

COUNCIL ON HIGHER EDUCATION

Number 1
August 2017

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This monitoring brief considers research publication ethics, in the context of monetary rewards for publishing. In South Africa, universities receive research output grants based on the quantum of research produced at the institution. Increasingly, there is concern that this may be affecting research ethics and leading to a focus on quantity over quality. This concern is explored in this monitoring brief.

Research Publication Ethics

Introduction

Worldwide there is an increasing awareness of illegitimate or corrupt academic practices, and quality assurance organisations are expected to step in to assist with curbing them.ⁱ Eaton, president of the US Council for Higher Education Accreditation (CHEA), explained in *University World News* that the extent of the problem is not really known, but that steps need to be taken to protect students and the image of universities. She explained that while corruption is deliberate, breaches of integrity are normally unintentional, and that an important first step is building awareness.ⁱⁱ

In the South African context, the Council on Higher Education (CHE) has also become aware of such matters, both intentional and unintentional. The purpose of this briefing is to consider some of these issues as they relate to academic research and publishing.

In 2003, the Department of Education published the *Policy and Procedures for the Measurement of Research Output of Public Higher Education Institutions*.ⁱⁱⁱ This policy introduced financial incentives for research output at universities, to encourage academics to focus on research and increase their number of publications. The policy introduced certain measures (such as peer review) in an attempt to maintain quality. Such a policy, which rewards institutions for the quantum of research publications, is not unique to South Africa, and the 'publish or perish' culture has become prevalent in academic circles across the world. While the policy was intended to encourage and financially support the undertaking and publication of high quality academic research, and has resulted in a sharp increase in the number of research publications, the unintended and negative effects of the policy need careful consideration.

One of these consequences is the rise of 'predatory journals'

Quantity and quality

As universities and individual academics have endeavoured to increase their research output, unethical research practices have crept in, which can affect the quality of the research. These practices can be as a result of actions taken by journals, academics, or

universities. One of these consequences is the rise of 'predatory journals'. These journals tend to ignore rigorous academic peer review processes, publish exceptionally large numbers of papers, and charge high article publication or page fees. As such, the journals aim to make maximum profit, rather than to enhance knowledge and promote quality research. Such journals have taken advantage of both incentives to publish and of the new focus on open-access publishing. The American academic, Beall, emphasised the threat posed by such predatory journals, and developed a list of journals he deemed to be predatory.^{iv} However, the list was not without controversy, and some journals refuted his claims. As a result, Beall removed his list, although he continues to argue for the careful assessment of journals.^v

Predatory journal publishing in South Africa

A recent study, undertaken by Mouton & Valentine of the Centre for Research on Evaluation, Science and Technology (CREST), investigated the prevalence of South African publications in predatory journals.^{vi} The article is careful to note that these journals prey on academics (often directly approaching them with an invitation to publish), and that authors may not be aware of the unsound academic practices of such journals. Mouton & Valentine described the indicators they used to assess those journals alleged to be predatory (on Beall's website) that are also on the accredited lists used by the Department of Higher Education and Training (DHET) for subsidy purposes. They provided a list of journals they determined to be either 'probably' or 'possibly' predatory in nature (leaving out those they believe have the necessary policies and procedures in place). Thereafter, they analysed the number of South African publications in these journals by year, institution and field.

Mouton & Valentine found that there has been a steep increase in the number of publications in such journals, from fewer than 50 in 2005, to about 100 in 2008, and to over 900 in 2014, with a sharp increase in those deemed 'probably predatory' since 2011.^{vii} Over the past 10

years, 3 906 South African papers (or 3.4% of accredited journal publications) have been published in these journals.^{viii} When analysing by institution, Mouton & Valentine found that academics from all institutions published in predatory journals.^{ix} While the largest number of publications were from the University of South Africa (UNISA) and the North-West University (NWU), these publications accounted for less than 10% of the total publication output at each of these institutions. When considering the proportion of publications in predatory journals at a specific institution, they found that such publications accounted for over 20% of publications at the Mangosuthu University of Technology (MUT), University of Fort Hare (UFH) and University of Venda (UV). The authors highlighted the need for academics to be better informed about predatory journals, which prey on unsuspecting young and emerging academics, and to be more aware of the effect such publications will have on the quality of their CVs.

However, it has become clear that plagiarism is also a problem among academics.

In terms of field, the greatest number of publications in such journals were in the Humanities and Social Sciences, followed by Economic and Management Sciences. Mouton & Valentine suggested that the reason for this could be that, of the DHET accredited journal lists, the ProQuest IBSS list which focuses on the Humanities and Social Sciences contained more predatory journals than other lists.^x It should also be borne in mind that it is especially in the human and social sciences that academic 'gatekeeping' is experienced, sometimes making it hard for African experiences or alternative theories to find space in traditional, Western-focused journals. While the authors referred to the amount of subsidy that universities have been awarded

as a result of publications in such journals, an issue of perhaps greater concern is the amount that universities have paid to these journals in the form of publication fees.

Academics and plagiarism

While many authors publishing in predatory journals may be doing so in good faith, other research practices highlight the need for a broader focus on research ethics. Plagiarism is a well-known and serious academic issue. Universities have developed plagiarism policies, which tend to focus on student assignments. Academics are in the position to manage and detect plagiarism among students, and software tools are bought and used for this purpose.^{xi} However, it has become clear that plagiarism is also a problem among academics. In a 2015 study, Thomson *et al* carried out a study in order to understand why not all academics took the necessary steps against students who committed plagiarism.^{xii} Among other findings, they found that academics were themselves sometimes complicit. The team analysed (through *Turnitin*) 371 articles, published in 19 South African management journals. While 31% of articles contained low levels of plagiarism (1% to 9%), almost 50% had 'high and excessive plagiarism of 15% or more'.^{xiii} Thomson explained that 'If academics themselves are plagiarising, it seems likely they'll ignore students doing the same'.^{xiv}

'There should be a zero tolerance policy for academics who cheat'.^{xv}

While Thomson focused on plagiarism by students, the incidence of plagiarism by academics is of serious concern. She suggested that the reason academics would take such a risk may be one of the unintended consequences of the *Policy and Procedures for the Measurement of Research Output of Public Higher Education Institutions*.^{xvi} More recently, the case of eleven academics at NWU under investigation for alleged plagiarism has become public.^{xvii} These

academics, some with doctorates and professorships, were mainly from the natural and agricultural sciences, and included a member of senior management. The institution is investigating the allegations. Another serious concern is the practice of selling complete assignments. Thomas explains that in 'November 2010, the *Chronicle of Higher Education* published an article that rocked the academic world. Its anonymous author confessed to having written more than 5 000 pages of scholarly work a year on behalf of university students'.^{xviii} While Thomas concentrated on students purchasing assignments, often written by university academics, she raised the possibility of academics doing the same. She concluded that, in order to curb such behaviour, 'academics must be role models and must promote ethical behaviour within the academy. There should be a zero tolerance policy for academics who cheat'.^{xix}

The unintended consequences of the incentives policy go beyond research ethics in the view of Macleod, who argues that research has become increasingly commodified, and that most institutions 'have instituted a system of incentives to encourage publications amongst staff'.^{xx} She explains that the system is 'counterproductive in terms of scholarship' because it encourages 'salami-slicing'; 'discourages collaboration and team research'; and makes 'no distinction ... between top tier and bottom tier journals in either the subsidy formula or the percentage given to staff'.^{xxi} She concludes that this encourages staff to publish in less prestigious journals rather than taking longer to publish high quality papers, and that the incentive system is a 'managerialist solution' and 'blunt instrument that serves the purposes of increasing university income rather than supporting scholarship and knowledge production'.^{xxii} Furthermore, she is critical of internal university allocation policies, whether directly to academics or to research accounts, that are based purely on the quantum of research. Macleod advocates for an allocation method which takes quality into account, and suggests that a central research office which assesses all applications for research funding allows for a committee which can make 'informed decisions about the quality of

the research produced. And so the colleague who produces only one article in two years, an article of seminal importance, will not be disadvantaged because s/he has not had numerous research outputs'.^{xxiii}

The DHET and research ethics

Concerns about research ethics and the negative consequences of incentivising research output are not new, and the DHET is aware of these. Already in 2007 the Department highlighted that 'institutions are responsible for ensuring the ethical integrity of their submissions'.^{xxiv} The report mentioned ethical concerns such as institutions claiming twice for research published in different formats; compromised peer-review practices; and 'salami slicing' (where one piece of research is broken into small, publishable pieces in order to accrue the maximum number of publications).^{xxv}

Subsequent reports again highlighted 'salami slicing'; the submission of two very similar papers published in different conference proceedings; the claiming for articles in accredited journals which are not original, peer reviewed research articles; claims for academics not affiliated to the institution when the research was conducted; claims for international or visiting academics not legitimately affiliated to the institution; and journals run by universities where the majority of articles are produced by academics at that same institution.^{xxvi}

'The Department is concerned that some institutions appear to be more interested in increasing funding than in improving research capacity and quality...'^{xxvii}

More recently, in the 'Report on the Evaluation of the 2013 Universities' *Research Outputs*, the DHET highlighted possible unintended consequences of the Policy.^{xxviii} The report mentioned a possible focus on 'quantity and less on quality' and an increase in salami-slicing, but also focused on the recent 'threat' to quality posed by predatory journals.^{xxix} The report explained that after hearing of a suspected predatory journal, the DHET carried out investigations and informed ProQuest (who removed the journal and others from the same publisher from the accredited list). It added that universities should continue to inform the DHET of suspected predatory journals, and that authors should not submit claims if journal processes do not meet those outlined in the policy 'as that constitutes a fraudulent activity'.^{xxx} The same report commented on other unethical practices which had been noted, and stipulated that the Department could withhold payment if a journal 'does not meet the criteria as outlined in the research output policy', even if the journal is listed on an accredited index.^{xxxi}

The DHET also raised the matter of internal allocation of the subsidy, reminding institutions that research output allocations are part of the block grant for institutions, and are not intended for individual authors.^{xxxii}

Interventions and policy considerations

Mouton & Valentine call on national bodies, particularly the DHET, to assist in reducing publications in predatory journals.^{xxxiii} They advise that the DHET should review the approved journal lists, and should cease to provide subsidy for any article published in a journal which is found to be predatory. These suggestions are in line with the DHET's plan mentioned above. Mouton & Valentine also advise that the Council on Higher Education (CHE) should consider organising an indaba on predatory journals and questionable publication practices; and they indicated that the National Research Foundation has issued a statement on predatory journals.^{xxxiv} Regarding institutions and research offices, such bodies should alert academics to the dangers of predatory publishing, which Mouton & Valentine acknowledge is

done at some institutions, but mainly at those with an established research tradition. In addition, a better validation process prior to claiming subsidy should be introduced, and academic librarians should form part of the information strategy. Finally, when it comes to individual academics, Mouton and Valentine advise that senior academics and supervisors should inform younger academics about predatory journals and guide them in their publication strategies.

Thomas and the DHET place the main responsibility for the monitoring of research ethics on universities. Thomas advises that universities should report to the DHET as soon as they have discovered a predatory journal, which can then be further investigated by DHET and removed from the lists if necessary.^{xxxv} She adds that while institutions are entitled to claim for publications in such journals, the 'question to ask is whether it is ethical to claim subsidy It is here that universities must apply moral conscience in line with academic and research

ethics'.^{xxxvi} She emphasised that universities need to consider their 'scholarly reputations' when academics publish in such journals, and that page fees to them should not be paid using university money.^{xxxvii} The DHET emphasised that: 'Vice Chancellors and Deputy Vice Chancellors responsible for research are urged to address issues of integrity with academics. Furthermore, institutions must ensure that they do not pressurise academics into unethical practices in an attempt to increase research output funds. The Department is concerned that some institutions appear to be more interested in increasing funding than in improving research capacity and quality output at their institution'.^{xxxviii}

The Council on Higher Education is considering the implications of these findings both for policy and practice, and will engage further with institutions and research offices in this regard.

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Notes

ⁱ B. O'Malley (2017) 'Seeking global cooperation to fight corruption in HE' in <http://www.universityworldnews.com/article.php?story=20170714154213374>, accessed 11 August 2017.

ⁱⁱ Ibid.

ⁱⁱⁱ DoE (2003), *Policy and Procedures for the Measurement of Research Output of Public Higher Education Institutions* (as revised 2015).

^{iv} J. Elmes, (2017) 'Beall: 'social justice warrior' librarians 'betraying' academy' in <https://www.timeshighereducation.com/news/beall-social-justice-warrior-librarians-betraying-academy>, accessed 11 August 2017.

^v Ibid.

^{vi} J. Mouton & Valentine, A. (2017) 'The extent of South African authored articles in predatory journals' in *South African Journal of Science* 113(7/8), 9 pages.

^{vii} Ibid.

^{viii} Ibid.

^{ix} Ibid.

^x Only articles published in journals included on the accredited lists, as determined by the DHET on an annual basis, accrue subsidy. Accredited journals indices include the Approved DHET list; the ISI Web of Sciences lists; Scopus; and the ProQuest IBSS list.

^{xi} A. Thomas (2015) 'Dishonest academics may make students think plagiarism is acceptable' in <https://theconversation.com/dishonest-academics-may-make-students-think-plagiarism-is-acceptable-45187>, accessed 8 August 2017.

^{xii} Ibid.

^{xiii} Ibid.

^{xiv} Ibid.

^{xv} A. Thomas (2015) 'Forget plagiarism: There's a new and bigger threat to academic integrity' in <https://mg.co.za/article/2015-08-19-forget-plagiarism-theres-a-new-and-bigger-threat-to-academic-integrity>, accessed 8 August 2017.

^{xvi} Thomas (2015) 'Dishonest academics may make students think plagiarism is acceptable' in <https://theconversation.com/dishonest-academics-may-make-students-think-plagiarism-is-acceptable-45187>, accessed 8 August 2017.

^{xvii} M. Fengu (2017) 'Academics stole work' in <http://www.news24.com/SouthAfrica/News/academics-stole-work-20170729>, accessed 8 August 2017.

^{xviii} Thomas (2015) 'Forget plagiarism: There's a new and bigger threat to academic integrity' in <https://mg.co.za/article/2015-08-19-forget-plagiarism-theres-a-new-and-bigger-threat-to-academic-integrity>, accessed 8 August 2017.

^{xix} Ibid.

^{xx} C. Macleod (2010) 'South Africa: Incentive system bad for scholarship' in <http://www.universityworldnews.com/article.php?story=20100605063654105>, accessed 8 August 2017.

^{xxi} Ibid.

^{xxii} Ibid.

^{xxiii} Ibid.

^{xxiv} DHET (2007) 'Ministerial Report on the Evaluation of the 2006 Institutional Research Publication Outputs'.

^{xxv} Ibid.

^{xxvi} DHET (2011) 'Ministerial Report on the Evaluation of the 2010 Institutional Research Publications Outputs'; DHET (2012) 'Ministerial Report on the Evaluation of the 2011 Institutional Research Publications Outputs'.

^{xxvii} DHET (2012) 'Ministerial Report on the Evaluation of the 2011 Institutional Research Publications Outputs'.

^{xxviii} DHET (2015) 'Report on the Evaluation of the 2013 Universities' Research Outputs'.

^{xxix} Ibid.

^{xxx} Ibid.

^{xxxi} Ibid.

^{xxxii} Ibid.

^{xxxiii} Mouton & Valentine (2017) 'The extent of South African authored articles in predatory journals' in *South African Journal of Science* 113(7/8), 9 pages.

^{xxxiv} Ibid.

^{xxxv} A. Thomas (2015) 'African academics are being caught in the predatory journal trap' in <https://theconversation.com/african-academics-are-being-caught-in-the-predatory-journal-trap-48473>, accessed 8 August 2017.

^{xxxvi} Ibid.

^{xxxvii} Ibid.

^{xxxviii} DHET (2012) 'Ministerial Report on the Evaluation of the 2011 Institutional Research Publications Outputs'.