

# Publications, citations and impact factors

## Myth and reality

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This article discusses the role of university academics as researchers. In present-day society which touts instant gratification, the primary role of a university is being undermined. In Malaysia, academics no longer teach and research as they please but are 'guided' by government agencies and influenced by the priorities of funding agencies. One of the components of academic freedom is the freedom to publish. Academics publish research that pushes the boundaries of knowledge. They choose journals in which their articles will be peer-reviewed, published and read by the communities of interest. However, lately many academics tend to publish in journals based on rankings, in journals reputed to have higher impact than others. Often young academics are puzzled whether they should publish where it matters or where it would quickly boost the key performance indicators (KPIs) set by the university. This article highlights some of these struggles in modern academia and exposes several examples of academic misconduct.

*Keywords: role of academics, academic freedom, journal ranking, academic misconduct*

## Introduction

Academics are pillars of educational endeavour and agents of knowledge discovery and dissemination. Some academics only conduct research, while others busy themselves solely with teaching. Still others have mastered the delicate art of balancing both teaching and research. In a nutshell, an academic's value lies not merely in fulfilling the role of a teacher, but also in active discovery and disseminating knowledge through research.

Let us examine the roles of the teacher and contrast it with a lecturer who conducts research. A teacher uses a syllabus with textbooks as guides to teach and convey knowledge to students, aiming to ensure students' comprehension of the subject matter. A teacher's primary

focus and concern would be students' learning. For lecturers and professors, their main focus is often their field of expertise that they research and teach. Lecturers and professors seek to invigorate students' thinking on their subject matter, by constantly questioning the status quo and providing new perspectives to a subject matter through research.

Their focus would be discovering new knowledge and contributing to the greater body of knowledge. In terms of knowledge creation, researchers play a pivotal role in the academy in their systematic attempt to conduct research to provide answers to important questions. This is in line with the purpose of research which aims to enhance knowledge and generate new applications from newly-discovered knowledge (Sulo *et al.*, 2012). The danger is that the wheel might be reinvented. A

researcher's worst nightmare is to get stuck in the middle of their research, only to discover that the same work has already been done (Noll, 1997). To avoid this, researchers need to be constantly updated with the changes to the existing body of knowledge and new knowledge in their field of research.

## Academic freedom

In the process of knowledge creation and dissemination, academics crave academic freedom. Academic freedom refers to the independence and autonomy given to academics to teach and conduct research in any capacity without being constrained by rules and regulations, thereby allowing them to discover and disseminate newly-found ideas regardless of their sensitivity (Robinson & Moulton, 2001). Additionally, scholars require academic freedom which allows them to work and research without restraint and/or interference by other individuals, authorities and the government (Robinson & Moulton, 2001). In having this form of freedom, academics may effectively focus on research which can generate, nurture and exchange ideas and knowledge more freely, without being confined to rules and regulations that might limit the scope of their work. To conduct research free from external influences and be able to teach and share knowledge freely without any form of control, as well as having the right to choose problems for investigation is the traditional view of academic freedom (Polanyi, 1998).

Scholars and researchers should be granted the right to conduct research without interference or suppression in accordance with their professional principles of intellectual rigour, scientific inquiry and research ethics. They should also have the right to publish and communicate the conclusions of the research which they have authored or co-authored.

Aby & Kuhn (2000) stipulated that academic freedom encourages the exploration of new ideas, the testing of received wisdom and, ultimately, the search for truth; it is the *sine qua non* of free inquiry. This resonates with the very notion of education in the words of John F. Kennedy; 'the goal of education is the advancement of knowledge and the dissemination of truth' (Kennedy, 1956). In the past, threats to academic freedom, and subsequently to freedom of intellectual enquiry and expression, have originated from individuals and groups within and outside the university, who wield their power to prevent the expression of opinions contrary to their own.

Academic freedom is essential in higher education institutions if these organisations are to make their proper

contribution to the common good, which depends on the free search for truth and its free exposition. It is this which justifies academic freedom, not the interests of the individual academic or even the interests of a university. Ideally, academic freedom functions to fulfil the two main roles of higher education, which have been defined by Franke (2011, p. 2-3) as the advancement of 'knowledge through research and creativity' and the education of students in such a manner that they are able to 'develop their own independence of mind'.

In line with this, academics should be given the freedom to conduct research, publish, share and explore ideas, in addition to maintaining the quality of their respective institutions (Herther, 2009), uninhibited by numbers or rankings or tenure. Tenure is the permanency of employment up to the age of retirement which ensures that academics will not be dismissed based on their freedom to publish in their areas of interest. As academics, they should be able to conduct research in their preferred area (Wicks, 2004) and advance knowledge where they see fit without being worried that their contract will not be renewed just because they are not publishing in line with the university's rigid research map.

Engaging in research enhances one's personal development and provides new knowledge for teaching purposes. Teachers or educators active in research will acquire skills and knowledge and enhance their students' learning experience by delivering quality teaching sessions and encouraging knowledge sharing among students (Thomas & Harris, 2000; Nathan *et al.*, 2017). By cutting down on teaching hours and offering more research grants, institutions of higher learning can encourage academics to engage in active and continuous research (Katz & Coleman, 2001). However, academics should be given leeway (Franke, 2011) in finding the delicate balance between teaching and research, and in choosing areas of investigative research without compromising on teaching and research standards merely to fulfil the goals of funding agents or market trends.

Academic freedom is inseparable from a university's role as the critic and conscience of a society, because academic freedom can only exist within an environment that encourages creativity, radical ideas and criticism of the status quo (Jones, Galvin & Woodhouse, 2000). Here the university ought not to focus its research directions merely towards meeting industry needs; rather it should look at the holistic role of the university towards the entire spectrum of society (Nathan, Tan & Shawkataly (2013).

## Publishing and journal impact factors

According to Rowley and Slack (2000), the main reason academics publish is to allow more people to access their work and provide a platform to share new findings or ideas. If there is no restriction on scholarly property rights or confidentiality, and the principal agrees, the researcher is free to publish. Publishing as a new researcher provides one with a better sense of personal achievement, improves one's writing and communication skills, contributes to a better resumé and garners recognition. During the production of a piece for publication, most scholars fall back on journal articles, monographs and conference papers that have been published by others as their sources of reference (Turk, 2008), commonly referred to as the literature review. The number of publications that a researcher has accomplished also adds credence in terms of fulfilling the criteria for future recruitment (Gumpenberger, Wieland & Gorraiz, 2012).

In highlighting the importance of research publications, Yuyenyongwatana and Carraher (2008) emphasised (i) the pursuit of knowledge; (ii) the extrinsic rewards to those publishing; and (iii) the increase in the prestige of the institution within which the publishing faculty is affiliated. According to Knight and Steinbach (2008), scholars across disciplines have substantial common interests with respect to journal publishing, thereby strengthening the ties that unite academics seeking to publish, which inadvertently lead to a potentially high likelihood of future cross-disciplinary research, and a correspondingly robust environment for an intellectual exchange of information.

In academia, productivity is defined by the number of research endeavours conducted over a specific period, while the quality of research, which cannot be measured tangibly, is dependent on peer or expert reviews. Publication productivity often serves as a requirement for consideration in the extension of tenure, promotion, and academic merit pay. Gomez-Mejia and Balkin (1992) reported the most significant determinant of differences in academic pay levels at institutions granting both doctorate and non-doctorate degrees, was publication in top-tier journals.

In terms of quality, Engemann and Wall (2009) stipulated that a journal ranking should not be assumed to be a definitive indicator of the relative quality of individual papers within the journal, and that any ranking should be handled with a great deal of care when being used for decision making. For all journals, a rank is the outcome of many judgment calls, be it on the actual set of journals

to consider, the age of citations, permissible articles, or the question of including self-citations; hence, there is no such thing as "the" correct journal. Ultimately researchers should publish their work in relevant journals where it matters by considering topic relevance and readership.

Apart from ranking, the quality of research should not be solely dependent on impact, defined by Herther (2009) and Gumpenberger *et al.* (2012) to mean the number of times a researcher's work has been cited by others. The number of publications and citations received constitute what is known as the impact factor. Academics are considered influential by their quantity of publications and also the fact that their work is frequently cited by others in the field. The popular notion is that if one's work is not cited by others, the research is not attractive enough or has not produced new knowledge, thus having less impact. A piece of literature that has gained a higher number of citations tends to have a higher impact over others (Zhang, Su & Deng, 2008). From a holistic perspective however, many other elements are just as important, and they include the reputation of the journal's editors and review board, researchers' insights, rankings, the impact factor, colleagues' opinions, the journal's longevity, rate of acceptance, and circulation number, all of which are pertinent factors which may affect number of citations and impact factor (Bontis & Serenko, 2009).

In addition to meeting the requirements of quantity and quality, it is well-known that academics worldwide face pressure to publish in prestigious English language journals, with the journal impact factor being the most widely recognised indicator of journal prestige and influence. The impact factor was designed to assess journals indexed by the Web of Knowledge, and it measures how often an article in a journal has been cited on average per year. For journals within the same subject category, the factor indicates the journal's relative influence or impact. The impact factor reflects average citation rates for articles; a high impact factor shows that a journal is important in its field. Based on this, many scholars select journals in which they hope to publish.

According to Editage Insights (2013), although the journal's impact factor serves as a useful tool for the evaluation of journals, it must be used wisely. The selection of a journal for researchers to send their manuscripts should not rest solely on the impact factor, simply because some journals have a lower impact factor due to their narrow focus area, while other journals with broad focus areas tend to have a higher impact factor. As such, researchers should determine the quality of a journal using other indicators like Source Normalised Impact per

Paper (SNIP) and the Eigenfactor score (ES), to get a better idea of the journal's prestige and influence.

In light of the fact that research publications often add prestige and status to an institution (Kirkpatrick & Locke, 1992; Manning & Barrette, 2005), reputable institutions, especially research-oriented ones, often require their academics to publish in top-tier journals. This notion is compounded by Fogarty and Ravencroft (1999), who, in their examination of a population of accounting-based scholars with PhDs between 1986 and 1996, found a strong relationship between the willingness of academics to publish and the status of an institution.

The presence of the Internet is another element that has made its mark in the evolution of research publication culture, where researchers now have higher accessibility to journals via the online mode. Electronic journals, or

e-journals, provide a sense of efficiency in terms of mobility, ease in reading and publishing, saving time and cost, and reducing the barriers between researchers and readers (Rao, 2001). Thanks to the accessibility provided by the Internet, the traditional platform for research publications has made way for the presence

of open access journals in a range of disciplines. Open access journals enable free access to publications via the Internet using a "funding model" through which researchers bear no costs when downloading or printing research materials (Rowlands & Nicholas, 2005). In some cases, costs are borne by the authors themselves, usually via their employers or funding body, while in other instances, researchers themselves operate the open access journals funded by costs borne by their employers. Open access journals have certainly benefited academics, evidently seen in the increasing citations and impact factor, by providing them with a means to publish extensively due to the convenience now available, in contrast to traditional methods.

Another factor that spurs academics to publish was the introduction of the H-index in 2005 by J.E. Hirsch, which is a bibliometric measurement that takes into account the total importance of a researcher, measured by how often he or she gets cited. A scientist gets an H-index of N for their Nth paper when all their works are sorted from the highest to lowest cited (Hirsch, 2005). Hirsch suggest an H-Index of 20 as good, 40 as outstanding and 60 as

exceptional for a researcher who has been publishing for 20 years. Higher learning institutions are using this among many other metrics to help them in making tenure decisions, awarding grants and allocating research funds (Jacso, 2008).

In addition to the H-index, there is an indicator known as the g-index introduced by Leo Egghe (2006), which is an enhanced version of the H-index. This was followed by the contemporary h-index, known as the hc-index, introduced by Antonis Sidiropoulos, Dimitrios Katsaros, and Yannis Manolopoulos (2007), and finally the e-index introduced by Chun-Ting Zhang in 2009, all providing different tools to measure the impact factor and citations of a researcher (Sun & Wang, 2013).

Due to the strong correlation between peer judgments and citation frequencies, citations tend to be used as an

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indicator of quality and among other things, for benchmarking universities, scholarship and employment decisions, decisions regarding research funding, exploring research fields and identifying influential work and research trends. This prompts scholars and academics to engage more aggressively in doing research for the purpose

of gaining extrinsic rewards rather than for their own interest or for the sake of acquiring or disseminating new knowledge and to push the boundaries of knowledge in their field of specialisation. Academics also tend to write on current or hot topics in the hope of attracting other editors and reviewers, and increasing their publications (Stewart, 2008). However, as the H-index takes self-citation into account, it may affect the quality of the measurement of bibliometric indices. Hence, it has been suggested that self-citation indicators come in as supplementary indicators to provide better evaluation of an author's contribution (Mohammad & Farzaneh, 2009).

The existence of such measurement indices, evaluation and funding cultures have indeed provided the context for coercive citation. When academic promotions are based on publications in a journal with a high impact factor, most journal editors are motivated to get the best impact factor possible because this attracts more articles from up-and-coming researchers. This has opened new doors and opportunities for pay-to-publish and predatory journals that are flourishing. Disguised as open-access publishers, many for-profit predatory publishers are

rushing in to exploit academics who are geared towards increasing their number of publications quickly in order to meet key performance indicators. Most of which are of poor quality, plagiarised and poorly or not peer-reviewed. A list of such predatory journals are listed in Bealle's List of predatory journals and publishers (2018).

While it is necessary to ascertain the quality of academics and scholars, universities and institutions of higher learning, it must also be understood that the ratings used in the form of rankings, impact factors, indices and so forth, are not "definitive", as postulated by Stewart and Cotton (2013), who highlighted the shortcomings of conventional rankings and necessitated the need for multiple measures depending on the institute's strategy and priorities. A holistic view of an academic's contribution to his field of specialisation and to the institution is necessary.

## Academic misconduct and ethical issues

Honesty is certainly the best policy and cannot be over-emphasised when it comes to academic research. First, authors need to provide accurate and responsible reports. Second, reviewers need to provide fair and equitable judgment on journals. Apart from this, journal editors should also exercise their responsibilities without fear or favour and endeavour to publish research which can further enhance and disseminate knowledge that can benefit others in relevant areas (Calabrese & Roberts, 2004).

Another issue that must be taken into account is citations, which refer to the basic unit measuring research output. Citations are regarded as an objective, or at least, a less subjective measure to determine impact, i.e. influence and importance. They are used in addition to, or as a substitute for, peer judgments. It's important to cite sources used in research for several reasons as listed below:

- i. To show your reader you've done proper research by listing sources you used to get your information.
- ii. To be a responsible scholar by giving credit to other researchers and acknowledging their ideas.
- iii. To avoid plagiarism by quoting words and ideas used by other authors.
- iv. To allow your reader to track down the sources you used by citing them accurately in your paper by way of footnotes, a bibliography or reference list.

Failure to ensure accurate citations leads to plagiarism, which refers to 'the use of someone else's ideas or words without properly acknowledging the original source, turning in an assignment verbatim for a class that you've already used for another class, borrowing ideas or work from others, and cutting and pasting information from a

site on the Internet without citing the source' (Rouse & Gut, 2001, p. 1).

Plagiarism occurs when one person takes the credit for original ideas from someone else. In taking away that which belongs to others, it destroys the freedom that people should enjoy as academics. Plagiarism, therefore, reverses the goals of academic freedom, which is the pursuit of disseminating unblemished research.

According to Schrimsher, Northrup and Alverson (2011), plagiarism and other incidents of academic misconduct are on the rise for a variety of reasons. Students seemingly have the notion that Internet-based information is public knowledge and thus, is free from intellectual property rights. As such, they do not seem to think that the information taken off the Internet needs to be cited for academic purposes. Due to the lack of knowledge and understanding of citing requirements, there have been high levels of unintended plagiarism, bogus referencing and collusions (Perry, 2010). To avoid plagiarism, researchers should adhere to proper citations and referencing to give credit to the original author and articles they cite. Text-matching software, such as Turnitin can be of help, up to a point, in checking for potential plagiarism.

The following paragraphs present several cases of academic misconduct recorded in Malaysian higher education. These examples are in relation to misconduct with regard to publication. In the frenzy of increasing their number of publications, more cases of academic misconduct are now recorded. Names of individuals and institutions have been disguised.

### Case 1: Lost in Translation

This case involves a 'Senior Academic A' from a publicly-funded university in Malaysia who had published a book in the Malay language in 1990. The book was printed and distributed by the university's publication house and cost the university approximately RM50,000.00 (approx. A\$18,500) for printing and distribution. The book contained thirteen chapters, 11 of which were later found to be a direct translation of materials taken from a 1960s English text book. The other two chapters were a direct translation from two journal articles written in English. This case was exposed by a postgraduate student who was doing her research and stumbled upon the original English book. The university took action by withdrawing the book from all bookshops it had initially been distributed to and the 'author' was made to reimburse the university. However, no stern disciplinary action was taken, and the senior academic was permitted to continue teaching. He retired as a senior academic.

**Case 2: Research grant for a stolen proposal**

In this case, 'Professor B' plagiarised a PhD student's research proposal and used the student's proposal to apply for a research grant. Professor B came in contact with the student's proposal as he was appointed as the external examiner for the student's research proposal presentation. His aim was to use the student's proposal to solicit research funding and to eventually publish the work. Blinded by his ambition to publish and neglecting ethics, Professor B plagiarised the student's research proposal and submitted it as a funding application. The 'stolen proposal' was awarded the research grant vied for; however, the student's name was not in the grant application, nor did the student know about this approved research funding. Upon discovering this halfway through his PhD studies, the student reported it to the university. The university gave Professor B a verbal warning. Professor B went on to use the grant for the research he had obtained. Everyone lived happily ever after; except the PhD student whose original work was stolen.

**Case 3: Lend me your student's work, I just want to learn**

This is a case of a new 'Lecturer C' who recently joined a university and borrowed the final year project of a student under the supervision of another lecturer (Lecturer D). Lecturer C borrowed the student's project under the pretext of being a new lecturer wanting to learn the format and the supervision process of a final year project. However, Lecturer C went on to publish the results and findings of the student's final year project and probably thought it was ethical to include Lecturer D as the co-author of 'his paper', when in fact the results belonged to the final year student. The student's name was not in the published manuscript. Lecturer D eventually reported this to the university, since Lecturer C is still under probation and on contract, the action taken was not to renew his contract. No other action was taken.

The above cases are several among many examples of academic misconduct that happen in Malaysian universities. Unfortunately, not all get reported and only a handful are investigated. Among the investigated cases, the institutions are found to have been grossly inadequate in taking serious disciplinary action against the perpetrators, thereby not sending a strong signal against academic misconduct.

**Looking forward**

Although one of the requirements placed upon academics by universities is active publication, the number of

publications that one has produced, rankings, impact factors, or the other indices should not serve as sole indicators of an academic's prowess, nor should it create boundaries which curb the pursuit of knowledge for the sake of knowledge itself. Academics and researchers should therefore persist in pushing the boundaries of knowledge by publishing where it matters, to the communities of interest, aligned or not to the government or funding agencies.

Researchers should also be judged on the quality of their information and their contributions to the academic community as well as their ability to provide insight and advance knowledge. Not only do these factors enable the researchers to gain intrinsic rewards in the form of personal satisfaction and the uplifting of the intellectual standards of their institutions, but they are also able to contribute towards the betterment of society through sustainable dissemination of their findings, knowledge and truth in their discipline.

According to Lee (2014), instead of 'publish or perish', academics should persist and publish, and publish to accomplish, create knowledge, or to challenge taken-for-granted assumptions. In short, researchers should not publish for the benefit of the university administrators, but for the benefit of the research and academic communities, not forgetting the society at large (Nathan *et al.*, 2013). If 'publish or perish' could be replaced with a more positive mantra like 'publish to accomplish', and if publishing could be rewarded for its own sake and publications evaluated for their own worth, academic publishing would become a much more rewarding experience.

In the words of Franke (2011, p. 2-3):

Good research and creative activities need breathing space. People may be inhibited from doing their best work if they fear offending outside forces, such as politicians or donors, or inside authorities, such as trustees or senior administrators. Without academic freedom, our society would lose professors' best inventions, scholarship, and creative products.

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