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Summer 2-22-2022

A STUDY ON THE USE OF ACADEMIC SOCIAL NETWORKING SITES (ASNSs) BY PROFESSIONAL LIBRARIANS IN PUBLIC UNIVERSITIES IN AKWA IBOM STATE, NIGERIA

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Akwang, Nse E. PhD, CLN, "A STUDY ON THE USE OF ACADEMIC SOCIAL NETWORKING SITES (ASNSs) BY PROFESSIONAL LIBRARIANS IN PUBLIC UNIVERSITIES IN AKWA IBOM STATE, NIGERIA" (2022).

Library Philosophy and Practice (e-journal). 6962.

<https://digitalcommons.unl.edu/libphilprac/6962>

Introduction

The world is becoming more open and connected in such a way that distance and boundaries are no more barriers to effective communication. The connectivity, facilitated by advancements in technology has created significant impact on information seeking pattern of people or community. This has seen the advent of technologically-motivated platforms for people to connect to others, share ideas, activities, and personal details, communicate, and keep track of activities of people and organizations of interest (Dehghani et al, 2021). These platforms are known as Social Networking Sites (SNSs). The main purpose of using SNSs include meeting new friends, entertainment, games, maintaining relationships, social involvement, live feed, joining and creating groups and pages, joining and creating group discussions, creating and joining events, following others, sharing thoughts and feelings, micro blogging, searching jobs, instant messaging, sharing information and documents, tagging friends, browsing, lurking, updating profile information, and finding current news (Asmi & Margam, 2015). Social networking sites come with unique features and benefits, including special platforms for academic research and collaboration, known as Academic Social Networking Sites (ASNSs), which have revolutionized the concept of knowledge sharing and publication pattern in academia (Ali, Naushad, Vaidya & Musheer, 2021).

Academic Social Networking Sites (ASNSs) offer same features as that of other SNSs except that they are intentionally designed to cater for the needs of the members of academic community. Devi & Devi (2017) simply define ASNSs as specialized social networking sites for academic purpose. Jordan (2019) explains that academic social network sites encompass a variety of online platforms which seek to bring the benefits of online networking to a specifically academic audience, including academic librarians. Academic librarians are information professionals

actively engaged in research activities primarily for teaching, personal development, professional growth, assessment for appointment and promotion, among others. Thelwall & Kousha (2015) note that ASNSs are modifying traditional patterns of scholarly communication among academic audience by providing alternative means of discovering research outputs. A variety of ASNSs have gained popularity over the past decades, which include ResearchGate, Academia.edu, Google Scholar, and Mendeley. A common capability of many of these academic social networking sites is to provide an online repository to which users can upload and share research papers. These sites help to build personal profiles for interaction, share interest, ask questions, and track relevant research articles (Ali et al., 2021; Nentwich & Konig, 2014); as well as provide social recognition and empower scholars to boost their achievement in the field (Bik & Goldstein, 2013).

The advent of academic social networking sites (ASNSs) has prompted research into their usage as well as their potential to be a proxy for measuring the impact of scholarly outputs across disciplines (Vasquez & Bastidas, 2015; Hoffmann et al, 2016; Yu et al, 2016). The tremendous popularity of ASNSs has grown over the years with significant contributions. This is supported by Jordan (2019) who noted that three main platforms (Academia.edu, ResearchGate, and Mendeley) were launched ten (10) years and other platforms have increasingly been added to the list. Corroborating, Stephen & Pramanathan (2020) specifically affirmed that ResearchGate, Academia.edu and Google Scholar have gained popularity over the past decades, providing an online repository to which researchers upload and share research papers. However, it is not clear to what extent these platforms are patronized by academic librarians despite their huge benefits to academic audience. Therefore, it is timely to study the use of ASNSs by academic librarians in Akwa Ibom State, Nigeria.

Akwa Ibom State was created in 1987 as one of the states in South-South zone of Nigeria. There are two (2) public universities in the state, namely; University of Uyo, Uyo and Akwa Ibom State University, Ikot Akpaden. The University of Uyo (UniUyo), a federal institution established in 1990 runs a multi campus system with a total of one central library, three campus libraries, and thirteen faculty libraries at Main campus, Town campus with annex, and Abak campus. These libraries are supervised and managed by about thirty-five (35) academic librarians (Philip, 2017). The Akwa Ibom State University (AKSU), a state institution established in 2010 has two (2) campuses – Main campus at Ikot Akpaden in Mkpato Enin L.G.A. and the other campus at Obio Akpa in Oruk Anam L.G.A. It has one main library, one campus library, and five faculty libraries at different locations. The libraries are supervised and managed by eleven (11) academic librarians (Administrative Records, 2021). Both UniUyo and AKSU libraries have Internet facilities with evidence of some ASNSs adopted to facilitate resources sharing among different communities of practice. Hence, this paper discusses the conceptual considerations within the ASNSs and surveys their usage by professional librarians in public universities in Akwa Ibom State, Nigeria.

Specifically, the study sought to achieve the following objectives:

- i. To determine the awareness level of ASNSs by professional librarians.
- ii. To examine the registration status of professional librarians with ASNSs.
- iii. To identify the professional librarians' reasons for not registering with ASNSs.
- iv. To find out the frequency of visits to ASNSs by professional librarians.
- v. To identify the purpose of using the ASNSs.
- vi. To determine the professional librarians' level of satisfaction with the ASNSs.
- vii. To examine the facilities used by professional librarians to access ASNSs.

Statement of the Problem and its Significance

With the demands of professional status of librarians, they are meant to conduct researches in different areas within information landscape and publish the research findings in reputable journals, manuals, books, among others. Recently, professional librarians, especially those with academic status are expected to write research papers and attach evidence before being sponsored to conferences, workshops, etc. It is also a requirement for accessibility of grants from both local and foreign funders. Professional librarians are required to publish a certain number of publications in SCOPUS listed resources before they can be considered for promotion to higher ranks. Publishing for any reason as mentioned above demands in-depth and quality research that could be painstaking but worthy. One needs to seek for collaboration, exchange of ideas, sharing of information, and staying connected with colleagues and experts within and beyond Nigeria to gain wide spectrum of knowledge on the chosen research areas. It is believed that the ASNSs provides tools and opportunities needed for online resources accessibility and assures effective communication among librarians/scholars globally. Several researches (Owusu-Ansah, 2015; Salami, Chuks-Ibe, & Uzoagba, 2020; Akwang, 2021) revealed that most staff in African universities, including Nigeria are not active users of technology despite its overwhelming benefits. This implies that many professional librarians in Nigerian institutions may not have account with the ASNSs. This is evidenced in the low research output, poor quality of the research papers, poor on-line visibility of research papers, and poor social interaction, etc., by these librarians compared to their counterparts in the developed and few developing countries. In view of the above, it becomes imperative to survey professional librarians in public universities in Akwa Ibom State to investigate their use of ASNSs.

Review of Related Literature

The literature reviewed covered the conceptual considerations and empirical investigations relating to the use of ASNSs in a global perspective.

Academic Social Networking Sites (ASNSs): Conceptual Considerations

The idea of ASNSs came as a need to create online networked platforms peculiar to academic audience which was not the case of social networking sites (SNSs) such as Facebook, Twitter, Instagram, etc. Many studies, according to Gruzd (2012) reveal problems and limitations of using the SNSs to build users' professional network. The author notes that users find it difficult to establish boundaries between personal and professional lives when using SNSs and often complain of loss of personal privacy as well as demands for creating multiple accounts on SNSs. The emergence of ASNSs in 2008, as noted by Jeng, He, & Jiang (2015), came as an option to address the limitations by offering scholars new online tools for easing the tension between their personal and work lives.

The term ASNSs is also known as Networked Participatory Scholarship [NPS] (Veletsianos & Kimmons, 2011), Research Networking Platforms [RNPs] or Research Networking Tools [RNTs] (Weber et al, 2011), Academic Profile Websites [APWs] (Zhang & Li, 2020), and Academic Social Media [ASM] (Ali in Salami, Chucks-Ibe, & Uzoagba, 2020). The ASNSs emerged to modify traditional patterns of scholarly communications by providing alternative means of supporting research activities among scholars around the world. They cover a variety of on-line platforms which have sought to bring the benefits of online networking to a specific professional audience. The ASNSs as online services, tools, or platforms help academics, researchers, students, and scholars to build their professional networks and facilitate their various activities when conducting research. With ASNSs, librarians can share professional contacts, disseminate research findings, and promote collaboration among themselves.

Jeng, He, & Jiang (2015) identify two categories of ASNSs, each originating from different online academic activities – websites that started with supportive social-based features such as Academia.edu and ResearchGate and websites that mainly emphasized research-oriented activities such as Mendeley and Zotero. The first category are the online sites developed primarily to facilitate profile creation and connection (analogous to Facebook) whereas the second category are the online sites developed with a primary focus on posting and sharing academic-related content and have subsequently added social networking capabilities (Jordan, 2019). Ward et al (2015) identify four categories of ASNSs to include websites for searching the scholarly web; websites for sharing research findings; websites for managing research citations; and websites for disambiguating research outputs. However, each website offers its own combination of tools and capabilities to support research activities, communication, and networking which should be carefully studied before making decision to adopt or use.

The positive features of ASNSs include providing users with a place to create a personal profile; share papers, track views and downloads and discuss research; the ability to both provide measures of academic impact; and the ability to build meaningful and lasting collaborative partnerships among scholarly communities (Relajo & Pilao cited in Ali & Richardson, 2018). These features have brought structural changes in the scholarly environment. The methods of evaluating research impact and interactions between researchers and the broader community are changing with the emergence of tools, social behaviours, and cultural expectations associated with ASNSs. The idea of open access publishing, open data, and open evaluating system within and among research communities, such as information scientists has become a reality. In other words, the structural changes brought by emerging ASNSs platforms lead to new ways of building, showcasing, and measuring scholarly reputations of professional librarians.

Empirical Evidences on the Use of ASNSs among Professional Audience

Given the impetus to encourage the use of ASNSs as vehicles to enhance professional communications, a considerable number of empirical studies have highlighted findings relating to the use of ASNSs and academic audience, including librarians. While most of the empirical studies published are of international scenes, they are related to this present study. In this view, Mas-Bleda et al (2014) investigated the presence of 1517 high-cited European researchers on several platforms, including Google Scholar Citations and Academia.edu. The results show that the usage of these websites by the top researchers was very low; only 9% of the researchers had a profile on Google Scholar and just 2% on Academic.edu.

A low usage of ASNSs among 11,000 Spanish researchers in various disciplines was revealed in a research conducted by Ortega (2015). The findings indicated that only 39% had created academic profile, with Research-Gate (29%), Google Scholar (11%), Mendeley (7%), and Academia.edu (6%). Also, Mikki et al (2015) conducted a research to compare the use of Research-Gate, Academic.edu, Google Scholar, and ORCID by researchers in a Norwegian university. They found that while 37% of the researchers had at least one profile, ResearchGate was the most popular site (30%), followed by Google Scholar (8%), while Academia.edu and ORCID only had 4% and 3%, respectively. Bullinger et al cited in Vasquez & Bastidas (2015) conducted in-depth interviews with the founders of ten (10) academic websites including Academia.edu, Research-Gate, and Mendeley to develop taxonomy for “Social Research Networking Service” [SRNS]. The authors report a considerable increase in temporary collaboration among professionals in different fields of scholarship.

However, several recent studies of international scene revealed a higher presence rate on ASNSs. Miguez-González et al (2017) analyzed the presence and activities of 78 scholars in the

field of Communication Studies in three (3) Portuguese universities and found a presence rate of 60% on Research-Gate and Academic.edu. They also found that 15% of the researchers only created a name profile without publication list or other further information, making them symbolic researchers. Another research conducted by Tran & Lyon (2017) on the use of APWs (Academic Profile Websites) in a US research university and found low levels of awareness and use of these websites. In terms of the popularity, they found that the most popular websites included Research-Gate (64%), Google Scholar Citations (54%), Academia.edu (24%), and ORCID (15%). Zhang & Li (2020) investigated science researchers' presence on ASNSs using Science Departments of the University of Saskatchewan, Canada. The study revealed that 78% of the researchers had established at least one academic profile, with Research-Gate being the most popular, Google Scholar Citations the second, followed at some distance by ORCID and Academia.edu. The authors recommended promotional campaign for researchers, librarians inclusive on how to create profile and add publications to the ASNSs.

Stephen & Pramanathan (2020) conducted a study to investigate the nature of the use and the perceived utility of the ASNSs among LIS professionals in the North Eastern Region in India. The study revealed that the respondents have knowledge of ASNSs with Google Scholar and Academia.edu as the most widely used. The findings revealed that 59% of non-teaching LIS professionals, 26% of teaching LIS professionals, and 15% of other research scholars had single/dual and multiple accounts in ASNSs. This result indicates high patronage of ASNSs among non-teaching LIS professionals than even teaching LIS professionals and other scholars. The researchers suggested that LIS professionals should utilize ASNSs to a personal brand, disseminate scientific findings and connect with researchers worldwide. In addition, they recommended a well-

planned post-publication strategy for enabling the widest possible access to one's research as well as maximizing its impact.

In a related research, Salami, Chuks-Ibe, & Uzoagba (2020) investigated the use of academic social media in enhancing scholarly communication among faculty members in Federal universities in Nigeria using 387 respondents. The study revealed that faculty members use academic social media to seek and obtain knowledge from other researchers using majorly three types of academic social media platforms, namely; Academia.edu (mean=3.28), Google Scholar (mean=3.19), and Research-Gate (mean=3.15). The findings also revealed that Social Science Research Network and Mendeley were underutilized with a mean score of 2.43 and 2.39, respectively. Also revealed in the study is that majority of the respondents have never used platforms such as Microsoft Academic Search (mean=1.77), Research Professionals (mean=1.76), Science Open (mean=1.61), Impact Story (mean=1.58), Dataverse (mean=1.51), and ORCID (mean=1.44).

Dehghani, Kahouei, Akhondzadeh, Mesgarpour, & Ferdousi (2021) in their qualitative study of the expectations of health researchers from academic social network sites in Iran identified that Iranian health researchers based their expectations from ASNSs on functional and technical characteristics. The study qualitatively investigated 23 researchers selected purposively in the health system using semi-structured interviews to collect data. The study found that the health researchers' functional characteristics from ASNSs include facilitating communication and team activities, managing scientific publications, enhancing the process of conducting research, being informative, and sharing and trading laboratory materials and equipment. It equally revealed that the technical characteristics of the health researchers from academic social network are user management capabilities, high security and privacy, being user-friendly, etc. The study finally

revealed that though researchers generally used ASNSs to increase the speed and quality of their research but ASNS are abandoned by researchers in some cases due to the lack of attention by programmers to users' opinions in the design of ASNS.

Research Methodology

This study adopts a survey research design to investigate the use of ASNSs by professional librarians in Akwa Ibom State, Nigeria using the two public universities. The study considered only professional librarians based on the assumption that they are expected to facilitate their academic/professional contacts, disseminate research findings, and promote collaboration as their counterparts in other professions. Again, librarians, especially those with academic status are expected to show evidence of scholarly output before they can be promoted, be able to access local and foreign grants, among others. All the professional librarians in University of Uyo and Akwa Ibom State University totaling ninety- seven (97) were considered and used as sample for this study since the size was manageable. A researcher-developed questionnaire and five-item interview schedule were used for data collection. The face and content validity of the instruments was realized through experts' assessment and corrections. To test the reliability, the instruments were administered to 15 professional librarians in the three (3) private universities in Akwa Ibom State – Obong University, Ritman University, and Topfaith University who were not part of this study. Their responses were analysed using Cronbach's alpha reliability index formula, which yielded a reliability coefficient of 0.84. This indicated that the instrument is good and reliable enough to measure the intended variables with consistency. Consequently, copies of the questionnaire were distributed to the 97 respondents in the two universities studied and 82 copies were returned and considered valid for the analysis, thus indicating 84.54% response rate. The data collected were analysed using both quantitative and qualitative methods in form of frequency

counts, simple percentage, mean, and standard deviation. Qualitatively, the interview responses from some of the respondents were transcribed and interpreted in line with the purpose of the study, and added up to the discussion of findings.

Results and Discussion of Findings

Data analysis was based on the data generated from the 82 (84.54%) respondents who completed and returned copies of the questionnaire with valid information as shown in Table 1 below.

Table 1: Questionnaire Distribution and Retrieval Rate by Gender

Respondents' Gender	Copies of Questionnaire Distributed	Copies of Questionnaire Retrieved	Response Rate (%)
Male	35	30	30.93%
Female	62	52	53.61%
Total	97	82	84.54%

Source: Researchers' Field Survey, 2022

The analysis of data on Table 1 shows the results of the questionnaire distributed, retrieved and the corresponding response rate. It shows that out of the 97 copies of questionnaire distributed, 82 copies representing 84.53% were completed and retrieved with valid information. It further reveals that out of 97 copies distributed to both male and female respondents, 30 copies (30.92%) were retrieved from male whereas 52 copies (53.61%) were retrieved from the female respondents. This implies that a total of 82 respondents representing 84.54% response rate provided valid data for the analysis while 15 copies (15.46%) were lost.

Table 2: Awareness Level of ASNSs by Professional Librarians in Public Universities in Akwa Ibom State (n = 82)

S/No.	Items	Highly Aware	Aware	Fairly Aware	Unware	Mean	Std. Dev.	Remark
1.	Academia.com	22	30	23	7	2.82	0.931	Agreed
2.	ResearchGate	18	47	6	11	2.88	0.908	Agreed
3.	Penprofile	0	17	32	33	1.80	0.761	Disagreed
4.	LinkedIn	10	48	12	12	2.68	0.873	Agreed
5.	Google Scholar	22	40	10	10	2.90	0.938	Agreed
6.	Mendeley	6	2	42	32	1.78	0.817	Disagreed
7.	ScienceStage	0	14	35	33	1.77	0.725	Disagreed
8.	Epernicus	0	2	40	40	1.54	0.549	Disagreed
9.	ResearchID	6	31	24	21	2.27	0.930	Disagreed
10.	Zotero	0	0	41	41	1.50	0.503	Disagreed
11.	Methodspace	0	9	30	43	1.59	0.684	Disagreed
Grand Mean						2.14		Disagreed
Criterion Mean = 2.50								

Source: Researchers' Field Survey, 2022

The analysis of data on Table 2 shows the awareness level of ASNSs by professional librarians in public universities in Akwa Ibom State. It reveals that the overall level of awareness of these sites by librarians is low. However, out of the 11 ASNSs investigated, the respondents affirmed awareness of 4 ASNSs which include: Google Scholar (2.90), ResearchGate (2.88), Academia.com (2.82), and LinkedIn (2.68). On the other hand, the result reveals that the respondents were not aware of 7 ASNSs which are: ResearchID (2.27), Penprofile (1.80), Mendeley (1.78), Sciencestage (1.77), Methodspace (1.59), Epernicus (1.54), and Zotero (1.50). The low awareness level was confirmed by a lower grand mean score of 2.14 against the 2.50 criterion mean score. This implies that librarians in Akwa Ibom State may still be relying on traditional method of searching information from books and other print media for the professional development and research purposes.

Table 3: Registration with ASNSs by Professional Librarians in Public Universities in Akwa Ibom State (n = 82)

S/No.	Items	Registered	%	Not Registered	%	Mean	Std. Dev.	Remark
1.	Academia.com	47	57.3	35	42.7	2.57	0.498	Agreed
2.	ResearchGate	59	72.0	23	28.0	2.71	0.484	Agreed
3.	Penprofile	9	11.0	73	89.0	2.11	0.315	Disagreed
4.	LinkedIn	49	59.8	33	40.2	2.60	0.493	Agreed
5.	Google Scholar	52	63.4	30	36.6	2.63	0.485	Agreed
6.	Mendeley	12	14.6	70	85.4	2.15	0.356	Disagreed
7.	ScienceStage	6	7.3	76	92.7	2.07	0.262	Disagreed
8.	Epernicus	9	11.0	73	89.0	2.11	0.315	Disagreed
9.	ResearchID	27	32.9	55	67.1	2.33	0.473	Disagreed
10.	Zotero	10	12.2	72	87.8	2.12	0.329	Disagreed
11.	Methodspace	13	15.9	69	84.1	2.16	0.367	Disagreed
Grand Mean						2.32	Disagreed	
Criterion Mean = 2.50								

Source: Researchers' Field Survey, 2022

Table 3 reveals ASNSs registration by professional librarians in public universities Akwa Ibom State. It shows that out of the 11 ASNSs investigated, the respondents agreed to have registered with 4 ASNSs which are: research gate (2.71), google scholar (2.63), LinkedIn (2.60), and academia.com (2.57). It further reveals that researchID (2.33), methodspace (2.16), mendeley (2.15), zotero (2.12), penprofile (2.11), and epernicus (2.11) were not registered by the respondents. The individual responses were further confirmed by a grand mean of 2.32 against the criterion mean of 2.50 to validate the low rate of registration with ASNSs by the librarians in Akwa Ibom State. This result may imply that librarians in Akwa Ibom State may not take full advantage of the sites to gather information as well as share knowledge across the space which the ASNSs intend to achieve.

Table 4: Reasons Professional Librarians in Public Universities in Akwa Ibom State are not Registered with ASNSs (n = 82)

S/No.	Item Statements	SA	A	D	SD	Mean	Std. Dev.	Remark
1.	Lack of awareness	20	39	20	3	2.93	0.798	Agreed
2.	Lack of personal interest	6	31	42	3	2.49	0.689	Disagreed
3.	Low technological literacy	4	38	40	0	2.56	0.590	Agreed
4.	Fear of technology (technophobia)	14	14	52	2	2.49	0.805	Disagreed
5.	Lack of knowledge on registration process	4	27	36	15	2.24	0.810	Disagreed
6.	Lack of funds	11	29	33	9	2.51	0.864	Agreed
7.	Lack of motive for ASNSs use	3	35	38	6	2.43	0.685	Disagreed
8.	Not a priority	11	14	51	6	2.37	0.809	Disagreed
9.	Lack of time	7	49	24	2	2.74	0.644	Agreed
10.	Fear of cybercrime	15	28	31	8	2.61	0.899	Agreed
Grand Mean						2.54		Agreed
Criterion Mean = 2.50								

Source: Researchers' Field Survey, 2022

The analysis on Table 4 shows the reasons professional librarians in public universities in Akwa Ibom State are not registered with most ASNSs. It reveals that out of the 10 reasons investigated, the respondents agreed that lack of awareness was the major reason they are not registered with ASNSs. Other reasons are lack of time (2.74), fear of cybercrime (2.61), low technology literacy (2.56), and lack of funds (2.51). On the contrary, fear of technology (technophobia) (2.49), lack of personal interest (2.49), lack of motive for ASNSs use (2.43), not a priority (2.37), and lack of knowledge on registration process (2.24) were not considered as reasons why librarians studied are not registered with ASNSs. The overall degree of agreement on the reasons why librarians

studied are not registered with academic social networking sites was confirmed by a grand mean of 2.54 against the 2.50 criterion mean. From the finding, it is interesting to note that librarians need to appreciate the fact that ASNSs have become essential tools in enhancing quality contribution to knowledge in the contemporary society.

Table 5: Frequency of Visits to ASNSs by Professional Librarians in Akwa Ibom State (n =82)

S/No.	Items	VHF	HF	LF	VLF	Mean	Std. Dev.	Remark
1.	Academia.com	0	44	25	13	2.38	0.748	Disagreed
2.	ResearchGate	6	61	15	0	2.89	0.497	Agreed
3.	Penprofile	1	3	39	39	1.59	0.628	Disagreed
4.	LinkedIn	6	43	12	21	2.41	0.955	Disagreed
5.	Google Scholar	11	33	29	9	2.56	0.862	Agreed
6.	Mendeley	0	9	35	39	1.65	0.674	Disagreed
7.	ScienceStage	0	11	21	50	1.52	0.724	Disagreed
8.	Epernicus	0	9	16	57	1.41	0.684	Disagreed
9.	ResearchID	0	14	25	43	1.65	0.760	Disagreed
10.	Zotero	0	5	27	50	1.45	0.612	Disagreed
11.	Methodspace	0	15	14	53	1.54	0.789	Disagreed
Grand Mean						1.91	Disagreed	
Criterion Mean = 2.50								

Source: Researchers' Field Survey, 2022

The analysis on Table 5 exposes the frequency of visits to ASNSs by professional librarians in public universities in Akwa Ibom State. It shows that although the frequency of visits to the various academic social networking sites vary from one to the other, the overall frequency of visits is low, which is manifested in a lower grand mean of 1.91 against the 2.50 criterion mean. However, the most frequently visited ASNS by professional librarians in public universities in Akwa Ibom State is ResearchGate with a mean score of 2.89; followed by Google Scholar with 2.56 mean score.

Other academic social networking sites include LinkedIn (2.41), Academia.com (2.38), ResearchID (1.65), Mendeley (1.65), Penprofile (1.59), Methodspace (1.54), ScienceStage (1.51), Zotero (1.45), Epernicus (1.41), were less frequently visited by the respondents.

Table 6: Purpose of Using Academic Social Networking Sites (ASNSs) by Professional Librarians in Akwa Ibom State (n = 82)

S/No.	Item Statements	SA	A	D	SD	Mean	Std. Dev.	Remark
1.	Searching scholarly contents	7	56	13	6	2.78	0.703	Agreed
2.	Downloading documents	9	55	18	0	2.89	0.567	Agreed
3.	Publishing or authoring academic papers	24	42	10	6	3.02	0.846	Agreed
4.	Uploading academic publications	27	37	15	3	3.07	0.813	Agreed
5.	Connecting with people for employment opportunities	15	38	20	9	2.72	0.893	Agreed
6.	Linking people for admission opportunities	12	53	14	3	2.90	0.678	Agreed
7.	Knowledge sharing among professionals	34	36	6	6	3.20	0.867	Agreed
8.	Making and developing friendship/contacts	6	52	24	0	2.78	0.567	Agreed
9.	Creating and customizing scholarly profiles	16	47	19	0	2.96	0.656	Agreed
10.	Keeping track of citations to personal articles	13	51	6	12	2.79	0.885	Agreed
Grand Mean						2.91		Agreed
Criterion Mean = 2.50								

Source: Researchers' Field Survey, 2022

Analysis on Table 6 shows an overall affirmation with the purpose of using academic social networking sites (ASNSs) by professional librarians in Akwa Ibom State. It reveals that the respondents use ASNSs for the purpose of knowledge sharing among professionals (3.20),

uploading academic publications (3.07), publishing or authoring academic papers (3.02), creating and customizing scholarly profiles (2.96), as well as linking people for admission opportunities (2.90). Other purposes are downloading documents (2.89), keeping track of citations to personal articles (2.79), making and developing friendship/contacts (2.78), searching scholarly contents (2.78), and connecting with people for employment opportunities (2.72). The result was confirmed by a grand mean of 2.91 against the 2.50 criterion mean to validate the degree of the respondents' agreement on the purpose of using academic social networking sites.

Table 7: Level of Satisfaction with ASNSs by Professional Librarians in Public Universities in Akwa Ibom State (n =82)

S/No.	Item Statements	Highly Satisfied	Satisfied	Not Satisfied	No Idea	Mean	Std. Dev.	Remark
1.	Academia.com	19	35	15	13	2.73	0.994	Agreed
2.	ResearchGate	20	42	16	4	2.95	0.800	Agreed
3.	Penprofile	1	0	51	30	1.66	0.549	Disagreed
4.	LinkedIn	1	35	34	12	2.30	0.732	Disagreed
5.	Google Scholar	16	34	15	17	2.60	0.478	Agreed
6.	Mendeley	1	10	44	27	1.82	0.687	Disagreed
7.	ScienceStage	1	11	42	28	1.82	0.705	Disagreed
8.	Epernicus	6	5	41	30	1.84	0.838	Disagreed
9.	ResearchID	4	10	30	38	1.76	0.854	Disagreed
10.	Zotero	3	3	30	46	1.55	0.740	Disagreed
11.	Methodspace	3	13	32	34	1.82	0.833	Disagreed
Grand Mean						2.08		Disagreed
Criterion Mean = 2.50								

Source: Researchers' Field Survey, 2022

The analysis of data on Table 7 reflects the level of satisfaction with ASNSs by professional librarians studied. It shows that librarians are satisfied using ResearchGate (2.95), Academia.com (2.73), and Google Scholar (2.60). On the other hand, the respondents' disagreement with LinkedIn (2.30), Epernicus (1.84), Mendeley (1.82), Sciencestage (1.82), Methodspace (1.82),

ResearchID (1.76), Penprofile (1.66) and Zotero (1.55) indicate high level of dissatisfaction with the ASNSs. The respondents' degree of disagreement with the level of satisfaction with ASNSs was validated by a lower grand mean of 2.08 against the 2.50 criterion mean. This result can clearly be attributed to most of the respondents' lack of awareness and registration with majority of the ASNSs glaringly revealed in all the analyses.

Table 8: Facilities used by Professional Librarians in Akwa Ibom State to Access ASNSs (n = 82)

S/No.	Item Statements	SA	A	D	SD	Mean	Std. Dev.	Remark
1.	Institutional e-library	0	15	47	20	1.94	0.833	Disagreed
2.	Office computer	0	22	37	23	1.99	0.745	Agreed
3.	Personal laptop	28	42	12	0	3.20	0.675	Agreed
4.	Smartphone	14	55	10	3	2.98	0.666	Disagreed
5.	Tablet	12	33	24	13	2.54	0.932	Agreed
<i>Grand Mean</i>						2.53		<i>Agreed</i>
<i>Criterion Mean = 2.50</i>								

Source: Researchers' Field Survey, 2022

Table 8 shows the analysis of data on facilities used by professional librarians in Akwa Ibom State to access academic social networking sites. It reveals that majority of librarians used personal laptop (3.20) to access academic social networking sites, followed by smartphones (2.98) and tablet (2.54). On the contrary, office computers (1.99) and institutional e-library (1.94) were disagreed upon as facilities through which the librarians access academic social networking sites. The result was confirmed by a grand mean of 2.53 against the 2.50 criterion mean.

Qualitative Interpretations to Interview Schedules

As already stated in the methodology, the study adopted both quantitative and qualitative methods of data collection and analysis. In addition to the above quantitative analyses, a five item interview schedule was adopted to elicit more insights in the study. The five items in the interview schedule are transcribed below:

Question 1: Do you know what academic social networking sites (ASNSs) are all about?

Responding to the question, some of librarians interviewed expressed divergent views about their knowledge of ASNSs. Based on their interview responses, it was deduced that most librarians did not know what academic social networking sites are, while a few librarians understood academic social networking sites (ASNSs) as online platforms for communicating or sharing academic research outputs among academic audiences; a few of them also responded that ASNSs are scholarly online tools used in connecting people for personal and professional development.

Question 2: Can you mention some of the academic social networking sites you have used before?

Responses to this question typically proved that most librarians lack awareness of academic social networking sites (ASNSs). Majority of librarians interviewed were mainly aware of Google Scholar and ResearchGate but lack knowledge of other ASNSs which are very essential in enhancing their scholarship and contributions to knowledge.

Question 3: Do you know the processes involved in registering with ASNSs?

Probing into the knowledge of the librarians on the processes of registering with academic social networking sites, majority of librarians responded that they have not tried to register with ASNSs before. However, the few of them who have at one point registered complained that it was difficult to complete the registration process and requires some technology literacy skills and internet connected facilities.

Question 4: Have you ever used academic ASNSs personally to share scholarly research articles?

In responding to this question, the librarians expressed diverse reactions with majority, saying that they have never used ASNSs personally to share scholarly contents rather through their more technology literate research associates. More so, transcribing the interview schedule, it was deduced that the librarians' inability to personally use the ASNSs influences their overall level of satisfaction and frequency of visits to sites.

Question 5: What are the major challenges professional librarians experience in using ASNSs?

Responses to this question proved that using academic social networking sites (ASNSs) by professional librarians are hampered by some major challenges including lack of e-library facilities, poor internet services, inadequate internet surfing skills, stringent conditions of academic social networking sites, etc.

Discussion of Results

This study examined the use of ASNSs by professional librarians in public universities in Akwa Ibom State, Nigeria. The study revealed that the awareness level of ASNSs by professional librarians is low with most of the librarians being awareness Google Scholar, ResearchGate, Academia.com, and LinkedIn. This finding is in line with the studies conducted by Salami, Chuks-Ibe, & Uzoagba (2020); as well as Stephen & Pramanathan (2020), which revealed that researchers in Nigeria majorly used Academia.edu, Google Scholar and Research-Gate to seek and obtain knowledge from other researchers. It also corroborates with Tran & Lyon (2017) whose research findings revealed low levels of awareness of academic profile websites in a US research university.

On the registration with ASNSs, the findings revealed low rate of registration with ASNSs among librarians in the study area. Supporting the quantitative analysis on registration with ASNSs by librarians, the semi-interview schedule as transcribed, revealed that issues of technological

literacy and poor internet connectivity are factors why majority of the respondents were not registered with ASNSs, even as no available literature investigated issues of registration with ASNSs. Regarding the reasons professional librarians in public universities in Akwa Ibom State are not registered with most ASNSs, the study revealed lack of awareness, lack of time, fear of cybercrime, low technology literacy, and lack of funds. This finding, in a way is in line with Dehghani, Kahouei, Akhondzadeh, Mesgarpour, & Ferdousi (2021) whose qualitative study revealed that ASNS are abandoned by researchers due to the lack of attention by programmers to users' opinions in the design of ASNS.

The finding revealed that the overall frequency of visits to ASNSs by professional librarians in public universities in Akwa Ibom State is low. This finding aligns with the positions of Miguez-González et al (2017), which revealed that some researchers only created a name profile on ASNSs without publication list or other further information, making them symbolic researchers. On the purpose of using academic social networking sites (ASNSs) by professional librarians, the finding revealed that librarians use ASNSs for knowledge sharing among professionals, uploading academic publications, publishing or authoring academic papers, creating and customizing scholarly profiles, making and developing friendship/contacts, etc. This finding is in line with Dehghani, Kahouei, Akhondzadeh, Mesgarpour, & Ferdousi (2021); Stephen & Pramanathan (2020) whose studies showed that ASNSs are utilized to enhance personal brand, disseminate scientific findings and connect with researchers worldwide.

Regarding the level of satisfaction with ASNSs by professional librarians, the finding revealed that librarians are satisfied using ResearchGate, Academia.com, and Google Scholar. This finding agrees in part with Tran & Lyon (2017); Zhang & Li (2020) whose studies revealed researchers are had established at least one academic profile with Research-Gate, and Google

Scholar Citations. The finding also revealed that the facilities used by professional librarians in Akwa Ibom State to access academic social networking sites are personal laptop, smartphones, and tablet.

Implications for Research and Practice

The implications of this study are precise and justified considering the need to use ASNSs among librarians for personal, professional, and career growth, especially in this technology-driven era. This study provides conceptual considerations on ASNSs which aimed explicitly at promoting the use of ASNSs for online persona management, research dissemination, documents management, impact measurement, increasing collaboration chances, etc.

Another implication arises from the research outcome provided in this study which reveals low awareness of ASNSs by professional librarians. This implies that librarians in Akwa Ibom State still rely on traditional method of information sharing among colleagues. This is evident in the low rate of registration with ASNSs among the respondents which is attributed to lack of awareness and time, fear of cybercrime, low technology literacy, etc., as revealed in this study. The results of this research have far-reaching implications for librarians, university management, government, and other stakeholders to provide opportunities that will enable librarians and other professional audiences register with ASNSs for personal, professional, and institutional growth.

Limitations of the Study

There are a number of limitations in this study that could be addressed in future researches. The scope of this study of professional librarians and public universities in Akwa Ibom State could hinder the generalization of the result of this study to a larger population of librarians. This limitation could be addressed by extending the study area to cover one or more geographical zones if not the entire Nigeria and even regions of the world.

Conclusion and Recommendations

Academic social networking sites (ASNSs) are indisputably revolutionizing the space and speed of scholarly communication and collaboration among professionals in every academic discipline, including librarianship. This paradigm shift does not only guarantee quality research output but provides unlimited horizon for global visibility of research contributions. However, the obvious low level of awareness of and registration with ASNSs by professional librarians in public universities in Akwa Ibom State, as revealed in this study is a serious call for concern. Thus, the following recommendations become pertinent:

- i. Library Associations, in collaboration with university authorities in Akwa Ibom State should organize training sessions through which professional librarians can be trained on available academic social networking sites (ASNSs) and their registration procedures.
- ii. Management of university libraries should provide more ICT facilities and better internet access through campus area network (CAN) for improved internet connectivity to enhance the use of ASNSs.
- iii. Professional librarians should improve their technology literacy skills in order to take full advantage of the ASNSs and maximize their potentials in this digital age.
- iv. Owners and managers of ASNSs should modify and ease the protocols, processes, and policies regulating the registration and use of ASNSs in order to encourage researchers.

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