of social media in the promotion of today's library and information services in India. The study discovered that library personnel in India used social media used for the promotion of library services and interacting with users in knowledge searching process. The finding is in line with this study which found that respondents used social media for promoting and marketing of information products and services, communicating and interacting with users, sharing of information and knowledge to users among others. In the same vein, Taylor and Francis Group (2014) from their study found that social media tools were being used by librarians basically to fulfill a variety of objectives, particularly on promotion (visibility for and usage of the library service and resources), receiving feedbacks, outreach, for increase in visibility and connections within the broader library community; as well as for assisting in the promotion of the work of the faculty members which is in tandem with this study.

The result obtained in this study is, however, at variance with the findings of Fiander (2012) that twitter was a customer service medium for announcement as well as tracking feedback from users for better and enhanced services. It also disagrees with Wan (2011), Khan and Bhatti (2012), Islam and Habiba (2015) and Akporhonor and Olise (2015) that library personnel used Facebook and LinkedIn for marketing of library and information service, sharing library news and events, video conferencing, advertisement, and research purpose. The study is also at variance with the study of Kemoraj (2013) that Foursquare, Tumblr, Vimeo, Pinterest, Instagram, and Wikipedia were used by some of the librarians for service delivery.

Based on the empirical findings and submissions in the literature, it is therefore, submitted that library personnel in universities in southwestern Nigeria made use of social media tools to carry out their activities and to render effective services to their users, although the level of usage still exists. This study affirms that the level of social media use by library personnel in university libraries was moderate.

4.6.4 Challenges to the use of social media for service delivery by library personnel in universities

The finding of the study on challenges associated with the use of social media for service delivery revealed that the three most prominent challenges affecting the use of social media for service delivery by library personnel in universities in Southwestern Nigeria were identified as poor Internet access, inadequate facilities and absence of social media policies. This affirms the results of earlier findings by earlier researchers such as Hosseini and Hashempour (2012); Arif and Mahmood (2012) who identified obstacles to the use of social media for service delivery to include inadequate ICT infrastructure (low bandwidth), lack of knowledge as well as technical skills. It also corroborates Mundt (2013) and Mabweazara and Zinn (2016) that lack of staff resources and competences, privacy issue and lack of social media policies were barriers to the use of social media in the library.

On the other hand, the finding of the present study partly disagrees with Abou-Shouk and Hewedi (2016), Wolcott *et al* (2008) and Collins and Quan-Haase (2012) who identified lack of reliability of information sources, lack of skills and knowledge, uncertainty over the benefits of social media, absence of adequate infrastructure and unproductive past experiences as perceived barriers to social media use. Ezeani and Igwesi (2012) and Ossai-Ugbah (2012) also identified lack of awareness of social media tools, lack of trained staff, and lack of government intervention, bandwidth problem, technophobia, and unreliable power supply among others as factors facilitating non-use of social media in the library.

Similarly, the finding on challenges to the use of social media by library personnel in universities in Southwestern Nigeria supports the results of Shehu, Urhefe and Aworo (2015); Adewojo and Adebara (2016) who identified challenges to the use of social media tools such as poor Internet access, irregular power supply, lack of management support and lack of awareness of social media tools. The finding also supports the results of Ramzan and Singh (2009) and Aggyekum, Arthur and Trivedi (2016) who revealed challenges to the use of social media in academic libraries to include lack of Internet connectivity, network failure, inadequate facilities and unstable power supply. Furthermore, the findings of Oyeniran and Olajide (2019) from a study conducted on librarian's use of social media for library service delivery in university libraries in Nigeria corroborates with the findings of this study where they reported that lack of awareness, unreliable power supply and low bandwidth constituted the major challenges librarians confronted in the use of social media for the provision of services to their users.

The finding however contrast the results of Taylor and Francis Group (2014) and Nazim (2015) who reported that some of the challenges to the use of social media by library personnel were lack of time and maintenance of copyright issues on one hand and agreed on the other hand that lack of social media skills or requisite knowledge, lack of personal knowledge and skills affected library personnel in the use of social media affected.

Additional challenges indicated by majority of the library personnel in universities in southwestern Nigeria were lack of staff commitment and cooperation, absence of social media policies, staff unwillingness to change, low level of management support. The findings however, aligned with the findings of Wolcoth *et al* (2008); Collins and Quan-Haase (2012); Makori (2012); Mosha *et al* (2015) and Abou-Shouk and Hewedi (2016). It is evident therefore, from the results of these findings that social media apart from building and recreating the image of university libraries could enhance effective service delivery of any kind. Thus, the need to address the challenges becomes very paramount.

4.6.5 Relationship between personal characteristics and social media use by library personnel in universities in southwestern Nigeria

The finding on the relationship between personal characteristics and social media use by library personnel in universities in southwestern Nigeria showed that all the sub-constructs of personal characteristics such as age, gender, marital status, educational qualifications and computer use experience had positive linear correlations with social media use for service delivery by library personnel in universities in southwestern Nigeria. For instance, in this study, it was found that age had a significant positive linear correlation on social media use.

This implies that younger library personnel tend to use social media for service delivery more than older categories. This finding confirms previous studies by Chung, Park, Wang, Fulk and McLaughlin (2010); Ajuwon (2013); Tarhini *et al* (2016) that age is an important personal characteristic that has influence on use of new technology. This is because, cognitive skills could be lost with age. The result also supports the findings of Venkatesh and Morris (2000); Jung *et al* (2010); Tahini, Home and Liu (2014) that age was a factor that could determine the successful use of information systems.

The result of this study also supports the previous study carried out by Keller and Hrastinski (2006) that age was a significant factor on the use of new technology. Odumeru (2012) carried out a study on acceptance of e-banking by customers in Nigeria and found that age was a significant factor which supports the finding of this study. It could be deduced that age is a very significant factor to the use of any new information system. On the contrary, the finding of this study disagrees with the results of empirical studies by McKeown *et al* (2007)

and Goldfard and Prince (2008) that age was negatively correlated with Internet use. This could be as a result of lack of Internet skills including differences in attitudes among age groups which could be lower in older individuals.

In addition, gender was also found to have positive influence on the use of social media for service delivery by library personnel for service delivery in universities in Southwestern Nigeria. It shows that female used social media than their male counterparts. This contrasts the findings of Goswanmi and Dutta who revealed that males had a more positive influence in the use of a new technology than their female counterparts. This also affirms the positions of Teo (2001) in Singapore; Coklar and Sahin (2011) in Turkey and Islam *et al* (2011) in Malaysia that males were more dominant users Internet and had less technostress than their female counterparts.

This finding is in agreement with the findings of Bimber (2000); Teo (2001); Gardner and Schmitt (2001); Venkatesh *et al* (2003); McKeown *et al* (2007); Wang, Wu and Wang (2007); He and Freeman (2010); Coklar and Sahin (2011), Islam, *et al* (2011); and Goswanmi and Dutta (2016) that gender had influence on Information Technology use but that male users used information technology more than their female equals. On the contrary, the study is a sharp contrast from the findings of Master (2008); Goldfard and Prince (2008) that no difference existed between the percentage of male and female in their information technology use.

Furthermore, marital status was also found to be significant in this study. This finding corroborates the finding of Ajuwon (2013) that marital status had significant influence on Internet accessibility. The result also supports the findings of previous studies by Lee and Lee (2001); Wang *et al* (2003); Nyamba and Mlozi (2012); Nnaemeka *et al* (2012) that marital status had a significant relationship with the use of new information systems. On the contrary, the finding of this study disagrees with the result of Mufutau *et al* (2012) that marital status had no significant effect on the use of any new information system.

On educational qualification, it was indicated in this study that educational qualification had a positive significant relationship with the use of social media by library personnel for service deliver in universities in southwestern Nigeria. This result is in corroboration with the previous studies carried out by Teo (2000); Venkatesh and Morris (2000); Ono and Zavodny (2007); Goldfard and Prince (2008) and Islam *et al* (2011) that level of education contributed positively to the effectiveness of information system use. This could be deduced that library personnel with higher educational qualifications could have a greater knowledge about any information system use which would facilitate social media use for service delivery as well

reduce anxiety and apprehension in the use of computer hence improving the attitude of library personnel in the use of social media for service delivery.

More importantly, it was revealed that computer use experience had the strongest positive linear correlation on social media use for service delivery by library personnel in universities in southwestern Nigeria. On computer use experience, the present finding agrees with previous findings by Taylor and Todd (1995; 2001); Venkatesh and Davis (2000); Park *et al* (2012) that the relationship between those who had experience in the use of computer with those who were novice users. They noted that those who had computer experience would prefer to use new information system more than those who had little or no experience at all. Therefore, computer use experience could have a positive influence on the use of social media. Therefore, it could be inferred that all the indices of personal characteristics (age, gender computer use experience, marital status and educational qualifications) had positive influence on the use of social media for service delivery by library personnel in universities in southwestern Nigeria.

4.6.6 Relationship between motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) and social media use by library personnel

There was a significant relationship between motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) and social media use for service delivery by library personnel in universities in southwestern Nigeria. All the indices of motivational factors positively and significantly correlated with the use of social media for service delivery. This implies that perceived usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness are strong influencers of social media use for service delivery by library personnel in universities in southwestern Nigeria.

This finding corroborates with earlier studies by Tan and Teo, (2000), Ramayah *et al* (2003), Hwa *et al* (2015) as well as Elkaseh *et al* (2016) that Perceived Usefulness, Perceived Ease of Use and Perceived Enjoyment have positive influence on the use of information system as well as the enjoyment that could be derived from using it (Ramayah *et al*, 2003). It further affirms the proposition of Davis (1989) and Venkatesh (2003) that information system use is determined by two key factors: Perceived Ease of Use (PEOU) and Perceived Usefulness (PU). The result also conforms to the findings of Wamba (2014); Dumpit and Fernandez (2017) that Perceived Usefulness, Perceived Ease of Use and Computer Playfulness had a positive significant impact on social media use and adoption.

Further, Perceived Usefulness in this study was found to have positive influence on the use of social media for service delivery by library personnel in universities. This affirms the submissions of Hu *et al* (1999); Venkatesh (2000); Gerrard and Cunningham (2003) where Perceived Usefulness was found to be determinant of actual behaviour that encourages users to use new technologies with greater autonomy to perform their work activities. Previous studies have shown that Perceived Usefulness has a strong and consistent positive relationship with information system usage (Suki and Suki, 2011 and Khalid, 2014). The finding is also in line with the submission of Jian *et al* (2012); Liu, Tsai and Jang (2013); Khayati and Zouaoui (2013) that Perceived Usefulness had a positive effect on Information Communication Technology use.

The result is also in consonance with the finding of Luo *et al* (2010) who analysed the determinants of user acceptance of Enterprise Instant Messaging (EIM). The study enlightened the critical antecedents of employees' intention to use Enterprise Instant Messaging (EIM) and found that Perceived Usefulness is a predictor of intention to use enterprise instant messaging. Going by the evidence of the empirical studies reviewed and the present finding that Perceived Usefulness is very important to the library personnel in determining the use of social media for services delivery, it is expected that library personnel in universities in southwestern Nigeria would as a matter of urgency integrate fully the use of social media for service delivery; embark on training programmes for self-development in the use of different technologies particularly different social media tools for service delivery.

The finding is also in agreement with Alakayani *et al* (2012) that Perceived Usefulness had positive influence on the use and acceptance of new information system. Additionally, the analysis on the relationship between Perceived Usefulness and social media use showed a significant correlation. This implies that the extent of social media use for service delivery is influenced by Perceived Usefulness of social media use by library personnel in universities in southwestern Nigeria. It also implies that the extent to which library personnel would go using social media for service delivery is dependent upon how useful the information system (social media) is perceived for service delivery. This finding is in line with Davis (1989); Adams *et al* (1992); Ataran and Nami (2011); Akinde and Adetinmirin (2012); Ke *et al* (2012) who found Perceived Usefulness is an important factor that influences use of a new information system.

The findings also supported the view of Hu *et al* (2012); Wang, Yang, Ho and Su (2018) that Perceived Usefulness influences information system use. The findings also support the assertion of Hamid *et al* (2016) that Perceived Usefulness positively related to

continuance intention to use e- government in Malaysia; Lin and Wang (2012) for Blog learning; Mardikaya *et al* (2012) 3-G technology in Turkey; Baker-Eveleth and Stone (2013) for Instant Messaging and Stone and Baker-Eveleth (2015) for e- textbooks.

Nevertheless, the result as obtained in the study is at variance with the submissions of Alenezi *et al* (2012) that Perceived Usefulness had no significant effect on the use of Internet in Saudi Arabia. In addition, the present study also supports Sharma and Chandel (2013); Alatawi *et al* (2014); Baleghi-zadeh *et al* (2014); Hwa *et al* (2015) that Perceived Ease of Use was positively correlated with use of information system such as social media. The study is also in conformity with the studies of Davis *et al* (1992); Yuliharsi and Daud (2011); Juniwatti (2014) and Abou-Shouk and Hewedi (2016) that Perceived Ease of Use had significant relationship with system use. This implies that any information system that is user friendly would be easily accepted and adopted as compared to a more complex information system.

The study similarly agrees with the study of Al-Haderi (2014) who carried out a study on the influence of system use and reported that Perceived Usefulness had a significant relationship with new information technology. The finding of the study also corroborates with the findings of Haung (2008) who found the impact of e-consumers' Perceived Ease of Use to be mediated by their behavioural attitude on their satisfaction to use new information system. The finding is in consistent with several prior studies of Chang and Tung (2008); Almarashh *et al* (2011); Farahat (2012); Sharma and Chandel (2013); Alatawi *et al* (2014) and Baleghi-zadeh *et al* (2014). By implication, perceive ease of use motivates users when the system is easy to use and where less effort would be required.

On the other hand, the present finding is in contrast with previous studies by Ndubisi *et al* (2001) and Chau and Hu (2002) that Perceived Ease of Use showed no significant effect on Perceived Usefulness. The finding is also not in agreement with the findings of previous studies by Agarwal and Prasad (1997); Bajaj and Nidumolu (1998); Hu *et al* (1999); Chau and Hu (2002) who reported that perceived ease of never had a significant relationship with system use.

On Perceived Enjoyment, the finding supported the findings by Moon and Kim (2001), Van der Heijden (2004), Luo *et al* (2010), Igarria *et al* (1995), Teo (2001) Ramayah *et al* (2003) that individuals tend to use technology because they feel it is important and beneficial to their work activities and also the enjoyment being derived from using it. The finding conforms with the previous studies of Moon and Kim (2001); Koufaris (2002); van de Heijden (2004); Nysveen *et al* (2005); Hsu and Lin (2007); Dickinger *et al* (2008); Balog and

Pribeanu (2010) that Perceived Enjoyment was seen to be a strong determinant of information system usage.

Nysveen *et al* (2005) investigated the intention to use mobile chat service using data from a survey of 684 mobile chat service users in Norway. The result showed that Perceived Enjoyment is an important determinant of intention to use mobile chat service. According to them, mobile chat service was easy to operate and enjoyable corroborating with the finding of this study. Lin *et al* (2005) likewise carried out a study on the intention to use web portal from a survey of 300 undergraduate and post graduate students in Taiwan and reported that Perceived Enjoyment had a positive influence on web portal use. Correspondingly, MaryAnne and Christine (1997) investigated World Wide Web (www) usage for entertainment purposes using data from a sample of 78 undergraduate business students and 84 graduate MBA students and conveyed that Perceived Enjoyment significantly influenced the use of World Wide Web (www).

Van der Heijden (2004) also indicated that Perceived Enjoyment has been found to be a significant construct and even more important than Perceived Usefulness in information technology use. Dickenger *et al* (2008) studied the role of Perceived Enjoyment and social norm in the adoption of technology with network externalities in Austria and found that Perceived Enjoyment is an important antecedent for the adoption of information technology. Balog and Pribeanu (2010) similarly studied the role of Perceived Enjoyment on the students' acceptance of an augmented reality teaching tools (ARTP) using a structural equation modeling tools in Romania. The result showed that Perceived Enjoyment has a significant impact on behavioural intention to use ARTP. The results of this study supported previous studies of van der Heijden (2004); Khalid (2014) that Perceived Usefulness and Perceived Enjoyment was a positive factor on behavioral intention to use new information system.

On the contrary however, Pikkarainen, Pikkarainen, Karjaluoto and Pahnla (2004) previously investigated online banking service from a sample of 268 online banking users. The researchers reported that Perceived Enjoyment did not affect the use of online banking in Finland. In another related study by Igbaria, Iivari and Maragahh (1995) on computer usage using 450 users sampled from 81 companies in Finland was revealed that Perceived Enjoyment had no significant effect on use of data processing system. By implication, the rationale behind Perceived Enjoyment is that library personnel who experience pleasure or enjoyment from using an information system such as social media are more likely to use it extensively and comprehensively than others hence enjoyment can also make library

personnel to overlook the difficulty associated with the technology since they enjoy using social media for service delivery and do not perceive it to be too difficult.

Similarly, the finding of the present study on Computer Playfulness corroborates the submissions of Moon and Kim (2001), Chen *et al* (2002); Lin *et al* (2005); Serenko and Turel (2007); Atkinson and Kydd (1997); Zolkepli and Kamarulzahan (2014) that information system is influenced by perceived playfulness. The study also supported the claims of Davis *et al* (1992); Agarwal and Karahanna (2000); Chung and Tan (2004). Furthermore, the finding is in variance with the finding of Padilla- Melendez *et al* (2013) who investigated the effect of perceived playfulness on gender differences using technology acceptance model in a blended learning scenario in Taiwan and found that Computer Playfulness did not indicate any positive significance towards intention to use learning management system.

Rather, Computer Playfulness made learners to perceive the system as being so easy to use. The non-significance of playfulness towards behavioural intention according to them was as a result of learners' strong perception towards Perceived Usefulness and Perceived Ease of Use. The researchers argued that students' perception towards e-learning systems can be improved by incorporating the sense of amusement in the system design. Additionally, some prior studies have also indicated that Computer Playfulness does not have any potential to improve users' perception to use an information system (Saade *et al*, 2008; Saade *et al*, 2009; Al-Aulamie, 2013).

4.6.7 Test of relationship between personal characteristics (age, gender, computer use experience, educational qualification and marital status) and motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) on social media use for service delivery by library personnel

The findings of this study revealed that there are no significant relationship between personal characteristics and motivational factors. For instance, the study found that gender has no significant relationship with motivational factors on social media use for service delivery of the respondents. On the contrary, with respect to Perceived Enjoyment on gender, Brad Sago (2013) carried out a study on the factors influencing the adoption and use of various social media service among undergraduate university students in the U.S and reported that influence of Perceived Enjoyment was higher for males than for females.

This implies that there was a significant relationship between gender and Perceived Enjoyment which is one of the variables of motivational factors. This is similar with the findings of Gefen and Straub (1997); Venkatesh and Morris (2000); Venkatesh *et al* (2003); Ong and Lai (2006); Amin (2007); Riquelme and Rios (2010); Goh (2011).Terzis and

Economides (2011) who reported that women were more motivated and influenced by Perceived Ease of Use and user friendliness of the information system. Okazaki and Santos (2012) employed extended TAM to study 446 faculty members in Brazil in adoption of e-learning tools using structural modeling analysis. The result showed that Perceived Usefulness was stronger in men while Perceived Ease of Use was stronger in women.

With respect to age, there are no significant relationship between age and motivational factors on social media use for service delivery of the respondents. The result of the study is also supported by Chung *et al* (2010) who found no effect of age on the relationship between Perceived Ease of Use, Perceived Usefulness and behavioural intention to engage in online communities. Wang *et al* (2009) also did not find any effect of age on the relationship between performance expectancy which is similar to Perceived Usefulness and intention to use a mobile learning system

Furthermore, there are no significant relationships between marital status and motivational factors on social media use for service delivery of the respondents. The finding is not in conformity with the findings of Lee and Lee (2001); Nyamba and Mozi (2012); Izogo *et al* (2012); Ajuwon (2013) who reported that marital status had significant influence on information technology use. More so, Mufutau *et al* (2012) indicated that marital status had no significant relationship with on the effectiveness of e-learning system.

However, Nyamba and Mlozi (2012) carried a study on factors that influence mobile phone usage in Tanzania and found a significant relationship between marital status and use of mobile phones. In the study of Izogo *et al* (2012) on the impact of demographic variables on consumers' adoption of e-banking in Nigeria reported that marital status also had a significant relationship with consumers' e-banking adoption. These findings were in corroboration with the studies carried out by Lee and Lee (2001) and Wang *et al* (2003).

Additionally, there are no significant relationships between educational qualification and motivational factors on social media use for service delivery of the respondents. The finding confirms the positions of Agarwal and Prasad (1999); Venkatesh *et al* (2003) who found no relationship between level of education and Perceived Usefulness. In contrast, the findings of Venkatesh and Davis (2000); Rogers (2003); Porter and Donthu (2006) indicated the level of education was found to influence both Perceived Ease of Use and Perceived Usefulness. Similarly, Burton-Jones and Hubona (2006) affirmed that higher educational level would influence Perceived Usefulness and they are less sensitive to Perceived Ease of Use since it could reduce the computer anxiety and improve intention to use while individuals

with lower educational level would regard Perceived Ease of Use as being important and imperative.

Finally, there are no significant relationships between computer use experience and motivational factors on social media use for service delivery of the respondents. This is in variance with the findings of previous studies such as Igbaria *et al* (1995); Mathieson, Peacock and Chin (2001); Mathieson *et al* (2001) where computer use experience had positive significant relationship with Perceived Usefulness and Perceived Ease of Use. Conversely, on the contrary, Odumeru (2012) investigated on the influence of acceptance of e-banking by customers in Nigeria using TAM as a research framework. The study showed that age, level of education and computer use experience influenced Perceived Enjoyment and all positively determined acceptance of e-banking in Nigeria. The above was confirmed by similar studies carried out in India, Malaysia, New Zealand among others (Tan and Teo 2000; Chung and Paynter, 2002; Kamakodi and Khan, 2008) that age had a significant effect on motivational factors.

4.6.8 Test of relationship among personal characteristics (age, gender, computer use experience, educational qualification and marital status), motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) and social media use for service delivery by library personnel

Personal characteristics and motivational factors were correlated to the use of social media by library personnel in universities in southwestern Nigeria. The result showed that personal characteristics and motivational factors correlated positively with the use of social media among library personnel in universities in southwestern Nigeria. The finding revealed that the joint contribution of the independent variables (personal characteristics and motivational factors) to the dependent variable (social media use for service delivery) was significant but motivational factors had more significant influence on the use of social media for service delivery by library personnel in universities in southwestern Nigeria than the personal characteristics.

In other words, personal characteristics (age, gender, educational qualification, marital status and computer use experience) and motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) jointly influenced social media use for service delivery by library personnel in universities in southwestern Nigeria even though motivational factors had more influence on the use of social media use for service delivery than personal characteristics of library personnel in universities in southwestern Nigeria.

The multiple correlations and a multiple R square were obtained and the analysis of variance for the regression yielded was significant at 0.05 level. This implies that there is a significant joint influence of personal characteristics (age, gender, computer use experience, educational qualification and marital status) on social media use for service delivery and that the other variables not included in this model may have accounted for the remaining variance. Similarly, a coefficient of multiple correlation and a multiple R² were obtained. This means that the significance of the composite contribution was tested at P<0.05. This implies that the joint contribution of the motivational factors (PU, PEU, PE and CP) to the dependent variable (social media use for service delivery) was significant and that the other variables not included in this model may have accounted for the remaining variance.

Therefore, it is concluded that all the sub-construct of personal characteristics and motivational factors are predictors of library personnel's use of social media in universities in Southwestern Nigeria. The finding conforms the position of Venkatesh *et al* (2003); Guriting and Ndubisi, (2006); Khayati and Zouaoui (2013) that a positive effect exist among Perceived Usefulness, Perceived Ease of Use Perceived Enjoyment and Computer Playfulness on users' behavioural intention to use any information system.

4.6.9 Relative influence of personal characteristics (age, gender, computer use experience, educational qualification and marital status) and motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) on social media use for service delivery by library personnel in universities in southwestern Nigeria

The standardised regression coefficient was employed to determine the relative contributions of the independent variables personal characteristics (age, gender, computer use experience, educational qualification and marital status) and motivational factors (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness) to the explanation of the dependent variable (social media use). The relative contributions of each of the independent variables to the dependent variable indicated that the five sub-constructs of personal characteristics expressed as beta weights, Viz, age, computer use experience; gender; educational qualification; and marital status had significant contributions. It could be noted that only computer use experience, age and gender were the most three significant values of β .

Hence, computer use experience had the highest relative influence on social media use for service delivery by library personnel in universities in southwestern Nigeria. Independently, there is significant influence of age, gender and computer use experience on

social media use for service delivery by library personnel in universities in Southwestern Nigeria while marital status and educational qualification did not have much significant influence. The report is in conformity with the findings of Ajuwon (2013); Tarhini *et al* (2014); and Tarhini *et al* (2016) who indicated that age was a factor that determined a successful use of new information system. This is in contrast with the study of McKeown *et al* (2007); Goldfard and Prince (2008) that age was negatively correlated with Internet use.

For motivational factors, standardised regression coefficient was also employed to determine the relative contributions of the variables (Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment and Computer Playfulness). The relative contributions of each of the four sub-construct of motivational factors expressed as beta weights viz PU, PEOU, PE, CPL, on social media use for service delivery of the respondents indicated that they had significant relative influence.

However, it could be observed that Perceived Enjoyment and Computer Playfulness had highest significant relative influence followed by Perceived Usefulness to the use of social media for service delivery by library personnel in universities in southwestern Nigeria while Perceived Ease of Use had the least. The report is in conformity with the findings of Luo *et al* (2010); Khayati (2013); Juniwatti (2014) and Khalid (2014) that all the indices of motivational factors had positive relative contribution to social media use. This implies that the two independent variables (personal characteristics and motivational factors) had a joint influence on the dependent variables (social media use) by library personnel in universities in southwestern Nigeria.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the summary of findings, conclusion and recommendations drawn from the analysis of the research data. It also captures the contributions of the study to knowledge, recommendations and suggestions for future research.

5.2 Summary of the Findings

Based on the analysis of the data, the following are the main findings of the study:

1. There was a moderate level of use of social media by library personnel in universities in southwestern Nigeria. The most widely used social media tools for service delivery by library personnel in universities in southwestern Nigeria were information sharing sites (such as WhatsApp, Facebook and Google+); media sharing sites (like Instagram and You Tube), Google reader while RSS feeds and Vodcast were not considerably used.
2. The main purpose of social media use was found to be for communicating and interacting with users, sharing of information and knowledge and for promoting and marketing of library information products and services by the library personnel in universities in southwestern Nigeria. However, majority of the respondents did not make use of social media for purposes such as reference services.
3. The three most prominent motivational factors affecting the use of social media for service delivery by the library personnel were Perceived Usefulness, Computer Playfulness and Perceived Enjoyment respectively.
4. There was a significant relationship between personal characteristics (age, gender, computer use experience, marital status and educational qualification) and social media use for service delivery by library personnel in universities in southwestern Nigeria.
5. There was a significant relationship between motivational factors (perceived usefulness, perceived ease of use, perceived enjoyment and computer playfulness) and social media use for service delivery by library personnel in universities in southwestern Nigeria.

6. There was no significant relationship between personal characteristics and motivational factors on social media use by library personnel in universities in southwestern Nigeria.
7. There was a significant multiple relationship among personal characteristics, motivational factors and social media use for service delivery by library personnel in universities in southwestern Nigeria
8. The joint contribution of the independent variables (personal characteristics and motivational factors) to the dependent variable (social media use for service delivery) was significant nevertheless, motivational factors had more significant relationship on the use of social of social media for service delivery by library personnel in universities in southwestern Nigeria than personal characteristics.
9. The relative contribution of the two independent variables (personal characteristics and motivational factors) on the dependent variable (social media use) showed that computer use experience and age (sub constructs of personal characteristics) had the highest contribution to social media use. While Perceived Enjoyment and Computer Playfulness followed by Perceived Usefulness (sub construct of motivational factors) had highest significant contributions; hence, perceived ease of use had the least contribution to the use of social media for service delivery by library personnel in universities in southwestern Nigeria.
10. There was no significant relationship between personal characteristics and motivational factors and the use of social media for service delivery by library personnel in universities in southwestern Nigeria.
11. The three most prominent challenges affecting the use of social media for service delivery by library personnel in universities in southwestern Nigeria were identified as poor Internet access, inadequate facilities and absence of social media policies.

5.3 Conclusion

Social media has proved to be very useful for service delivery in university libraries as library personnel and users can exchange information on the social media with high effectiveness and efficiency without stress. However, university libraries that fail to deploy social media for service delivery might find it very difficult to address user apathy as the delivered services may not be compliant with the present digital age and users may be forced to seek information from other sources. It is necessary therefore, for library personnel in southwestern Nigeria to incorporate social media as part of the technological tools that would enhance service delivery in their respective libraries. The use of social media depends on

several factors, and paramount among these factors are personal characteristics and motivational factors.

Personal characteristics such as computer use experience, age and gender could be determinants of social media use for service delivery by library personnel. Additionally, motivational factors like perceived enjoyment, computer playfulness, perceived usefulness and perceived ease of use are also important determinants of social media use for service delivery by library personnel. Thus, personal characteristic and motivational factors are important predictors of social media use for service delivery.

5.4 Recommendations

Based on the findings, the researcher therefore, recommends the following:

1. Library personnel should endeavour to extensively use social media that they find easier to use for service delivery and should explore and integrate social media such as Instagram, LinkedIn, YouTube, RSS Feed, Skype, Blogs and Flickr apart from WhatsApp, Facebook and Google+ which were mostly used in order to provide users with updates and timely alerts. By implication, library management should include the full use of social media into various library housekeeping functions to attract more potential users to use the available library information resources.
2. In order to ensure that the level of social media use for service delivery by library personnel in universities in southwestern Nigeria progresses from moderate level to high level, it is necessary that the use of social media be encouraged and incorporated into the library environment as part of the technological tools germane for service delivery. If this is done, library personnel would be able to sensitise users on the use of different types of social media that could also help them in enhancing their academic activities, receiving information and sending feedback to the library personnel for better services.
3. Library services such as reference services (current awareness services, selective dissemination of information, and document delivery among others), sending article alerts, exhibition of library materials and newly acquired should be seriously tailored towards the use of social media for effective service delivery.
4. Alternative power supply such as the use of solar energy and Inverter should be made available and installed; Internet bandwidth and unlimited access to the Internet for library personnel to effectively use social media for service delivery should be improved and made available to enable library personnel to carry out their mandates and render services without exerting much effort.

5. Implementation of social media policies backing the use of social media for service delivery in all universities in southwestern Nigeria becomes paramount; Government should also as a matter of urgency ensure that facilitating conditions are made available to encourage the use of social media for service delivery by library personnel through TETFUND (Tertiary Education Trust Fund).
6. More importantly, university authorities and library management should ensure periodic training and retraining of library personnel on capacity building and on how to effectively use technological tools such as social media as ways of supporting the use of social media to carry out their activities and mandates. By so doing, they would be able to use different types of social media for service delivery particularly those they find more useful and easy to operate. This will also equip library personnel in universities to be more abreast of the new trends in this digital era.
7. It is also imperative for constituted authorities to employ more of younger personnel who are vibrant, vivacious and more technology savvy for a better result.

5.5 Contributions of the study to knowledge

The findings of this study had been able to identify core benefits of social media tools particularly to library users and the library personnel thus stressing the integration and use of social media for effective service delivery. Hence, this study has contributed to knowledge in the following ways:

1. Personal characteristics positively influenced the use of social media for service delivery by library personnel in universities in southwestern Nigeria.
2. Motivational factors potently influence the use of social media for service delivery by library personnel in universities in southwestern Nigeria.
3. The study has validated the theory and research models used in the study as all the factors and variables were found to be significant.
4. The study established the authenticity of the TAM 3 as a relevant model in testing the use of an information system such as the social media among library personnel.
5. The study has expanded the application of TAM 3 and Uses and Gratification Theory to explain empirically the personal factors and motivational factors that could influence social media use.
6. The study has contributed to the empirical literature in the field of library and information studies and library service delivery.

5.6 Suggestions for further research

This study examined personal characteristics and motivational factors affecting social media use by library personnel in Southwestern Nigeria. The researcher could not have expansively covered all the areas expected. It is on this basis that the further research should be carried out in the following areas:

1. Influence of personal characteristics and motivational factors on social media use by library personnel in Northern Nigeria.
2. Other constructs of the Technology Acceptance Model not used in this study such as anchor (Computer Self-efficacy, Perception of External Control and Computer Anxiety) and adjustment factor (objective usability) should be used to test social media use for service delivery by library personnel in universities in Nigeria other than the region used for this present study.
3. Comparative study of influence of personal characteristics and motivational factors on social media use for service delivery by library personnel in public and private universities in Southwestern Nigeria and South-east, Nigeria in order to ascertain the acceptability of social media use for service delivery.
4. More divergent models could also be established in a comparative study of social media use in order to ascertain their professed expounding and analytical capabilities.
5. Additionally, subjective norm, job relevance and output quality incorporated in Technology Acceptance Model (TAM 3) should be investigated to find their effect on the use of social media among library personnel in other Geo-political Zones in Nigeria.

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APPENDIX I



**Department of Library, Archival and Information Studies,
Faculty of Education, University of Ibadan, Nigeria.**

QUESTIONNAIRE FOR LIBRARY PERSONNEL

Dear Respondent,

This research questionnaire is being designed to elicit information on factors influencing social media use by library personnel. I am a doctoral student of the Department of Library, Archival and Information Studies, University of Ibadan. I hereby solicit for your support by completing the questionnaire objectively. All responses given will be treated with confidentiality and used for academic purposes only.

Thank you for your cooperation and kind assistance.

Oluchi O. Iwuagwu,

A handwritten signature in blue ink, appearing to read 'Oluchi O. Iwuagwu'.

Doctoral Student

SECTION A: Socio-demographic data/ Personal characteristics

Each section of the questionnaire is meant to elicit specific data on the above named title. Please read through each section carefully and indicate by ticking (✓) appropriately.

1. Name of Institution.....
2. Name of Library.....
3. Section/Unit.....
4. Religion: (a) Christianity [] (b) Islam (c) other, please specify.....
5. Gender: (a) Male [] (b) Female []
6. Age range: (a) 20-30 [] (b) 31-40 [] (c) 41-50 [] (d) 51-60 [] (e) 61- 70 []
7. Marital status: (a) Married [] (b) Single [] (c) Separated [] (d) Widowed []
(e) Divorced []
8. Educational Qualification: Please tick one (a) Doctoral degree. [] (b) MLS []
© MPhil (d) BLS [] (e) Diploma in Library Studies [] (f) others
9. Current designation (a) librarian [] (b) library officer []
10. Length of working experience in years: (a) 1-4 [] (b) 5-8 [] (c) 9-12 [] (e) 13 and
above []

11. Computer use experience: (a) 1-4years [] (b) 5-8years [] (c) 9-12years [] (e) 13years and above []

SECTION B: Motivational factors and Social media use

12. Which of the following factors motivated your social media use? Please tick appropriately using scales Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD).

	Items	SA	A	D	SD
	Perceived Usefulness				
i.	I find social media tools more useful in rendering service than the traditional ways of rendering service to users				
ii.	It is comparatively cheaper to use social media platform than the traditional ways of rendering service				
iii.	Using social media enables me to accomplish my job tasks more quickly				
iv.	Using social media has the potentials of improving my job performance				
v.	Using social media enhances my effectiveness when communicating with users				
vi.	I am not sure if using social media will increase my job productivity				
vii.	Social media is not useful to me in terms of service delivery				
viii.	Social media helps me to carry out my online service delivery more effectively				
ix.	Social media use could improve the quality of work that I do				
x.	My job would be more difficult to perform with social media				
xi.	Social media is useful for my communication and knowledge sharing with colleagues and users				
xii.	Social media addresses my job related needs for effective and efficient service delivery				
xiii.	Overall, I find social media useful for my work				
	Perceived Ease of Use				
xiv.	Interaction with social media is very easy				
xv.	It is easy for me to become more skillful at using social media for my work activities				
xvi.	Use of social media tools requires a lot of mental effort				
xvii.	Social media use does not allow me to make the best use of my time				
xviii.	It is not easy for me to get social media tools that is compactible to do what I want to do				
xix.	I find it easy using social media to obtain information and to deliver information to users				
xx.	Over all, I find social media easy to use				
	Perceived Enjoyment				
xxi.	The use of social media is enjoyable				
xxii.	It is very pleasant to use social media in the library environment				
xxiii.	Social media is exciting to use				
xxiv.	The use of social media for my work makes me happy				

xxv.	Social media use is boring to my work				
xxvi.	Use of social media is very frustrating in my work				
xxvii.	Use of social media is pleasurable to my work				
xxviii.	Over all, using social media for my work is wise				
	Computer Playfulness				
xxix.	Social media use stimulates my curiosity				
xxx.	Using social media leads to my exploration				
xxxi.	Use of social media gives me enjoyment in my work				
xxxii.	Use of social media makes me to be creative and flexible				
xxxiii.	Use of social media does not allow me to be original				
xxxiv.	Social media use makes me feel unimaginative				
xxxv.	Social media use does not make my work boring				
xxxvi.	Social media use arouses my inventiveness in my work activities				
xxxvii.	Social media use makes me feel swift in answering queries				
Xxxvii i	Overall, using social media makes me feel efficient				

SECTION C: Social media use for service delivery

The items are in the Likert Scale of Likelihood type as presented below. Please read carefully and rate the scale by ticking (✓) appropriately the options that best represent your view.

13. For what purposes do you use social media? Please tick appropriately using scales Very True (VT) =4, True (T) =3, Sometimes True (ST) =2, and Not True (NT) =1. Four being the highest and one the lowest.

Purposes of using social media

	Items	VT	T	ST	NT
	Purposes of use: I use social media for:				
i.	sharing of information and knowledge to users				
ii.	promoting and marketing of library information products and service				
iii.	communicating and interacting with users				
iv.	advertising library's new collections and acquisition				
v.	alerting users on the upcoming events in the library				
vi.	provision of alert service such as new additions				
vii.	reservation and cancelling of documents online				
viii.	granting request for renewal of loan service				
ix.	posting of overdue details and notices				
x.	sending article alert service				
xi.	advertising library's new collections and acquisitions				
xii.	user education service/virtual library tour				
xiii.	exhibition of library materials and new acquired materials				
xiv.	inter library loan service				
xv.	acquisition list of new arrivals				
xvi.	uploading of videos and pictures for users				
xvii.	reference service (answering users' queries, SDI/CAS, Document Delivery)				

xviii.	library outreach service				
xix.	collaborative delivery of service with colleagues				
xx.	keeping track with professional current trends				
xxi.	alerting users about the availability of booked materials				
xxii.	uploading videos and pictures for users				
xxiii.	personal purposes				
xxiv.	entertainment and for escapism				
xxv.	I use social media because it is very much applicable to my service to users				

14. What are the types and frequency of use of social media? Please tick appropriately using scales daily, weekly, monthly, occasionally and never.

Types and frequency of social media use

	Items: I use:	Daily	Weekly	Monthly	Occasionally	Never
	information sharing sites:					
i.	Facebook					
ii.	Google +					
iii.	Myspace					
iv.	QQ					
v.	Ozone					
vi.	WeChat					
vii.	WhatsApp					
viii.	Blackberry Messenger					
	Media sharing sites					
ix.	YouTube					
x.	Flickr					
xi.	Instagram					
xii.	Pinterest					
xiii.	Slide Share					
	Social bookmarking/Tagging					
xiv.	Delicious					
xv.	Diggo					
	Content Aggregation sites/awareness site					
xvi.	StumbleUpon					
xvii.	Reddit					
	Weblogs/Microblogging					
xviii.	Blogs					
xix.	LinkedIn					
xx.	Patient Like Me					
xxi.	Tumblr					
xxii.	Twitter					
	Content Delivery					
xxiii.	Really Simple Syndication (RSS)					
xxiv.	RSS feed					

xxv.	Google reader					
xxvi.	Feed reader					
xvii.	Vodcast					
xviii.	Podcasts					
	Others, please specify					

Section D. Challenges to social media use

The items are in the Likert (Agreement) Scale as presented below. Please read carefully and tick (✓) appropriately the options that best represent your view.

15. What are the challenges to social media use in your library?

	Factors	SA	A	D	SD
i.	Absence of social media policies				
ii.	Lack of financial support				
iii.	Lack of management support				
iv.	Poor Internet access				
v.	Inadequate facilities				
vi.	Low bandwidth				
vii.	Erratic power supply				
viii.	Staff unwillingness to change				
ix.	Lack of staff commitment and cooperation				
x.	Lack of users' demand				
xi.	Lack of personal knowledge and skills				
xii.	Tools are not easy to use				
xiii.	Tools are not useful for my work activities				

18. Other, please specify.....

Please make suggestions on how social media use can be improved in your library

.....

.....

.....

.....

APPENDIX II

Summary of descriptive analysis on the level computer use experience according to types of universities

University	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound	Lower Bound	Upper Bound
Federal	172	2.6221	1.06083	0.08089	2.4624	2.7818	1.000	4.000
State	113	2.8142	1.17677	0.11070	2.5948	3.0335	1.000	4.000
Private	184	2.5272	1.13046	0.08334	2.3627	2.6916	1.000	4.000
Total	469	2.6311	1.12012	0.05172	2.5295	2.7328	1.000	4.000

ANOVA Table showing difference in the level of computer use experience based on types of universities

	Sum of Squares	Df	Mean Square	F	Sig. P
Between Groups	5.788	2	2.894	2.320	0.099
Within Groups	581.398	466	1.248		
Total	587.186	468			

Table showing summary of descriptive analysis on the level of computer use experience of library personnel in universities in Southwestern Nigeria

Computer use experience	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound	Lower Bound	Upper Bound
1-4	95	1.96	0.955	0.085	1.79	2.13	1.00	3.00
5-8	127	1.99	0.834	0.082	1.83	2.15	1.00	3.00
9-12	103	2.16	0.842	0.086	1.99	2.33	1.00	3.00
13 and above	144	2.02	0.840	0.070	1.88	2.16	1.00	3.00
Total	469	2.03	0.872	0.040	1.95	2.10	1.00	3.00

Table showing frequency of use of social media by library personnel in universities in Southwestern Nigeria

Information sharing sites	Lower Bound	Upper Bound	Mean	Std	Std. Error
Facebook	1.00	5.00	4.12	1.330	0.061
Google +	1.00	5.00	4.03	1.139	0.053
MySpace	1.00	5.00	2.51	1.467	0.068
QQ	1.00	5.00	2.33	1.414	0.065
Ozone	1.00	5.00	2.06	1.247	0.058
WeChat	1.00	5.00	3.23	1.523	0.070
WhatsApp	1.00	5.00	4.40	0.955	0.044
Blackberry Messenger	1.00	5.00	2.59	1.676	0.077
Media sharing sites	8.00	40.00	25.27	10.751	0.496
YouTube	1.00	5.00	3.06	1.568	0.072
Flickr	1.00	5.00	2.72	1.504	0.069
Instagram	1.00	5.00	3.35	1.595	0.074
Pinterest	1.00	5.00	1.59	1.043	0.048
Slide Share	1.00	5.00	1.61	1.076	0.050
Social bookmarking/Tagging	5.00	25.00	12.33	6.786	0.313
Delicious	1.00	5.00	1.85	1.241	0.057
Diigo	1.00	5.00	1.76	1.231	0.056
Content Aggregation sites/awareness site	2.00	10.00	3.61	2.472	0.113
StumbleUpon	1.00	5.00	1.98	1.469	0.068
Reddit	1.00	5.00	2.36	1.514	0.070
Weblogs/Microblogging	2.00	10.00	4.34	2.983	0.138
Blogs	1.00	5.00	2.75	1.657	0.067
LinkedIn	1.00	5.00	2.94	1.505	0.070
Patient Like Me	1.00	5.00	2.33	1.469	0.068
Tumblr	1.00	5.00	2.19	1.374	0.063
Twitter	1.00	5.00	3.40	1.553	0.071
Content Delivery	5.00	25.00	13.61	7.558	0.339
RSS feed	1.00	5.00	2.42	1.523	0.070
Google reader	1.00	5.00	2.81	1.683	0.078
Feed reader	1.00	5.00	2.64	1.562	0.072
Vodcast	1.00	5.00	2.30	1.464	0.068
Podcasts	1.00	5.00	2.51	1.527	0.070
	5.00	25.00	12.68	7.759	0.358

Table showing the summary of Mean and Standard deviation of types and frequency of use of social media tools by library personnel according to types of universities

Types of universities	N	\bar{x}	SD
Federal universities	172	74.16	37.817
State universities	113	69.33	38.879
Private universities	184	72.04	38.232
Total	469	71.84	38.309

Access points of social media

Respondents were asked to indicate the point of access of social media tools and their responses are presented in Table 4.7.

Table 4.7: Access points of social media tools used by library personnel

Access point	Federal		State		Private		Aggregate	
	N	%	N	%	N	%	N	%
Cell phone	105	61.0	80	70.8	118	64.1	303	64.6
Smart phone	166	96.5	109	96.5	178	96.7	453	96.6
i-pad	112	65.1	73	64.6	119	64.7	304	64.8
Tablets other than i-pads	81	47.1	57	50.4	89	48.4	227	48.4
Personal computer	158	91.9	99	87.6	165	89.7	422	90.0
Public computer	70	40.7	36	31.9	73	39.7	179	38.2

Table showing summary of descriptive analysis on the level computer use experience according to types of universities

University	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound	Lower Bound	Upper Bound
Federal	172	2.6221	1.06083	0.08089	2.4624	2.7818	1.000	4.000
State	113	2.8142	1.17677	0.11070	2.5948	3.0335	1.000	4.000
Private	184	2.5272	1.13046	0.08334	2.3627	2.6916	1.000	4.000
Total	469	2.6311	1.12012	0.05172	2.5295	2.7328	1.000	4.000

Table showing the Reliability Statistics

Scale	Sub-Scales	Cronbach's Alpha (α)	Cronbach's Alpha Based on Standardized Items	No of Items
Motivational factors	Perceived Usefulness	0.813	0.812	13
	Perceived Ease of Use	0.843	0.953	7
	Perceived Enjoyment	0.793	0.826	8
	Computer Playfulness	0.833	0.733	10
	Aggregate	0.821	0.831	38
Social media use	Purpose of use	0.786	0.729	25
	Types and frequency	0.718	0.811	18
	Aggregate	0.752	0.796	43
Points of access to social media	Points of access to social media use	0.832	0.789	7
Challenges to social media use	Challenges of social media use	0.749	0.723	13