"Publish or Perish," "Publish and Perish": The Nigerian Experience

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Introduction

The role of universities in the production of scientific knowledge and in shaping man's existence has a long history. Research has often been at the core of this knowledge production responsibility and activity of universities globally. Academic staff in universities (both research-centred and teaching-centred) are at the frontline of fulfilling this mandate. The primary duties of academic staff in universities revolve around three areas – teaching, research and community service. Many scholars have considered the teaching and research roles of academic staff in time past to be highly correlated (Daumiller & Dresel, 2020; Galbraith & Merrill, 2012). This suggests that staff that are good researchers are also good at teaching or vice versa. However, other studies provided counter-evidence of no (significant) positive linear relationship between research productivity and teaching (Cadez et al., 2017; Hattie & Marsh, 1996). This relationship gap between these two crucial functions of academic staff has made scholars seek new ways in which the link might be strengthened for the good of academia (Flores, 2018).

Given these three statutory mandates, a practical evaluation of academic staff should be along these lines as they climb their career trajectory. Unfortunately, the assessment practices in academia have often favoured the research component (Cadez et al., 2017) over the other two aspects. Thus, academic staff performance assessment in universities has always been skewed toward research measures, and this trend seems to be intensifying (Bassey & Owan, 2018; ter Bogt & Scapens, 2012). Numerous studies indicate that institutions vying for high ratings/recognition and research grants have used techniques such as hiring and compensating scholars with prestigious publications or the potential to publish in well-respected venues (Owan & Owan, 2021; Ryazanova & Jaskiene, 2022). The research-based evaluation and reward system created a paradigm where academic staff must publish or perish. Many scholars are now using this system to gain roots or lend their voices to be recognised and avoid distorted career progress. This chapter elaborates on the concept of "publish or perish" and ushers us into the "publish and perish" based on the experience of Nigeria and lessons from other industrialised nations.

The concept of academic publishing

Academic publishing refers to the action taken by individuals or organisations to make scholarly materials publicly available. The research process is not complete and relevant until research results are made available to the public through publication (Owan et al., 2021). The essence of any scholarly venture is to create knowledge or modify existing knowledge. Knowledge cannot be said to have been created if the scholarly output is stored on a personal computer accessible only to the author(s). Through publication, other scholars or the general public become aware of the finished product of a scholarly venture. Scientific publications are the lifeblood of science because they serve as fertilisers for other scientists to think (Clapham, 2005). New hypotheses are generated, rebutted, or verified by publishing new information in the scientific community. In academic settings, the number of publications a person has to their name is commonly used as a proxy for their level of career success.

Nevertheless, writing a post and sharing it on a blog or social media platform may be seen as a form of publication, but such does not qualify as an academic publication. Any material considered an academic

publication must have passed through a process. These include initiating the idea, drafting the idea into a work plan, following the work plan to produce the desired results, preparing the report, and locating an approved outlet to publish the work. Usually, works submitted to publishers undergo a thorough editorial screening and peer review before they are either accepted, revised or rejected from being published. Once it is published, it becomes publicly available for consumption. Scholarly materials can be published as theses, dissertations, research or review articles, books, conference proceedings, and encyclopedias. In modern-day, academic publishing can take print and electronic forms, or both can be used concurrently.

Publishing houses disseminated academic works for decades, mainly through a subscription-based structure or as a membership benefit in cooperation with a group or organisation (Glick, 2016). Usually, access to papers published in subscription-based journals is limited to subscribers for up to a year. However, the Open Access (OA) model has challenged the subscription-based business model, requiring published scientific/scholarly materials to be made publicly accessible to everyone. As a result, many gold OA journals have emerged that impose an article-processing charge (APC) or a publishing fee that an author pays to promote complete visibility of the work(s). Articles are made available to the public immediately and at no charge other than those covered by the author(s) or funding agencies. Diamond OA journals are also available, making research works freely accessible to everyone without APC. Nevertheless, there are hybrid journals in which papers are published behind a paywall without charging the author, but the articles may be rendered open access if the author pays a premium. Under the hybrid model, authors can decide whether to publish open access or closed access during the production stage or sometimes during submission.

Academic publishing is unique from other industries or markets because two of its core services or inputs (articles and peer review) are offered for free. Consequently, publishers are at the receiving end – owning the copyright and earning from individual and institutional subscriptions. This makes rich publishing houses richer as the number of papers received freely increases with each passing day. One of the reasons for the skewness in the publication market to the publishers' direction is the desperation among scholars to keep producing scientific papers for their career growth. Scholars without a track record of academic publications are considered lazy and unworthy of promotion regardless of their contributions to the two other areas of their engagements (teaching and community service). Scientists who labour for years without submitting their findings to a peer-reviewed publication are also part of the issue. Therefore, scholars either publish or perish.

The "Publish or perish" culture

Coolidge invented the term "Publish or Perish" in 1932, and today it is a terrible reality (Coolidge, 1932). "Publish or perish" is a longstanding phrase used to explain a system where researchers, faculty or scholars are appraised by how many publications they can produce over time. To publish means meeting the stipulated requirements, while to perish means stagnating for not meeting the requirements. In higher education institutions, the faculty's ability to publish according to institutional prescriptions is considered productivity and deserving of grants, promotion or other benefits. On the other side of the divide, staff career growth remains stunted until such publication criteria are met. This system is like the scientific management theory (Taylor, 1911), advocating for high pay for success and a loss in case of failure.

There are several reasons why engaging in research without publication constitutes an academic offence worthy of punishment. First, it is harsh, but not unreasonable, to assume that individuals who do not publish their work are not doing it. Secondly, when scholars engage in research without publication, they have not created any valuable knowledge for the scientific or research community. Another reason why most scholars research without publishing is overzealousness to provide answers to all the questions surrounding a research problem. Consequently, these researchers go to the field and collect data to address some questions, and as soon as other questions emerge from the gaps of the previously intended ones, they go back to the field again to answer the new questions. As a result, time is wasted always trying to answer emerging questions, especially in cases where other researchers can publish similar findings before them. No research can ever address all the questions bordering on a problem at a time. Unpublished knowledge has little value to managers and other scientists and hence accomplishes nothing to help conserve the organism, environment, events or phenomena that we study.

The publish or perish syndrome has created various issues due to its effect. For example, some researchers are more concerned about publishing their work in a journal than doing it correctly. Due to the focus on publication, researchers spend less time building meaningful research agendas and more time trying to publish everything they can manage. Teaching undergraduate and postgraduate students is hampered by academic pressure to publish or perish. It is widespread for academics to prioritise research above teaching when the two conflict. It has become so severe that hiring boards of higher education institutions are giving less attention to the

teaching abilities of applicants during recruitment; instead, the emphasis is often solely on candidates' publication lists.

This pressure to publish more has led to unethical activities and wasted research. Many new journals have sprung up due to the increasing number of articles produced. It is unarguable that the concept of "predatory publishing" followed the publish or perish syndrome. Predatory publishing refers to rapid publications in journals with dubious characters. In other words, predatory journals are outlets that take advantage of authors' desire to publish almost anything quickly to avoid missing promotion (perishing), as long as the authors can pay the article processing charges. These journals are illegitimate and fraudulent since they do not uphold academic standards such as peer-reviewing submitted manuscripts. Admittedly, progress in science and academia cannot be made without research, and its significance in enhancing knowledge is undeniable. However, it is also vital that conducted research directly impacts the community. Unfortunately, the vast majority of studies published in academic journals are only to enhance the CVs of the researchers who conducted them but have little or no practical value to society or humanity.

Other unethical practices of the "publish or perish" system include salami slicing, plagiarism, republishing previously published work (self-plagiarism), deception, ghost authorship, data fabrication, data falsification and copyright infringement (Bassey & Owan, 2019). Salami slicing is the practice of splitting research results from a given project into tiny or fragmented portions so that each fragment can be published as a separate paper (to increase the number of publications) against having one rich research publication. Some researchers argue that occasionally some studies are too large to be published as a single piece (Beaufils & Karlsson, 2013). However, while the argument is valid, over slicing research into fragmented parts is undeniably a bad practice for academia. For example, it is common to find scholars split a master's or doctoral thesis with, say, eight objectives into eight separate papers (with each objective standing as a paper) when the output of that thesis can be published richly as one or at most two papers. Ghostwriters have also emerged to produce papers for lazy authors either for a fee or compensation. They are called ghostwriters because they are often not listed as authors for the paper they produce.

Research Evaluation: The metric-based system and the game of numbers

Metrics are increasingly being used in research assessment, and expert opinion is becoming less relevant. Organisations increasingly use assessment methods without proper guidance and interpretation, putting the system in danger. This has led to a situation where the methods intended to improve scientific quality may be endangering it (Hicks et al., 2015). The Journal Impact Factor (JIF) is commonly regarded as the critical metric to assess individuals' and organisations' scientific output. The JIF was initially developed to assist libraries in identifying journals to buy, not as a measure of an article's scientific quality. With this in mind, it is vital to recognise the JIF's well-documented shortcomings as a tool for assessing research (Owan & Owan, 2021; Vanclay, 2012).

InCites (using Web of Science) and SciVal (using Scopus) are two web-based tools that make it easy to evaluate the productivity and effect of different institutions' research, as well as "publish or perish" software that uses Google Scholar to analyse individual citation profiles (Harzing, 2010). Professor Jorge Hirsch introduced the h-index in 2005, which has since become a widely used tool for researchers to track their citations and measure productivity. Furthermore, altmetrics and F100Prime are other new metrics indicating the number of times an article has been mentioned on social media or social discussion. In 2016, Elsevier launched the citescore, a new metric that works the same way as the JIF but is calculated for three years and based on works indexed in the Scopus database. Google Scholar also has the i-10 index, which indicates the number of articles in an author's profile with ten or more citations. The Eigenfactor score was also introduced as an alternative to the JIF owing to the criticism levelled against the latter (see Owan & Owan, 2021).

All these metrics and many more not mentioned are used to varying degrees in the evaluation of scholars. Among them are the JIF and h-index, which have gained widespread acceptance globally. Heavy reliance on these metrics in evaluation decisions by funding agencies or institutions has made the present-day academia to be a "game of numbers." What then does the number say beyond being a mere discrete or continuous value? Scientists and research administrators have observed growing concern as indices for evaluating scientific achievement have been misused widely. For instance, several institutions use h-index thresholds and the number of papers published in "high-impact" journals to determine promotion opportunities for faculty.

Researchers' CVs have become a place to brag about these scores. It is common for postgraduate students to be asked to publish in high-impact journals and get external funding before they graduate. For example, several institutions in China and Scandinavia provide scholars awards for publications in journals with an impact factor

of 15 or more, or they utilise 'performance resources' to distribute funds based on individual impact ratings (Shao & Shen, 2011). Since academia has become a game of numbers, pressuring people to acquire higher numerical values, limited information is provided about the output quality. For instance, paying someone because he published in a journal with an impact factor of 15 does not mean that the journal is thrice better than one with an impact factor of 5. Furthermore, it does not also mean that the article published in the high impact journal is of better quality (in terms of knowledge created, problem solved or novelty) than the one in a so-called "low impact journal."

As a result, the San Francisco declaration of 2012 recommends that decision-making for research funding, appointment and promotion should not be based on journal impact factors or other journal-based measures. Instead, these factors should be evaluated independently of the venue in which a study is published. Finally, researchers should take advantage of new online publishing tools (for example, removing excessive restrictions on the number of words, figures, and references in papers and experimenting with new markers of relevance and effect). Furthermore, the Leiden manifesto (Hicks et al., 2015) offered ten principles to shape the objective use of metrics in evaluating researchers by funding agencies, institutions or researchers themselves. These include (1) supporting metrics with the use of experts judgment; (2) measuring research performance in line with the institution's mission; (3) protecting excellence in relevant local research; (4) promoting transparency, openness and simplicity in research data collection and analysis; (5) allowing those assessed to verify the data used for their evaluation; (6) using field-normalised indicators to account for disparities in publication output among scholars of the different field; (7) reading and evaluating scholarly works for quality instead of relying on metrics; (8) avoiding false precision; (9) using a broad spectrum of metrics and databases to account for fluctuations and gaming; (10) regularly scrutinising and updating assessment indicators.

Research assessment may play a significant role in the progress of science and its connections with society if it adheres to these ten criteria. It is possible to obtain and comprehend critical information that would be impossible to gather or grasp through human knowledge using research metrics. Nonetheless, this quantitative data must not be permitted to become the aim itself. The most excellent conclusions can be made by combining quantifiable metrics with an awareness of the research's purpose and nature. In order to be objective, quantitative and qualitative proof should be used.

"Publish and perish": Matters arising from the Nigerian experience

Academics are well aware of the adage "publish or perish," yet some have published just to perish. The phrase "publish and perish" is relatively new and gradually emerging. One may be inquisitive to ask – can one publish and still perish? Why will I perish when I have so many articles in different peer-reviewed journals? The truth is that "publish and perish" is gradually becoming the harsh reality or the new normal. You can publish and still perish, and you are probably worse than the person who perished for refusing to publish in the first place. Just as politicians are increasingly aware that giving their most acceptable interview to an obscure, low-circulation small-town newspaper may lose them an election, academics are more conscious that merely publishing is not enough (Nyamnjoh, 2004). Numerous academic and otherwise institutions exist to guarantee that only a select few get acknowledged, even among those with many publications.

Let us demystify the concept of "publish and perish" to understand its meaning and the circumstances where this manifests itself. By definition, "publish and perish" can be viewed as a situation in which researchers, scholars and scientists are still suffering the fate of those who refused to publish, having enriched their CVs with a track record of publications. It is a new culture where the growth of some scholars has been hindered, and their progress truncated even after making efforts to publish scholarly materials. Numerous variables guarantee that scholars and authors perish, even after publication. These include mediocre quality, obscurity, distance, or the publisher's bad reputation (Nyamnjoh, 2004). Earlier in this chapter, we discussed the game of numbers, where metrics are now virtually used in almost all facets of academic evaluation. This section will discuss how the game of numbers is gradually ushering us into the "publish and perish" paradigm.

The concept of "publish and perish" can be viewed from the perspectives of authors, publishers, and institutions/evaluators. From the perspective of authors, the practice of subscribing to or patronising predatory journals is an effort in futility. Due to the desire to publish quickly to avoid missing promotion timelines, most academics continue to patronage these vain outlets directly, indirectly, intentionally or unintentionally. The proliferation of predatory journals is not merely a waste of resources; it may have far-reaching effects on knowledge production, including corrupting science/other fields and causing reputational harm to individual academics. Most unsuspecting authors have invested heavily, especially those in developing nations (with limited funding opportunities), publishing in predatory journals, only to fail promotion or other consequences they were

trying to avoid. Most of these scholars realise the consequences of their actions after failing promotion, losing out on grant applications or other opportunities even after publication. This constitutes a more prominent form of perishing than not publishing. Unlike the former (where you perish for not doing something or not doing as much), you are still punished for doing it as much but with the wrong entity.

From publishers' perspective, the closed-access model of publication (earlier discussed) creates a system of "publish and perish". Researchers attempting to meet the academic criteria of publication will inevitably perish because they are forced to choose between compromising relevance for recognition or sacrificing relevance for recognition. The publishing industry's political economics precludes them from accomplishing these ideals concurrently. Since authors need to publish for their career growth, under the closed-access model, it is evident that scholars are merely used as work tools for publishers who take full ownership of their intellectual properties. This is a system where academics suffer to secure funding for research. They go all out to perform laboratory experiments or field surveys with associated risks. After that, data are collected, analysed, interpreted, and research reports prepared and submitted to journals. These journals will still use other academics to perform free peer reviews before publishing them. The published works are then put behind paywalls, with publishers taking full copyright of the materials. The researchers and their institutions will then be required to subscribe (by paying a prescribed fee usually decided by the publishers) before accessing the work produced by them. What other form of oppression is more than this? The joy of the academics is that they have added one more publication to their CV while the publishers are making billions of dollars from such products.

It constitutes "publish and perish" because the authors do not control how the work is used, who uses it and do not get anything in return for their labour. Even the authors have certain restrictions in using the work or risk facing sanctions from the publishers. It is like giving birth to children and someone else taking them away and deciding how and when they visit you or dictate for you (the parents) what errands to engage them with, simply because you have been cut off. In developing nations such as Nigeria, the matter is even worse due to limited funding opportunities. Scholars use their poorly and inconsistently paid salaries to pursue research endeavours, only to publish the same, and another entity is getting richer. This way, scholars are made to publish and perish just to get more funding, rewards, promotion and recognition to continue publishing and perishing. Today, journal editors complain of difficulty getting scholars to peer review articles, increasing the average processing time. On the other hand, reviewers are also complaining about being used as toys by publishers and are agitating for payment per peer-reviewed article. We should not be surprised that getting published in reputable journals might take several years in the future than is currently seen because scientists, researchers, and scholars are not regarded and constantly threaten to perish at the slightest opportunity. Perhaps academics are scientific/research enslaved people because they are in a system that does not reward the hard work of those deserving of it.

The third perspective is that of evaluators, funding agencies and institutions. It is now common for institutions and funding agencies to set very high publication demands for academics or researchers due to institutional politics and gaming. As earlier discussed, the choice of whom to promote or give grants to is now sole dependent on numbers. Most institutions are doing all within their powers to increase their standing in national and global rankings due to the competition created by ranking bodies. Due to this drive, many institutions keep modifying their appraisal conditions beyond the terms stated in the conditions of service. Today, in many universities, scholars are now considered for promotion based on the number of publications in Q1 or Q2 journals in Journal citation rank (Web of Science) or Scimago (Scopus) just to promote the reputation of their universities and improve their standing in ranking tables. In other contexts, authors are assessed based on their Google Scholar or Scopus h-index or the impact factor ratings of the journals hosting their papers.

The trend seems to be comparatively new in Nigeria, but we already feel the heat. Some institutions in Africa have toed towards the game of numbers. For instance, several academics have missed promotion and some more than once, simply because a ratio of their publications is not published in journals with specific characteristics. Nevertheless, most academics in Nigeria have incurred enormous and unquantifiable costs in time and monetary terms for publishing to avoid perishing. Sadly, most are still perishing, having worked hard to avoid it due to the dynamics and fluctuations in the assessment culture of many Nigerian research and academic institutions.

Today emphasis is placed on African scholars to publish in Web of Science, and Scopus indexed journals that the West considers the mainstream producers of scientific knowledge. Due to this drive, Nigerian authors hoping to publish with reputable Western research publishers have had their attempts thwarted by Africa's longstanding and persistent Western academic denigration. Many international publishers are more likely to hold African authors to the same intellectual and literary standards as those in the West, which are seen as the pinnacle

of culture and intellectualism (Nyamnjoh, 2004). In order to avoid extinction as a researcher, it is frequently necessary to cultivate an insensitivity to topics, viewpoints, and methods that elevate Africans, their experiences, values, and goals. It is rare for publishing houses that follow this paradigm to tolerate conflicting viewpoints and other intellectual stimulation and challenge forms. African researchers and authors also have a daunting job challenging such entrenched interests and hidden objectives because we depend on the same institutions that devalue Africa's culture for funding, research dissemination and creativity (Nyamnjoh, 2004).

As a result, getting published or read is no more a consequence of how vital a researcher or scholarly work is to comprehending the African condition but how well it conforms to western standards and expectations. What follows is a high rate of rejection for articles submitted by African scholars because our needs and priorities are misaligned with those of industrialised nations. Sadly, African scholars are persistently pushed by African institutions to patronise foreign publishers and databases when we can set ours up. The African Journals Online (AJOL), a South African company, hosts over 200 journals spread across different African countries. How many of our institutions consider such journals reputable? Today, it is unarguable that many of our institution-based journals that once met the academic needs of Nigerians are dying slowly with each passing day. Of course, who wants to publish and perish? Scholars are now more interested in international journals indexed in western databases.

Navigating the boat towards "publish and flourish": A survival advice
The "publish or perish" system has eaten so much into the fabric of academia that academics have missed out on the benefits attached to publishing. In recent times, many academics stopped researching and contributing to knowledge once they became Professors/tenured. This tells us that such scholars only published to advance their careers in the past. Being a researcher or a scholar, in our view, should be a lifestyle, not something you do because of pressure for promotion. In a review conducted by Lambovska and Todorova (2021), several factors were identified as to why scholars publish in Web of Science and Scopus (to flourish). Ranked in descending order of magnitude, these include collaboration and co-authorship, promotion/tenure, financial asset, publish or perish pressure reduction, reputation, funding acquisition, contribution to society, personal development, working conditions, contribution to science, job satisfaction, challenging/creative work and competing.

In line with some of the reasons advanced above, it can be seen that aiming to flourish as a researcher is desirable and rewarding. It explains why some scholars are remembered even after passing on due to the legacies they left behind. Today we celebrate scholars annually when they win noble prizes for their outstanding works and contributions. While the intention is not to create competition among scholars, reasoning along these lines can challenge academics to produce quality research and not just numbers. After all, the world's most significant innovations started as a product of just one research project. This means that we do not need quantity to flourish as scholars but quality and impact. Impact, in this case, is not measured by citation counts or other metrics but by the problem the research can address, the innovation it can create, and to some extent, the transformation it brings to the life of the researcher and society.

It is time we shifted the paradigm from the "game of numbers" to the "game of impact." Even if this raises a form of competition, such is likely to be healthy or beneficial for science and academia as innovations will unfold more rapidly. Funding agencies will also benefit from the new model by promoting marginal social productivity (MSP) and the reduction of incremental capital-output ratio (ICOR), usually arising from investment in wasteful ventures or unimpactful research projects. Another benefit that will follow the publish and flourish model is that the research and industry gap in Nigeria and other developing nations will be bridged. Because of the impactful nature of research churned out of universities and institutions, the industrial and government sectors will have no reason but to collaborate, creating a triple helix system.

Under the triple helix system, the government sector provides funds, incentives and resources to universities and research institutions to conduct quality research. These institutions produce the research and disseminate findings to the government and industry for decision-making, action and implementation. The industrial sector may also use such discoveries to produce new products that can be marketed domestically and exported to attract foreign inflows (which increases our GDP and improves our balance of payment position). Some of the products produced by the industrial sector can be further reused as inputs by researchers for further research production, and the cycle continues. Any nation seeking rapid economic advancement must think in this direction because the triple helix model is working for countries like China (Balzer & Askonas, 2016; Cheng et al., 2019), Russia (Egorov et al., 2019), the United States (Scalia et al., 2018) and many others. Today, attention is gradually shifting from the government-industry-university relations to include a fourth helix – the public

(Leydesdorff & Etzkowitz, 2003). This means that the public is also at the receiving end of quality research produced by universities.

Indicators of a flourishing researcher/research institution

1. Researchers and institutions that are flourishing are globally recognised and are considered prestigious or reputable.
2. The number of grants secured is a critical indicator of a flourishing researcher or institution. Research funding is perhaps the most crucial quantitative measure of research achievement for a well-established scholar.
3. Apart from journal articles, successful scholars diversify into writing other forms of scholarly publications such as books, monographs, and magazines for knowledge sharing, popularity and income generation.
4. The number of endorsements from high-profile organisations for academic achievements from a third-party perspective.
5. Flourishing academics produce research works that impact knowledge creation, problem-solving, and further research development.
6. The number of essential patents owned by a researcher or an institution is a fundamental determinant of research success. Patents serve as evidence of your inventiveness and commercial value.
7. The number of publications in high impact/well-respected Journals. Publishing in respectable, peer-reviewed journals is an excellent way to demonstrate your research success. This indicates how much one could navigate through desk rejection, revise and resubmit, attend to reviewers and overcome other rigorous processes.
8. Flourishing researchers have a stable tenure/career track. They are not under pressure to publish, yet they do not fail any promotion.
9. Flourishing researchers have a vast network of collaborators, exposing them to several opportunities for funding, and resources, among others.
10. A successful researcher has quality publications and high metric scores (such as reads, citations, high h-index and i-10 index).

Recommendation

1. Well established and seasoned scholars and academics should engage more in mentoring younger scholars for two-way productivity. This will help the younger scholars to build a robust research muscle for a successful career track.
2. It is essential to strengthening effective research collaboration at individual and institutional levels. Collaboration is crucial because no one is self-sufficient or a reservoir of knowledge. Through collaboration, a weakness of a scholar or institution is supplemented with the strength of another.
3. Strengthening multi-disciplinary, trans-disciplinary and inter-disciplinary research ties at the individual level. Collaboration creates a platform for interdisciplinary or inter-institutional research engagements, which are more likely to be rich due to the clash of different methods, epistemology, theories and instruments.
4. Universities/research institutions should support their scholars using internally generated revenue (IGR). IGR can be used to support scholars through small grant allocations, subscriptions to databases (such as WoS and Scopus) for access to indexed publications, paying for open access publications and supporting them for international conferences, among others.
5. Scholars should practice the art of working on multiple research projects simultaneously. This would increase productivity and promote the engagement of many early career researchers (mentees).
6. Science and academia should switch entirely to the open-access model. While the model has its challenges, its broad adoption will benefit researchers, institutions, and funding agencies.
7. For those interested in boosting their metrics, it is also recommended that preprint servers be used for the early dissemination of scholarly works prior to publication. Besides citations, preprints could enable the timely sharing of novel works that can be very useful while waiting for the review process to be completed.

Conclusion

This chapter concludes that publication is one of three core mandates of academic staff. Therefore, the emphasis on growth should not be solely based on one aspect. Research engagements, teaching, and community service impact should be equal in staff appraisal for promotion. Research impact is significant and should not be measured solely based on metrics. An author can be widely cited because people must perform literature reviews when writing scholarly materials, not because the work is impactful. The work may have been helpful to the

scholar reviewing the literature and nothing beyond that. Every scholar should strive to become a successful researcher that can leave a mark regardless of how much he can publish.

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