Faculty members perceptions of open access publishing in Ghana

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Abstract

This study sought to determine the rate of acceptance and use of open access scholarly resources by faculty members in Ghana. The study population was 443 faculty members. Using a survey design, a questionnaire was employed as the data collection instrument. Data collected were analyses using Statistical Package for Social Science (SPSS v20) and thematic analysis for qualitative data. Key findings were that although the faculty members showed positive attitudes towards open access publishing and had intentions to publish in open access journals and use open access content, they perceived that open access journals increase predatory journal publication, have poor impact factors, with murky peer review process. Recommendations based on study findings were thus directed towards the development of policies that promote open access publication, equipping libraries within the institutions with IT resources to develop and sustain open access journals, and increasing education on OAJs among others.

Keywords: Open access journals, repositories, faculty members, technical universities, predatory journals, Ghana

Introduction

While unlimited access to research information benefits all regions, the developing world's fragile and unstable economic conditions make the open-access model appealing to users (Borteye et al. 2021). In contrast to other types of freely available web content, open access is typically applied to the context of scholarly data publications. This means that open access publications are generally easily available on the public internet, permitting any user to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, regardless of financial, legal, or technical barriers. Distribution models for open access

publications include personal websites, blogs, wikis, databases, electronic books, videos, audios, webcasts, discussion forums, Simple Syndication (RSS) feeds, and Peer-To-Peer (P2P) networks. However, two delivery trucks are now dominating the conversation: open access repositories and open access journals. Baro and Eze (2017), opined that open access journals are serial titles that are freely accessible on the internet and do not require a subscription.

At a conference held in Budapest on February 14, 2002, the term "open access" was created, and it was decided, among other things, that peer reviewed literature should be made freely accessible over the internet via self-archiving or open access publications. The Bethesda statement, which was the product of a conference conducted on April 11, 2003, underlined

the need to facilitate a rapid and effective move to open access. Correspondingly, the Berlin Declaration, which was the product of a conference held in Berlin, Germany on October 22, 2003, informed that "our purpose of distributing knowledge is only half-fulfilled if the information is not publicly and easily accessible to society". Indeed, the possession of knowledge confers power. This suggests that information availability is essential. Those who are out of reach are excluded from traditional, pecuniary, community, and civil life; they are deprived of an essential tool to advance their own situations (IFLA annual report, 2018).

Nevertheless, the open access controversy persisted in the scholarly community. While some academics believe it is desirable to share their research findings with the public via open access, other researchers disagree. According to Nobes and Harris (2023) researchers who publish their investigation findings via open access believe that they write for impact rather than profit, and that making the type of impact they want to make earns them career points. Selling their work Nobes and Harris (2023) indicates, harms their interest by lowering their viewers, plummeting their influence, and twisting their professional ambitions by guiding them away from the specialized areas in which they are specialists and towards popular topics that sell. Contrary to this claim, Anane-Sarpong et al., (2018) hilariously stated that, in the sphere of public health, data sharing is a desirable default that has sparked significant ethical debate. Sharing data has the potential to be the greatest and utmost well-organized spring of systematic facts, but it is plagued with circumstantial disputes that make participants hesitant or delayed participating, particularly in under-resourced situations. Proponents of open access also believe that publications should have intrinsic worth irrespective of the newsletter in which they are circulated. This refutes pro-subscriber journals' claims that open access journals have poor impact factors. But, in truth, several respected editors, and journals, such as BioMed Central, Hindawi, and PLoS ONE, have open access models.

Within the African perspective, the open access debate has been around for a while now. Chiedza (2018) discovered that 61% of respondents in her study had a favorable attitude toward open access resources. These respondents were adamant that open access resources are of high quality and meet internationally competitive standards. "Majority of respondents agreed that open access resources are of high quality and that it would benefit them" Davies (2012) had reported.

In Ghana, Borteye et al. (2021) attributed the low patronage of open access journals in Africa, specifically Ghana, to factors like researchers' limited knowledge about open access publishing, poor internet access, insufficient IT infrastructure, and policy issues. Despite the challenges associated with open access, research shows that sharing and promoting open access information resources is the most certain way to achieve rapid socioeconomic development and the United Nations Sustainable Development Goals (SDGs), particularly in emerging nations and institutions where budgetary allocations remain typically insufficient (Atisco et al., 2017; Acheampong, Boakye and Agyekum, 2019). The cost of modern information infrastructure is high. As a result, research into the perceptions of faculty members towards open access publishing, its adoption, and use in technical universities is critical and imperative, given that technical universities have limited budgets coupled with lots of responsibilities. The challenge, however, is the ability to convince faculty members in technical universities to adopt and use open access journals. Furthermore, there seem to be paucity of literature on the subject, faculty perceptions of open access in Ghana. Indeed, studies that have attempted to investigate the subject matter, have mainly focused on open access journals in the context of conventional university libraries with emphasis on post graduate studies (Atisco et al., 2017; Lamptey & Boshoff, 2020; Borteye et al., 2021). This study aims to bridge this knowledge gap while also establishing a framework for future academic discourse.

Study Objectives

1. To find out the attitude of faculty members towards open access journals in technical universities in Ghana,

2. To find out faculty members intentions to use open access journals in technical universities in Ghana, and

3. To identify ways by which the usage of open access journals among faculty members in technical universities in Ghana can be improved.

Literature Review
Faculty Members' Perceptions of Open Access Publishing

Generally, many faculty members are aware of the existence of open access journals and repositories and have positive attitude towards open access publishing because they believe that it is beneficial to researchers

as it makes scholarly literature available to all (Ali & Ali, 2024; Nobes and Harris, 2023; Sheik, 2017; Kaba & Said, 2015; Yang & Li, 2015; Rodriguez, 2014). However, when it comes to how faculty members perceive open access journals or repositories, many are hesitant and doubtful because they are unclear of some aspects of open access journals and repositories. According to the findings of Shuva and Taisir (2016), although most of the faculty members support open access principles and are prepared to publish their work in open access, slightly more than half of the faculty who participated in their study appear to be ignorant of the open access objectives and the purpose. Furthermore, an extensive array of faculty remarks exposes a variety of perceived apprehensions concerning open access journals, including issues related to the submission process, plagiarism, copyright, and the perception that open access repositories are substandard publishing platforms that can have negative impacts in their academic careers. (Chakyarkandiyil, (2020); Beall (2017) reiterated that such issues as Impact Factor (IF) concerns, peer review status often scared many faculty away from publishing in open access journals. Meanwhile, some of the world's most prominent journals with extremely high impact factors (IF) operate open access models (Amutuhaire, 2022; Atisco, Kammer & Bossaller, 2019). This points to the idea that faculty's perception of open access journals and repositories is an intricate task that requires deeper scrutiny. Understanding of the issues of open journals must be looked at from external perspectives such as technological and social whilst deeper exploration of the issues concentrates on psychological standpoints.

According to Tmava (2023), faculty members have opposed OARs despite their growing acceptance around the globe. Although OpenDOAR data show an increase in OARs globally, there is little proof that OARs are making academic published content more accessible via faculty activities. Overall, the data indicates that academics and researchers have not been eager to adopt open access publication in their work. According to Jiang, Kocken, and Wical (2013) at the University of Wisconsin-Eau Claire, over 70% of respondents are unaware of the objectives of open access (OA) given that quite a few of the professors did not have good knowledge of what the objectives of open access entails. According to the Primary Research Group's 2009 research, just 3.5% of faculty members do not agree with the aims of open access (OA), and 37.9% of them do not know what the movement stands for. Even if 30.5% are uninterested in it or somewhat

support the objectives of open access, they believe working with commercial publishers is more crucial.

Although faculty saw open access journals (OARs) as a feasible means of sharing their research, O'Hanlon, MsSweeny & Stabller. (2020) discovered that faculty members were hesitant to use OARs because of worries about predatory journals and author publication costs. Panto & Cosmas-Quinn (2013) said that passive resistance is less of an issue than apathy when it comes to faculty members' non-participation in OARs. Fitzgerald and Jiang (2020) found that, in contrast to these assertions, 71% of participants believed that open access (OA) would broaden the impact of their work, 68% believed that authors who publish in a journal should have the option to deposit their work into an OAR, and 55% believed that OARs would help their career.

According to Rosenblum et al. (2022), even though there have been substantial advancements, certain aspects of open access (OA) seem to have taken a wrong turn, leaving a dysfunctional system that falls short of expectations. Better access to read and reuse academic material was the main emphasis of early OA initiatives. Even if there has been a lot of progress in this field, there is still a barrier to the open and free exchange of academic research: the inability of writers to publish their work. This is particularly difficult for those who don't have the resources or assistance to take part in the increasingly popular open access "pay to publish" paradigm. It is possible to redress this imbalance, but doing so would require the academic community to realign and concentrate its efforts.

Usage of Open Access Journals Among Faculty Members

Encouraging the greater utilization of open access publishing among faculty members is a crucial endeavor that can significantly enhance the dissemination and impact of research within academic circles. Proactive approaches are required to empower faculty members to leverage the advantages of open access publishing, thereby fostering a culture of collaboration, innovation, and accessibility in the academic community. There are many myths and misconceptions surrounding open access publishing this needs to be cleared before the concept can fully blossom in Ghana (Atisco et al., 2017). Faculty members need to understand the OA concept fully. Some people are of the perception that OA is synonymous with fake publishing (Nashipudi and Muthuraja, 2023; Bocanegra-Valle, 2023; Zaccaron, Behnck & Beall, (2024). That is far from the

truth. Predatory journals do exist and are constantly trying to lure researchers to publish their articles with them for the publisher's gains (Soyer et al., 2024). So, in attempts to publish in both OA journals, an author can fall prey to predatory publishing and hence must always do the necessary checks before engaging any journal be it OA or subscriber base journal. Others are also of the opinion that OAJ usually does not undergo rigorous peer review. However, there are prestigious journals today that operate open access models. Tailor & Francis, PLOS ONE, BMC Biology, Paladyn all have open access modes (DOAJ, 2008). This means that one can publish in OA and still in a prestigious journal. It is not true that most open access journals have low impact factors. The idea of impact factor is not applicable to newer journals. For a journal's impact factor to be calculated, it takes at least three years of the inception of the journal. Most OAJ are new and so are not favored by this calculation method. It is not true that OAJ has low impact factors (Borteye et al., 2021).

Publication fees or article-processing charges (APC)s have become the predominant means for funding professional OA publishing (Solomon and Bjork, 2012). Academic libraries need to seek more funding in support of faculty members who wish to publish in OA. Findings from the field data indicated that most faculty members who wish to publish in OA do so from personal sources. The Government of Ghana give yearly book and research allowance to eligible senior members across all tertiary institutions across the country. However, that is woefully insufficient in most cases. It was also revealed that some institutions have other funding options. This is in the right direction but much needs to be done to augment these efforts (Kodua-Ntim and Fombad, 2020). By establishing targeted strategies to raise awareness of open access publications, offer incentives, providing support, institutions can create a more conducive environment for faculty members to release the full potential of open access publishing.

Methodology

The study employed a quantitative approach. The research setting included Kumasi Technical University (KTU) and Accra Technical University (ATU). According to National Accreditation Board (NAB), there are ten (10) accredited technical universities in Ghana. However, the researchers choose KTU and ATU because these were some of the oldest technical universities in Ghana and were also members of the Consortium of Academic and Research Libraries in Ghana (CARLIGH). The total population was made up of 443 lecturers. With the help of the Krejcie and Morgan sample determination table (see table at appendix), a sample size of 207 was selected. Questionnaires served as the main data collection Instrument. The questionnaire was designed with Google forms and sent online via WhatsApp Messenger to lecturers through their official emails and group platforms through the platform administrators. After a period of 4weeks, a total of 167 answered questionnaires were received in their complete forms and used for analysis. The Statistical Package for the Social Sciences v20 (SPSS) was used to analyse data collected for the study (SPSS). Data collected was checked for accuracy before the analysis was done. The research was granted ethical clearance from the Ethical and Protocol Review Committee (EPRC) of the University of Ghana for the conduct of this study and all ethical procedures were duly followed during and after the data collection stage.

Study Findings

The findings of the study are presented in this section. The study obtained 80.7% (167 responses) response rate. The objectives of the study were each presented with a set of statements to seek faculty members' level agreement or disagreement. These were then followed up with statements on how favourable the option of adopting and using open access data was. All statements were rated on a five (5) point Likert scale ranging from 1-5, where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. Responses to each of the statements were analysed and presented in Mean scores (x̄) and standard deviation (σ) values. In interpreting the results of the study, mean scores of 1.00-1.80 depict that most of the respondent showed strong disagreement to the statement, 1.81-2.60 depicts disagreement; 2.61-3.40 signifies neutrality, 3.41-4.20 expresses agreement and 4.21-5.00 denotes strong agreement.

Respondent's Demographic

The demographic characteristics of the study respondents namely gender, age, academic qualification, rank, discipline, and job tenure have been presented in table 1.

Table 1. Demographic characteristics of characteristics of respondents

Variable	Category	ATU	KTU	Total
Gender	Female	14	31	45
	Male	45	77	122
Age group	0-29	0	7	7
	30-39	14	41	55
	40-49	42	50	92
	50-59	3	10	13
Academic qualification	Master's degree	52	83	135
	PhD	7	25	32
Professional rank	Assistant Lecturer	5	9	14
	Lecturer	23	44	67
	Senior Lecturer	31	55	86
Academic discipline	Arts and Humanities	11	19	30
	Business	23	38	61
	Sciences	25	53	78
Number of years served	1-4	14	8	22
	4-8	35	46	81
	8-12	8	49	57
	>12	2	4	6

Source: Field survey, 2023

Attitude of faculty members towards open access publishing

To find out the faculty members attitude towards open access publishing, the study sought to find out the number of publications faculty members publish within a year, the number of these publications published in open access journals, as well as the posture of faculty members towards open access publishing. First, as presented in Figure 1, the findings relative to the number of publication outputs of faculty members revealed that, of the167 faculty members who answered the questionnaire, 141(84.4%) were found to have published less than 5 publications in a year. Twenty-six (15.5%), however, indicated they had published 5 or more papers within a year.

Figure 1: Number of articles faculty members publish per year, N-167
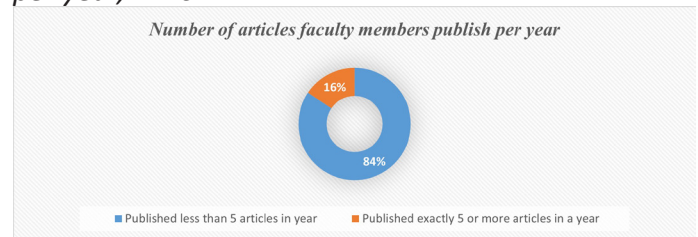
Source; Field Data, 2023

Secondly, to ensure that faculty members understood the requirements of publishing in open access, the respondents were asked to indicate the number of publications they had published in open access journals within a year. As depicted in Figure 2, it was discovered that 52(31.1%) of the faculty members had published less than 5 of their research papers via open access, whilst 115(69%) were found to have published 5 or more papers in open access journals.

Figure 2: Number of publications published in open access by faculty members per year. (N-167)
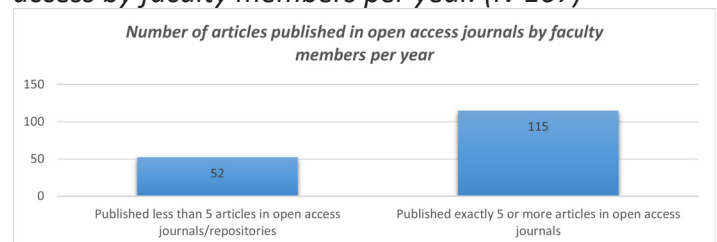
Source: Field Data, 2023

Lastly, to find out the position of faculty members towards open access journals, the respondents were asked to indicate their level of agreement or disagreement with five statement which were self-rated on a five-point Likert scale where 1=Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree. In general, the findings as presented in Table 2 depicts some level of positive attitude towards open access publishing by the respondents. Indeed, details of the findings in Table 2 revealed that majority of the respondents agreed with the general statement regarding their attitude towards open access journals with a mean ($\bar{x}$) value of 3.79 and standard deviation ("σ") of 0.852. Again, the findings also showed faculty members agreement with the statement relative to open access publishing as a favourable option ($\bar{x}$-3.80; "σ" -0.765) and having a positive influence on them ($\bar{x}$-4.15; "σ" -0.655). Open access as a current trend ($\bar{x}$-4.12; "σ" -0.760) was also agreed on by the faculty members, even though they neither agreed nor

disagreed (neutral) on whether open access journals are good just as conventional journals (x̄-2.34; "σ" -1.032).

Table 2. Attitude of faculty members towards open access journals (N=167)

Measurement statements	x̄	"σ"
Using open access journals is good just as or even better than conventional journals	3.86	0.727
It is much more a favourable option adopting and using open access journals in the university libraries	3.80	0.765
Using open access journals has a positive influence on me	4.15	0.655
It is valuable on me to use open access journals	3.01	0.7290
I think it is a trend to use open access journals	4.12	0.790
Overall x̄ and "σ"	**3.79**	**0.852**

Source: Field survey, 2023

x̄ =*Mean Score, σ=Standard deviation value*

Intentions to use open access publishing

To ascertain if faculty members had any intentions to use open access journals or repositories in the future, respondents were asked to show their level of agreement or disagreement with five statements which were self-rated on a five-point Likert scale where 1=Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree. , As shown in Table 3, the findings largely indicated a strong agreement with all statements use to measure the intentions of faculty members on the use of open access journals with an overall mean (x̄) value of 4.36 and a standard deviation ("σ") value of 0.6236. Specifically, majority of the faculty members strongly agree on the intention to use open access journals for research work (x̄-4.31; "σ" -0.656), and were willing to increase their occurrences of publishing in open access journals (x̄-4.34; "σ" -0.628). The respondents further affirmed their intention to recommend open access to their colleagues and students (x̄-4.44; "σ" -0.627) and confirmed their commitment to use open access in their class (x̄-4.34; "σ" -0.607). Lastly, the responses in Table 3 also shows the readiness of faculty members to

use open access journals to provide multi-approaches to data searching and research visibility, as majority of the respondents strongly agreed with the statement used to measure this assertion with a mean value of 4.39 and Standard deviation value of 0.600.

Table 3: faculty members' intentions to use open access journals (N=167)

Measurement statements	x̄	"σ"
I intend to use open access journals in my research work	4.31	0.656
I will increase my occurrences of publishing in open access journals	4.34	0.628
I will recommend open access journals to my colleagues and students	4.44	0.627
I would love to use open access journals in my class	4.34	0.607
I use open access journals to provide multi-approaches to data searching and research visibility	4.39	0.600
Overall x̄ and "σ"	**4.36**	**0.6236**

Source: Field survey, 2023

x̄ =*Mean Score, σ=Standard deviation value*

Improving the use of open access journals among faculty members in Ghana

In a bid to find out from faculty members the strategies that can be used to improve the usage of open access journals in Ghana, the respondents were asked to indicate their level of agreement or disagreement with five statement which were self-rated on a five-point Likert scale where 1=Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree. In general, the findings as presented in Table 4 shows strong agreement to all the statements used to measure how the use of open access journals among faculty members in Ghana can be improved. In fact, details of the findings in Table 4 revealed that all statements used recorded mean values higher than 4, an indication of faculty members affirmation of the need to enacting favourable institutional policies (x̄ - 4.67, "σ"-0.471), provision of necessary IT infrastructure (x̄-4.67, "σ"- 0.471), libraries forming alliances with local and international bodies, (x̄- 4.71; "σ" -0.480), depositing of scholarly work to digital repositories (x̄ - 4.29; "σ" -0.714), funding (x̄ - 4.71; "σ" -0.454) and

awareness creation (x̄- 4.7,1 "σ"-0.454) towards the enhancement of open access publishing.

Table 4. Improving the use of open access journals in technical university libraries in Ghana. (N=167)

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Measurement statements	x̄	"σ"
Enacting favourable institutional policies towards open access can enhance its adoption and use in Ghana	4.67	0.471
The provision of necessary IT infrastructure in Ghanaian academic libraries would help realize the open access dream in Ghana	4.67	0.471
Academic libraries alliances with other local and international bodies, will lead to fertile grounds for the proper adoption of open access journals	4.71	0.480
Faculty members should deposit scholarly work that they do not intend to publish via traditional means to digital repositories	4.29	0.714
Academic libraries should seek external funding to finance open access projects	4.71	0.454
Awareness creation by Ghanaian libraries would enhance library users' acceptance of OA journals and clear off the misconceptions about open access journals	4.71	0.454
Overall x̄ and "σ"	**4.63**	**0.51**

Source: Field survey, 2023

x̄ =*Mean Score*, σ=*Standard deviation*

Discussions of Findings

The findings of this research provide valuable information for understanding the current landscape of academic publishing in Ghana and offer valuable insights for policymakers, institutions, and individuals involved in fostering a culture of open access within the scholarly community. The formation of an attitude towards anything could be built from many reasons. Quality of a journals could be the deciding factor for some faculty members. If they perceive OA journals and repositories as good, they will use it and vice versa. A high perception of open access could also mean that open access is preferable, valuable and a trend to them. Previous research has validated the results of this investigation. In a similar study conducted at public universities in northeastern Nigeria, Okeezie & Idris (2022) found that faculty members had positive attitudes towards their participation in open access. These attitudes included strong support for the idea of open access at their institution, frequent deposit of their articles in institutional repositories, and confidence in using these resources to search for information. However, their studies also showed that some faculty members had a negative attitude towards open access journals due to a variety of difficulties, including impact factor issues, predatory publication, and the prestige of peer-reviewed journals. Also, consistent with the results of this research is Yang (2015). He hypothesised that faculty members at Texas A & M University (TAMU) libraries had a favourable attitude toward open access publications despite copyright and quality issues. Sheik (2017), who studied "Faculty knowledge, usage, and attitudes towards academic open access: A Pakistani viewpoint," came to similar conclusions. Sheik used Google forms to administer a carefully designed survey to gather information. His survey of 300 professors had a 20.53% response rate. According to the results of his investigation, most academics (80.1% of the sample) have a favourable view of OA principles and have favourable sentiments about them. Analogous to research by Dhanavandan and Tamizchelvan (2013), they found that 93.75 percent of faculty members were familiar with open access publications and had a favourable impression of them.

Like the earlier findings, Nobes, and Harris's (2019) research on open access in low- and middle-income countries: attitudes and experiences of researchers found that, while researchers had a generally positive view of open access journals and repositories. OA was considered a secondary consideration when choosing a publication venue due to the journal's international standing and prestige. It seems that even while professors have a favourable view of open access publishing, they still consider it to be of lower quality. These two researchers investigated

this topic in part because they felt open access would be especially useful for scientists working in the Global South. However, researchers from the Global North have mainly monopolised discussions about OA's public profile and reception.

In addition, Manjunatha (2011) agreed with the statement that professors had a generally favourable view of open publishing. The primary goal of his research was to examine how science professors at Indian universities feel about open access publishing. It turns out that almost half of all science professors in Indian universities were willing to release their work in open-access journals. In addition, 78 percent of the academics who participated in a study by Mammo & Ngulube (2015) titled "academics' use and attitude towards open access in selected higher learning institutions of Ethiopia" reported having a generally positive impression of open access journals and intending to use them in the future.

Nevertheless, Iton & Iton (2016) discovered that faculty members had little interest in using open access as a publishing mechanism, which runs counter to the findings of this study and other similar investigations. Although many professors are supportive of open access publishing, e-print servers, and institutional repositories, they were skeptical about the quality of work published in such venues and that was a major deterrent. Rowley et al. (2017), in their study titled "academic's behaviours and attitudes towards open access publishing in scholarly journals," reached a similar conclusion, arguing that faculty members do not have positive attitudes towards open access journals because they are uncertain of the quality of open access journals and the state of peer review in open access. It's possible that there are a number of factors at play here that explain why some studies found faculty members with a positive perception towards open access while other researchers reported negative attitude of faculty members towards it. Faculty members may have a negative attitude toward open access if they were previously unaware of its existence. Again, faculty members may have a negative attitude toward open access if they are unaware of the advantages of open journals. As described by the Technology Acceptance Model (TAM), a technology's likelihood of being used depends on several factors, including its perceived utility, ease of use, and the attitudes and beliefs of its potential users. Therefore, the results of this research are consistent with the tenets of TAM, as a favourable impression of the utility of open access journals is predictive of readers' actual engagement with these publications.

In line with the findings of this study, research shows that many faculty members have published and are willing to publish in open access journals. According to a study of over 7,600 American professors conducted by Woolston (2021), OA publishing formats have widespread approval especially among younger respondents. Shuva and Taisir (2016) claim that professors and researchers alike want to have their work published in freely available publications online. They do, however, favour open-access publications that have the same prestige and editorial standards as top-tier, subscription-only international journals. This demonstrates that, without sufficient steps to prevent the growth of predatory or low-quality publishers, the reputation of OA journals and OA resources might erode. Researchers in all fields would benefit from being made aware of the existence of quality OA publishers and having assistance in selecting journals with high editorial and access standards if the advocates of open access, library professionals, and national and international R&D organisations worked together to do so. Faculty members at Tanzanian health institutions have an interest in open access publishing for similar reasons advanced by Lwoga and Questier (2014), who postulated that these factors include "enabling environments," "extrinsic rewards" like professional recognition, "behavioural intention," and "individual characteristics" (professional rank, technical skills, and number of publications). In addition to mindset and open access culture, extraneous incentives had a role in shaping readers' intentions to engage with open access publications (academic incentive, accessibility, and preservation). In line with this view, Amponsah, Madukoma and Unegbu (2021) discovered that faculty members at Dartum University had a high level of knowledge of, satisfaction with, and motivation to use open access publications. As before, they found that teachers relied heavily on free access resources. On the other hand, they did highlight a few issues that might arise from open access being used.

According to Allahar & Sookram (2020), academics at the University of the West Indies, Trinidad and Tobago have not fully embraced open access as a publishing outlet due to academic resistance stemming from questions of acceptability and the existence of a system that gives greater recognition to the established subscription journals. Similarly, Xia (2010) discovered that researchers did not want to publish in open access journals because of concerns about their poor reputation, insufficient peer review, and predatory

publication.

There are a few possible explanations for the discrepancy between this study's results and those of others. Although open access has been around for a while, not all academics fully understand it. So, this limited knowledge of it will affect the perceptions faculty members form on it and their intentions to use it. In addition, the outcomes of studies conducted on a subject, such as open access, may differ depending on the location in which the studies were conducted. There is now a wide variety of open access and research funding regulations among continents, countries, and organisations. There is a significant possibility that research findings on the perception and intention to use will be consistent in locations whether these policies favour open access or closed journals.

Over the years, funding for information creation, processing, and distribution in Ghana has been woefully inadequate. (Asamoah, Akussah and Mensah, 2015; Borteye et al 2021). Kuchma (2011), who wrote about OA policies in developing and transition countries, reported that approximately 86% of researchers in Africa are convinced that open access publishing is advantageous to their research field because it directly improves scientific communication. This is consistent with the results of this study. Faculty members at Ghanaian technical university believe that open access is beneficial and can assist them in achieving their research objectives. However, misconceptions about open access, a lack of critical IT infrastructure for open access, policy concerns, and a lack of funding for OA are obstacles to its full utilization. To obtain the full benefits of open access, the following factors must be considered.

Rules and regulations are the governing principles in the things we do. Without rules and regulations, anarchy, lawlessness, and mayhem will prevail. For faculty members to clearly understand and use open access, there must clear and straight away policies governing its usage. Neither ATU nor KTU were found to have any codified institutional policies pertaining to open access. Approximately 12 years ago, The International Network for the Availability of Scientific Publications (INASP) and the Consortium of Academic and Research Libraries in Ghana (CARLIGH) pioneered Open Access (OA) policy issues in Ghana. According to the Ghana National Accreditation Board (NAB), 9 of the 204 colleges and universities listed on their website have fully functional public institutional repositories. Currently only five of these repositories are registered on the Open DOAR website, two of which are part of ROAR. It is also reported that only 4 universities in Ghana that have certified policies on institutional repositories. Ghanaian universities should prioritise open access by creating institutional repositories. For professors to fully accept open access, they need to subscribe to the DOAJ.

Secondly, for open access publishing to thrive effectively in Ghana, the needed IT infrastructure needs to be built. Even though open access is not technology, it is technology driven. Institutions, libraries, and individual academics need to procure the necessary devices which includes PCs, printers, scanners, strong internet connectivity, constant power supply to properly adopt and use open access. The findings of this study have indicated that, ATU and KTU do not have all the necessary IT equipment to facilitate the smooth adoption and usage of OA.

Practical Implications

The outcomes of this research will enrich the current body of information by adding contextual data on open access journals among the personnel of Ghana's Technical Universities. As at now, Ghana has no official policy in place to facilitate more widespread use of open access publications. As a result, policymakers and educational planners may utilise this study's results and suggestions to include open access information resources into library initiatives. The study's results will aid institutional heads in making decisions that will lead to expansion. This study's results may also help direct studies focusing on different ways to increase the number of people using open access publications.

Conclusions

The study on faculty members' perception of open access publishing in Ghana sheds light on the importance of making research output more accessible and visible. The findings of this study indicate a positive perception and growing intentions to use open access publishing among faculty members in Ghana due to their recognition of the potential benefits of open access in terms of knowledge sharing and dissemination. However, challenges such as limited resources, infrastructure, and institutional support pose significant barriers to fully embracing open access practices in academia. The role of libraries in Ghana appears crucial in facilitating open access initiatives, providing access to resources, and supporting faculty members in navigating the complexities of open

access publishing. Libraries serve as vital hubs for promoting open access awareness, training, and advocacy, ultimately fostering a culture openness and collaboration in scholarly communication. In summary, the study underscores the need for concerted efforts from faculty members and other policy makers to advance open access publishing in Ghana. By addressing infrastructure gaps, enhancing digital literacy skills, and fostering partnerships, the academic community in Ghana can harness the potential of open access to enhance research visibility, impact, and knowledge dissemination on a global scale.

Recommendations

Understanding the dynamics of how faculty members perceive open access publishing is essential for promoting and advancing scholarly communication. Through a comprehensive analysis of the data that was taken for the study, valuable recommendations have been made to enhance the integration of open access initiatives into academic institutions and maximize the support provided by libraries in facilitating the dissemination of research outputs. By exploring the perspectives of faculty members on this evolving landscape, potential strategies can be identified to bridge any existing gap between scholars, open access platforms ultimately contributing to the advancement of scholarship and the wider dissemination of knowledge. The following are some of the urgent steps that need to be taken to improve the usage of open access journals in Ghana.

Firstly, universities and higher learning institutions in Ghana should develop specific and detailed institutional policies on OA as well as subscribing to the Directory of Open Access Journals (DOAJ) in other to build the academic community's trust in open access and institutional repositories. Also, government of Ghana, management of higher learning institutions as a matter of urgency must put in place the necessary IT infrastructure to effectively support the adoption and usage of OA publishing. In addition to governing councils, managements of tertiary institutions in Ghana, should allocate more funding for academic libraries so that libraries will be able to invest in open access. Besides, higher learning institutions should form partnerships with library related organizations like International Federation of Library Associations and Institutions (IFLA), African Library and Information Associations and Institutions (AfLIA), Ghana Library Association (GLA), and the

Consortium of Academic and Research Libraries in Ghana (CARLIGH) among others. Lastly, continuous education on open access is critical. Knowing about the existence and usefulness of open access by faculty members will help clear their misconceptions about peer review process, impact factor, prestige of open access.

Areas for future studies

Future studies on the topic of faculty members' perceptions of open access publishing in Ghana could explore several areas to enhance understanding and shed more light on this all-important subject. Some of these include the following. Firstly, comparative studies: This would compare the perceptions and practices of faculty members across different disciplines, universities, or other regions within Ghana. This comparative approach can reveal variations based academic background, institutional context, or geographic location providing a more nuanced understanding of factors influencing attitudes towards open access publishing. Also, longitudinal studies would track changes faculty members' perceptions over time to observe any shifts or developments in their attitudes towards open access publishing. Lastly, policy analysis would investigate the role of institutional policies, funding structures, or national initiatives in promoting or hindering open access publishing among faculty members in Ghana. Understanding policy landscape can provide insights into broader institutional context that shapes scholarly communications practices.

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