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**AN OVERVIEW OF APPLICATION OF ACADEMIC SOCIAL NETWORKING
SITES AS STRATEGIES FOR ENHANCING RESEARCH PRODUCTIVITY OF
ACADEMICS IN NIGERIA UNIVERSITIES**

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Abstract

Purpose: The paper x-rayed the benefit and opportunities of academic social networking sites to academicians and researchers. The paper recommended that more funds should be injected into our public institutions and research centers across Nigeria, an alternative source of power supply, training, and re-training of academicians and researchers on the use of academic social networking sites.

Approach: the paper reviewed the literature to reveal the various types of academic social networking sites. The literature reviewed factors militating against the use of academic social networking in Nigeria.

Findings: The paper showed that academic social networking sites play a key role in making academicians and researchers to increase their visibility and representation and this will further facilitate their research activities, information sharing, collaboration, information consumption, and knowledge updates on the trend in academic disciplines.

Originality/Value: This paper provided valuable insight into the varying types of academic social networking

Introduction

Universities are centres of learning, places where knowledge is produced and where foundational knowledge is stored. A university's main duties include research, community service, and teaching and learning. Insofar as successful teaching is based on research findings and effective engagement in knowledge-based community service is likewise based on research findings, research is important to these activities. Universities should focus more on research to set themselves apart from other tertiary institutions of learning, notably in fundamental research for knowledge generation and applied research to solve production-related issues through innovation. Therefore, it is required of universities to prioritise research. A reputable institution is recognised and assessed based on the calibre of its research output. Universities are supposed to represent the finest in terms of academic substance and current knowledge. The ability of one's colleagues, peer groups, and students to read one's contributions, which take the form of scholarly publications, greatly influences what constitutes a sound academic (University of Ibadan 2020). According to Sawai, Chavan, & Kalbande (2018), research is the skill of scientific inquiry, whereas productivity is the correlation between output and input quantities (Phillips 1990).

Research, as described by Lucky (2013), is scientific investigation carried out to uncover new information, and its activities play a major role in advancing any nation's growth. In order to better society's issues, research's main purpose is to investigate the solutions to important questions.

Research productivity is crucial for professional development, peer recognition, increased income, and a closer bond with academic advisors and other colleagues. It serves as a gauge of academic success. The quantity of academic presentations at conferences and other peer-reviewed events, as well as the number of research articles published in peer-reviewed journals, are crucial indicators of an academic's productivity and standing. Research productivity is conducted in a variety of formats, including journal articles, books that have been published, book chapters, technical reports, conference papers, seminar papers, edited works, workshop papers, theses, and other sorts of publications. One of the key indicators and criteria of academic greatness has been and will continue to be the measure and volume of an institution's research output.

The use of information and communication technologies may easily increase research productivity.

According to Otolu and Saibikumo (2021), the growth of the internet as one of the newest instruments of information and communication technology (ICT) has enabled open access to a wide range of resources all over the world. According to Ahmed and Quazi (2011), technical advancements have long been viewed as powerful forces of development; nevertheless, the introduction of the internet has significantly altered virtually every aspect of personal, social, and professional life. Academic social networking sites are becoming commonplace on the internet (ASNS). Designed specifically for the academic community, academic social networking sites are similar to social networking sites. More academics are joining online research communities as a result of the social web's rising popularity and the advancement of ever more powerful network technologies.

The phrase "academic social network sites" (ASNS) refers to a number of online platforms that have aimed to make the advantages of online networking available to a target audience that is explicitly academic. Academia.edu and Research Gate are two examples of the first type of ASNS, which was built primarily to make it easier to connect and create profiles (similar to Facebook), as opposed to the second type, which was built primarily to make it easier to post and share academic content before incorporating social networking features (such as Mendeley). This demonstrates a distinction that is consistent throughout SNS in general (Boyd & Ellison 2007). According to Medical library (2016) academic social networking sites aimed specifically at academics, boast millions of users. Academia.edu, one of the most successful commercial platforms in this area, claims 33 million people have signed up their service, sharing 10 million uploaded papers on a site which enjoys 36 million unique visitors a month.

According to Stephen and Pramanathan (2020), these online platforms enable you to create a profile, engage with other scholars, and share academically relevant information. Usually, using these tools is free. These services' ability to provide a simple means for you to share your scholarly work with peers and academic communities throughout the world is its most alluring feature. But as social media and networked technologies have developed, the cycle has changed to incorporate more contemporary media, including blogs, podcasts, and networking sites, all of which raise a scholar's reputation in novel and increasingly participatory ways. By offering an alternative method of finding research outputs, ASNS is

altering established patterns of scholarly communication. As a result, it is crucial to comprehend both the characteristics of the academics who comprise ASNS' membership and the primary drivers behind why they use these websites and the services they offer. A comprehensive awareness of how academics utilise ASNS would improve librarians' capacity to offer useful guidance and resources, given the role that libraries play in assisting scholars across the whole scholarly communication lifecycle. Additionally, these websites, according to Meisher-Tal & Pieterse (2017), enable users to post academic papers, abstracts, and links to previously published works; monitor demand for their articles; and interact with other users in a professional capacity through discussions and question-and-answer sessions. Krause (2012) also confirmed that these sites frequently allow users to communicate ideas, follow one another's research, stay up to date with emerging trends in the field, share academic materials, and, most significantly, develop their professional networks. Academic social networking sites (ASNSs), as mentioned by Wiechetek, Phusavat, and Pastuszak (2020), are increasingly being utilised by academics for a variety of purposes, including the creation of academic profiles, the sharing of research articles, and peer interaction.

Online groups, among the different social characteristics of ASNS, according to Jeng, He, and Jiang (2015), play a particularly significant role in tying individuals to one another and to academic resources. They said that from the viewpoint of user interface, a group page in an ASNS may be seen as a platform on which users can cooperate with their peers by exchanging scholarly publications and having research conversations. For instance, Research Gate's "Project" group feature enables users to launch a workspace with several "benches." Participants can share ideas, papers, and research information at each bench. Both Mendeley and Zotero include similar group features for presenting and debating current research ideas.

The capabilities and advantages offered to users by the ASNSs are generally comparable. These websites enable peer following and the submission of published files. On the other hand, some websites offer specialised services not offered by others. Users can access non-academic SNSs like Facebook and Twitter through sites like ResearchGate and Academia.edu, for instance. ResearchGate offers a score for assessing academics based on publication downloads, citation counts, involvement in discussion boards, and the number of views, in addition to the provision of job hunting services (Alheyasat, 2015).

Anyim (2021) stated that the social integration and communication changes brought about by the digital revolution have had an impact on learning and research activities in addition to

corporate operations and socio-cultural interactions. With the advent of the digital revolution in academia, research output is no longer being swept behind a shelf with little visibility and accessibility to academics engaged in research and learning. Opeanwo and Mabawokun (2016) emphasised the expanding usage of academic social media in nearly every aspect of life, including academic parlance. As a result, academics and researchers are starting to rely on and integrate them for simple access to current scholarly publications, current news, current information, up-to-date sources, efficacy and efficiency, as well as for cooperation.

In the contemporary information and education sectors, academic social networking sites (ASNs) have emerged as one of the most significant platforms. It will undoubtedly become a crucial tool for the academic community's communication, connection, and collaboration (Mohammed Lazim and Rosle 2018).

Types of Academic Social Networking Sites

Designed specifically for the academic community, Academic Social Networks (ASNs) are comparable to social networking websites. You may create a profile in these online communities, connect with other scholars, and contribute content that is academic in nature. Usually, there is no charge to utilise these resources. These websites' ability to provide a simple approach for you to share your scholarly work with peers and academic communities throughout the world is its most alluring feature. The following are academic social networking sites according to Asmi & Madhusudham (2015), Mohamed Jelani, Ashkar, and Sarasu (2019). MacMillan, (2012); Mendeley, (2014); Academia.edu, (2014); Thelwall and Kousha, (2014) Sciencestage (2014), Epernicus (2014), ResearchID (2014) Zotero, (2014), Methodspace, (2014), and Stephen & Pramanathan (2020).

Academia.edu

The networking site exclusively for academics, Academia.edu, was launched by Richard Price in 2008. This platform enables users to make personal profiles, follow and communicate with other users who share similar interests, post papers, get comments, and track the engagement and effect of their papers using analytics. Users of Academia.edu may utilise the "import contact" option to get in touch with coworkers from other social networking sites like Facebook, Twitter, Google, etc. Whenever a researcher on a user's follow list publishes a paper, a notification function allows users to be notified through email.

Research Gate

Ijad Madisch, Horst Fickenscher, and Sören Hofmayer established Research Gate in 2008. Research Gate has successfully reached its ten-year milestone. Ten thousand people were only using Research Gate at the beginning, but there are now fifteen million users, a growth in users every year. Researchers may submit journal articles, conference papers, posters, data, and code to an online repository using Research Gate, an academic social networking site. Finding conference materials that aren't saved in other online databases, including posters and slide shows, may be made especially easy using this. Users of Research Gate also receive publishing metrics, including information on how often their papers have been viewed and referenced.

In order to set Research Gate apart from other platforms, it offers capabilities for community involvement. user can:

- Ask questions on issues, metrics, or structures within the academic community.
- Reply to questions from other users.
- Select to follow other academics to get notified when they submit new content.
- Message other members of the Research Gate community directly.

Using the "request full text button," ask writers to submit complete copies of their works.

- Speak with readers directly to get feedback on their publications.

Pen profile

An academic social networking site called Pen Profile encourages international (social) contacts between academics and scholars, students, and educational institutions with the goal of greatly accelerating the creation and development of knowledge. It offers a number of networking and productivity-enhancing capabilities and is accessible to anyone. A pen profile has a special way of merging social connection with beneficial information exchange and human resource development. It has many useful built-in features and sections, including the ability to create profiles for both individuals and organisations; a special article-writing and

blogging platform; the ability to create groups; the ability to review research; the ability to access academic news like job openings, writing opportunities, calls for papers, conferences, and a tonne of other membership opportunities.

LinkedIn

LinkedIn is a professional networking site that connects people and businesses to create professional relationships, career opportunities, skill acquisition, information exchange, etc. Despite the fact that LinkedIn accepts users from all professions, academic researchers have found it to be a useful platform over time. The company works via its website and was established in 2002.

Google Scholar

A search engine specifically designed to locate intellectual resources is Google Scholar. It enables users to do comprehensive academic literature searches using data from scholarly websites, institutional libraries, university repositories, professional associations, and periodicals. Users can keep their articles in the Scholar Library and import their citations after creating a Scholar profile. Authors may easily keep track of citations to their papers using Google Scholar's citation function. Additionally, it offers a metrics tool that enables authors to easily assess the popularity and impact of recent papers in scientific journals.

Methodspace

A multidimensional online community called Method Space was built for students and researchers to network and exchange research, resources, and discussions. Individual profiles can be created and updated by users. Users may network, exchange ideas, participate in discussions, and study through Method Space. They also get free access to a number of journal articles, book chapters, and other types of content, as well as new developments in the area. Users may also sign up for forums where network administrators post articles, lists, links, and other entertaining content that can be read, discussed, and disputed. Users of Methodpace may establish and join groups and blogs to share things like podcasts, films, and poster presentations. Access to numerous research and educational resources, including books, journals, connections, listservs, publishers, software, teaching techniques, and others,

is made possible via Methodspace. Users may also submit job openings and get updates on them. Additionally, users can solicit and offer cash for research initiatives.

Zotero

In addition to being a social networking site for academics, researchers, scientists, and librarians, Zotero also enables users to create and join research groups; compile all of their research into a single, searchable interface; add PDF files, images, audio files, and video files; locate full-text content in their libraries; organise collections and sub collections; automatically generate footnotes, endnotes, in-text citations, or bibliographies; and synchronise their data across as many devices as they like. Sharing, collaborating, and finding individuals with like interests, relevant fields, sources they are quoting in public or privately, and active research projects are all benefits. For the most recent information, users may subscribe to Zotero's blog or follow them on Facebook and Twitter. At its most fundamental level, Zotero is a citation manager. It's made to organise, save, and cite bibliographic references like books and articles. Each of these references in Zotero is an item. Items may be given tags to make them accessible to certain individuals or to the public. When content, tags, or metadata matches the search keywords, Zotero supports a search feature that may be used from the toolbar. Links, files, and notes may be connected to items.

Science Stage

For scientists and researchers, there is a multimedia network called Science stage. The website includes social networking functions such as the ability to create and edit personal profiles, display details about one's interests and areas of expertise, use a messaging system, add friends, and keep track of new content, as well as join and create discussion groups and communities of interest. It has a search option that allows users to narrow their searches by topic. It includes a method for making recommendations based on search keywords and outcomes. The research community uses the science stage for scientific exposition, conversation, and the dissemination of academic information. In blogs and wikis, researchers can post comments, add information, and link entries to people or groups. Science Stage may also be used to launch a new partnership. Additionally, RSS allows researchers to aggregate material.

Epernicus

For the benefit of other researchers, scientists created the social networking site and professional networking platform Epernicus. Its principal objective is to support scientists in their quest to "discover the appropriate individuals with the right competence at the right moment." It has its headquarters in the American city of Cambridge, Massachusetts. It serves as a professional platform to link researchers and locate resources; conduct effective searches for knowledge, techniques, and materials; maintain connections with current and former co-workers; communicate and work collaboratively with groups, departments, and locations; learn about the backgrounds and accomplishments of other researchers; aid in new discoveries; and find best practises. Three categories are listed on the Epernicus website: Epernicus Network, Epernicus Solutions, and trial networks. While Epernicus Solutions and Epernicus Network are social networking platforms, Epernicus Trial is an online platform to improve the effectiveness and calibre of clinical research operations. In contrast to the latter, which provides private expertise seeking and networking solutions for research institutes in business and academia, the former delivers these services in accordance with the structure and needs of the organisation.

Research ID

On the website for Researcher ID, invited researchers can sign up to receive a special researcher ID number. Through the use of a web service, Researcher ID accounts may be created, publications can be uploaded, and information can be downloaded from Researcher ID. Users can manage their publication lists, track their h-index and times cited counts, find new collaborators, check publication lists, and learn about how research is used around the world. Additionally, Researcher ID information is ORCID compatible and connects with the Web of Science, enabling you to claim and present your articles from a single account. According to citation metrics, the "Highly Cited Research" feature identifies the authors of the most significant articles across 21 key topic areas. Search options for Research ID features are varied. Users can search the registry by entering their name, their first name, their institution, their country, or their researcher ID number. The top 100 most common terms are displayed, the top 100 nations are shown (based on the parent institution), and the membership distribution is shown on a map of the whole planet. To make it simpler to identify articles by a given researcher, information in Researcher ID may be exchanged with the Web of Science. You may obtain a Research ID using SNSs like Facebook and Twitter.

Mendeley

Mendeley is a free reference tool and ASN that aids academics in organising their papers, collaborating digitally with others, and finding the most recent research conducted worldwide. By allowing users to exchange files, follow changes, leave comments, and monitor group progress, Mendeley promotes cooperation with other groups. Another feature of Mendeley is the ability for users to browse and add articles to their profile's library, as well as immediately comment on the papers of their colleagues. Mendeley is not only free to join, but users may also download it to their own PC for free.

ORCID iD

One of the greatest online resources is ORCID, which provides you with a lasting digital identifier (an ORCID iD) that you own and own and enables you to stand out from other researchers. By developing a professional profile, you may connect your personal information with details about your scholarly work, such as affiliations, grants, publications, peer review, and other accomplishments. Some writers' names are similar to one another's, or they may have different spellings in other publications. By giving each author in Scopus a unique number and cataloguing all of their works under that number, the Scopus Author Identifier separates writers with similar names.

Publons (Clarivate Analytics)

The Clarivate Analytics identification works similarly to Elsevier's identity in that it creates a connection between writers and their published papers in order to serve researchers' needs. Utilizing a mechanism called Researcher ID, which was initially created for the Web of Science, is what this programme does.

Xing

One of the top academic networking sites is Xing. It brings together professionals to cooperate, discover relevant research jobs and colleagues, take on new tasks, network, find relevant research jobs, learn from experts, and generate business ideas. Members can interact and exchange ideas in more than 100,000 specialised groups (helping to speed up research), as well as at open-to-the-public networking events.

Impact Story

Researchers may learn about and debate the online effects of their work using the free, open-source website Impact Story. This non-profit platform gives you access to a personal profile page where, if you choose, you may display both your articles and your social media activities. This will help people understand the importance of your work.

Microsoft Academic Search (MAS)

Citation tracking is a feature of Microsoft Academic Search (MAS), a document retrieval tool. Though with limited quality control, it is sufficient to be taken into consideration for research assessment and scientific benchmarking. It automatically gave the bibliographic data sorted by authors, journals, institutions, or research disciplines.

The Prospect of Academic Social Networking Sites in Enhancing Research Productivity

According to Kulkarni and Poornashankar (2018), researchers primarily use academic social networking sites (ASNW) for the purposes listed below: to refer to other research when choosing a topic; to collect data using a questionnaire through Google forms; to avoid spending time, money, and effort on field visits for data collection; to use project management tools like Trello, which encourage team members to participate in all phases of a project and facilitate completion of necessary tasks on time; and

The exposure of your work and yourself on academic platforms is also increased. It's similar to posting your resume online to create a personal profile. Your places of employment and study, the conferences at which you have given presentations, and your list of publications are all visible to others. Your profile may be searched in these databases if the platforms you use are linked to a database of journal articles, making it easier for your coworkers to remain up to date on your most recent achievements. Additionally, making postings or commenting on existing ones might draw attention to you (Behrendt 2020).

The patterns of information exchange and dissemination in the academic setting may be completely altered by ASNS. They may affect the composition and dynamics of the research community by providing venues for global interactions between academics (Meishar-Tal and Pieterse 2017). As a result of the shifting paradigm of researcher and scholar information seeking patterns, academic social networking sites (ASNSs) provide new opportunities for

communication, collaboration, and knowledge gathering. Researchers and researchers are gathered in one location by ASNSs. Information flows freely when ideas are freely exchanged and discussed in public (Asmi and Madhusudhan 2017).

These websites let users contribute academic papers, abstracts, and links to published works. They also let users monitor published work's demand and connect with other professionals. They boost scientific collaboration and make it easier to share research results with the public (Thelwall and Kousha, 2013). ASNS, according to Hagit Meishar-Tal1 and Efrat Pieterse (2017), have the potential to fundamentally change how academics share and publish their knowledge. Academic social networking sites, according to Hagit Meishar-Tal1 and Efrat Pieterse (2017), have the potential to change the structure and dynamic of the research community by providing venues for relationships between academics all over the world. Other potential outcomes of these sites include

- Sites for social networking among academics may be very useful for discovering new directions in research, teaching materials, and project collaboration.
- You can meet others who have similar interests thanks to academic social networking services.
- Additionally, they provide you with access to tools like textbooks and instructional materials that you would not otherwise have.
- Academic social networking sites may also keep you informed of the most recent developments in your field's science and news.
- Many websites feature forums where you can simply and quickly have your questions answered.
- You may communicate with friends and co-workers, discuss recent discoveries, and find out more about what's happening in your department.

Factors Militating Against Effective Use of Academic Social Networking Sites in Nigerian Universities

In spite of the numerous benefits that accrue from the use of academic social networking sites. There are numerous challenges in their utilization by academicians and researchers in developing countries. Lachlan, Spence, and Lin (2016), they claim that The depth of knowledge available on these websites helps researchers by offering crucial references for the resolution of scientific issues. The user-generated nature of such internet content, however, may increase the chance of coming across low-quality information. Furthermore, since the amount of data on websites keeps expanding, individuals are finding it harder to judge the quality of online information.

Lack of awareness: Despite the advantages of using academic social networking sites, many academics and researchers are still not fully aware of the myriad opportunities offered by these sites for enhancing research productivity.

Lack of information literacy and technical skills: In order to use academic social networking effectively, one has to possess the necessary information literacy and technological abilities. It is depressing that the majority of academics lack the ICT abilities necessary to use different academic social networking websites to their personal advantages.

Poor internet connectivity: There is insufficient bandwidth in most academic libraries in Nigeria, thereby making internet facilities very slow for meaningful research activities among scholars.

Erratic power supply: Irregular power supply is one of the major challenges of academic social networking sites' usage in Nigeria. Most public universities lack stable electricity.

Poor funding: Most public academic institutions are poorly funded in Nigeria. Lack of funds hampers the provision of ICT facilities, thereby hindering the effective utilisation of academic social networking for research activities.

Lack of maintenance culture: Many libraries lack the space and ideal surroundings for storing ICT equipment. Additionally, the majority of ICT equipment is not properly maintained due to the often high cost of maintenance.

Privacy Safety and security concerns: Academic social networking may be used as a tool to breach personal privacy and the information may be misused inappropriately by people who weren't supposed to see it. According to Al-Eryani, Mofleh, and Alariki (2017), safety is one of the academic social networking sites' top worries. This is mostly due to the fact that social networking websites allow users to publicly display their private information, including names, location, and email addresses. Some individuals are perpetually looking for a false identity. If they are able to gather all of the user's online information, they may use that identity for a variety of criminal activities that might later result in issues for the user.

Copyright infringement: Free access to intellectual property without proper credit to the original author on social networking platforms poses a significant threat to copyright management.

Mobility of information: The mobility of information is a challenge when using academic social networking sites for research. Scholars have no means of knowing how long a site will remain up once they have decided that it contains reliable material. However, if a researcher references an archived document, the item is still accessible until the archive is shut down or the document is destroyed. Other academics believe that they might visit the archive to go through the paper and assess the initial scholar's analysis. Web-based material may move around, unlike archival resources. Many excellent websites disappear or change locations (URL). The content published on a Web site could not be accessible once it is shut down. It can be difficult for others to analyse and criticise a scholar's work if they reference material from a website (Schffner 2001).

The Way Forward

Academically speaking, The 21st century technical era has been referred to as a century of technology development since several academics and researchers today routinely utilise social networking sites. This is because it is the century that is credited with turning the world into a global village. The following recommendations are made in light of the aforementioned difficulties:

- ❖ Researchers and academicians who are already aware of academic social networking sites should encourage and invite their peers to use one of them so they can gain more from them, improve their research, and become a part of the global research

community. This will help to further facilitate their research activities, information sharing, researcher collaboration, information consumption, and updates on the state of academic disciplines.

- ❖ In order to enable academic staff members to publish their research and get international recognition for it, the National University Commission should make membership in these academic social networking sites a requirement.
- ❖ The provision of alternative energy sources, such as standby generators and solar power systems, to enhance the availability of electricity in the majority of higher educational institutions in Nigeria.
- ❖ Academic personnel and researchers should be trained or retrained on how to use ASNSs to improve their exposure, representation, and academic standing among other institutions across the world.

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