

Combating Inhibitors of Quality Research Outputs at the University of Cape Town

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Abstract: *This paper examines the debates about academic scholars' ability to produce quality research outputs both consistently and frequently. It examines whether it is possible for academic scholars to produce quality research outputs in their respective domains given obstacles that impede scholars to do so. The rationale for this examination stems from the fact that in the academic community, much of a scholar's reputation depends on the publication of research in journal articles and books. Quality published research outputs enhance a scholar's status and serve as an important factor in situating where a scholar's employment will be within the hierarchy of his or her discipline. The paper explores the possible criteria for producing quality research outputs and obstacles that inhibit academic achievement. The paper describes the Emerging Researchers' Programme (ERP) of the University of Cape Town's Research Office as a program that facilitates the production of research output while overcoming obstacles to it. At the University of Cape Town, quality research outputs are identified as the number of articles per academic scholar that have appeared in a specific period of time in a set of prestigious journals or research published in professional journals and in conference proceedings; writing of a book or chapter; collection and analysis of original evidence; and mentoring post-graduate students and their dissertations and projects. In South Africa, the Department of Higher Education and Training (DHET) has identified quality research outputs to be those that appear in a set of prestigious journals or recognized research publications, such as: the Institute of Scientific Information (ISI) including Arts and Humanities Citation Index; Science Citation Index Expanded; and Social Sciences Citation Index. Other accredited lists are the approved South African journals and the International Bibliography of the Social Sciences (IBSS).*

Keywords: *Scholars, Research Barriers, Emerging Researchers' Programme, University of Cape Town*

Introduction

This paper examines the debates about academic scholars and their ability to produce quality research outputs. One can argue that quality research outputs are the 'number of articles per [academic scholar] that have appeared in a specific period of time in a set of prestigious journals' (Hadjinicola & Soteriou, 2006, p. 3), or research published in 'professional journals and in conference proceedings, writing a book or chapter, gathering and analyzing original evidence, working with post-graduate students on dissertations and ... projects' (Lertputtarak, 2008, p. 19), activities otherwise known as the pursuit of the academic mission.. In South Africa, the Department of Higher Education and Training (DHET) has identified quality research outputs to be those that appear in a set of prestigious journals, or, certain recognized research publications that qualify for subsidy. According to the DHET list, 'for purposes of subsidy, only DHET-accredited journals are recognised for subsidy' (University of Cape Town Publication count overview, 2012). These encompass the Institute of Scientific Information (ISI) that includes Arts and Humanities Citation Index; Science Citation Index Expanded; and Social Sciences Citation Index. Other accredited lists are the approved South African journals and the International Bibliography of the Social Sciences (IBSS) (University of Cape Town Publication count overview, 2012). It is expected that 'every academic publish at least 1.25 articles annually in journals' that the South African Department of Education has accredited (Schulze, 2008, p. 644).

The paper explores whether it is possible for academic scholars to produce quality research outputs in their respective domains, consistently and frequently, despite obstacles that impede scholars to do so. The rationale for the examination stems from the fact that in the academic community, much of a scholar's reputation depends on the publication of research in journal articles and books. Quality published research outputs enhance a scholar's status and serve as an important factor in situating where a scholar's employment will be within the hierarchy of his or her discipline (Eliason, 2008, p. 51), hence an examination of the climate of research output is timely and useful.

In order to explore whether it is possible for academic scholars to produce quality research outputs, the paper first examines the reasons for engaging in the academic enterprise in the first place. Secondly, the paper exposes the obstacles that inhibit the production of quality research outputs. Finally, the paper exposes measures used in the Emerging Researchers' Programme (ERP) of the University of Cape Town to overcome obstacles to the production of quality research outputs.

Why Write A Paper?

Among the reasons scholars engage in academic pursuits is to claim the moral right of an academic. This is to safeguard the authors 'personality' that encompasses the right of attribution of authorship, the right of integrity of authorship and the right against false attribution of authorship. The right of attribution of authorship is to avoid misattribution of one's work. The right of integrity of authorship and the right against false attribution of authorship of a work are rights of an academic to object to the 'intentional distortion, mutilation, or other modification of a work if [the] distortion is likely to harm the author's reputation, and prevents the destruction of any work

of recognized stature' (Rosenblatt, 1998). Indeed, within the scope of moral right, an academic is allowed to take certain measures to preserve the integrity of his or her work (Zemer, 2007, p. 37).

Another reason for producing quality academic research outputs is to confer personal benefit. It increases the chances of a salary increase or a promotion. Hadjinicola & Soteriou (2006, p. 1) report that research productivity has a momentous impact on promotions and salary raises. For example, with regard to the former, at the University of Cape Town, academic scholars are given a salary increase based on 'rate for job' (RFJ). This means that academic staffs are expected to, among other duties, produce 'certain levels of publication of peer-reviewed outputs ...' (Minimum performance criteria for academic Rate for Job, 2006). With regard to promotion, Shapiro, Wenger and Shapiro (1994, p. 439) say 'authorship credit is important to researchers because it helps them gain promotion'. In academia, the more a scholar publishes, the greater are the chances of being promoted in the profession and 'an inadequate publication record can prevent one from gaining promotion' (Effendi & Hamber, 2006, p. 113). In fact, non-production of academic output may result in failure to qualify for RFJ or promotion at the University of Cape Town.

The desire to qualify for research grants also can be cited as a reason to write, publish, do research, or teach. The more a scholar publishes the more likely s/he is to gain research grants. According to Shapiro, Wenger and Shapiro (1994, p. 439) 'authorship credit is important to researchers because it helps them gain ... grants'. Dundar & Lewis (1998, p. 608) are of the view that 'reputation for scholarly excellence can, in turn, result in an increased capacity for attracting research'. In South African tertiary institutions for example, the National Research Foundation (NRF) allocates funding to scholars to pursue research. In order to qualify for such research funding in both the 'unrated' and 'rated' researchers categories of the NRF, applicants have to show among others 'consistency of proposed research with previous track record' (Multi-Criteria Decision Making (MCDM) Tool: Unrated Researchers, 2006; Multi-Criteria Decision Making (MCDM) Tool: Rated Researchers, 2006). Hence, it can be said that the production of quality research among South African scholars' increases their chances of gaining NRF and other research grants.

The desire to be known, recognized, and associated with good research output by one's peers are certainly factors among the reasons. In the academic environment there are certain well-known academics who have gained 'the approbation of professional societies and their peers' (Shapiro, Wenger & Shapiro (1994, p. 439). In fact, it is by the production of quality research outputs that academics have gained recognition and exposure. This is irrespective of their academic ranking. Take the example of a professor and a lecturer who are both engaged in a research project. Although it would be natural to assume, based on academic ranking alone, that the professor leads the research project (Hafernik, Messerschmitt & Vandrick, 1997, p. 31), the inclusion of the lecturer's name associates him or her with the research and qualifies him or her for the benefits to be gained from participation in it.

A final reason for producing quality research outputs is to uphold one's indirect economic rights. These rights are termed 'indirect' because academic authors do not directly acquire any monetary benefits from their 'natural property right' that is, from 'the fruits of their creation' (Hurt & Schuchman, 1966, p. 421). For example, at the University of Cape Town, academics have a duty to publish in peer-reviewed subsidy-generating journals in order to generate income

for the institution. The subsidy, valued at approximately R119,331,00, US Dollars 10,1263 since 2010, is awarded by the Department of Education (DoE) to the institution for each published single-authored article (Maritz, personal communication, June 19th, 2012). Authors receive no direct monetary compensation but are encouraged by the institution to continue publishing to sustain the revenue stream. In this regard, it can be argued that the economic rights of authors are associated with the politics of scholarly publishing (Hurt & Schuchman, 1966, p. 422), because it is 'imposed by the academic community' (Hafernik, Messerschmitt & Vandrick, 1997, p. 31).

Possible Factors Inhibiting Production of Quality Research Output

Among the factors inhibiting the production of quality research outputs is the lack of research 'planning guidance' (Greed, 2005, p. 725), that formulates, assesses, clarifies, structures, and establishes objectives and results of research (National Institute for Educational Policy Research, 2011). According to Person (1940, p. 65), planning encompasses the design of a structure of procedures whereby the objectives of research are accurately attained with 'minimum waste of the energies employed, and in most instances giving initial direction to execution'. In fact, it could be said that the absence of research planning guidance is tantamount to ensuring that no structure ever will exist to direct researchers to achieve quality research outputs.

The lack of commitment to pursue research is a factor that may inhibit the production of quality research outputs. According to Archambault (2004, p. 2), many diverse factors can motivate commitment. Among them are the involvement of a strong person(s) or role model(s) (Ridpath et al., 2007, p. 59), who are 'top-quality professors' (Altbach, 2004) pursuing quality research and have evidence of previous quality research experience (Ledley & Lovejoy, 1993, p. 436). A role model has the potential to encourage emerging researchers to engage in research, first, and then to seek excellence in the writing. Role models are 'individuals admired for their ways of being and acting as professionals' (Kutob, Senf & Campos-Outcalt, 2006, p. 244). In addition, they are contacts for research guidance and serve as positive persons to emulate in many ways: personality, skills, track record, and competence. Gelso (1993, p. 468) is of the view that personality and training level affects research attitudes and productivity. According to Kutob, Senf & Campos-Outcalt (2006, p. 244), role models moderate negative stereotypes as they have the wit to craft explicitly the value of what is being researched. In the absence of a role model to encourage emerging scholars to commit to research it may be difficult for scholars to produce quality research outputs.

The lack of appropriate research knowledge may inhibit the production of quality research outputs. Universities are expected to play a vital function in society as producers and transmitters of knowledge (D'Este & Patel, 2007, p. 1296). They have highly-qualified manpower equipped with research skills. Lee (1996, p. 845) says that 'universities command enormous scientific and technological resources' acquired from their qualified research-skilled manpower. In instances in which institutions are deficient in trained manpower to pilot multiple research tasks, such as doing fieldwork, inputting, and analyzing data (Cua, Mckone & Schroeder, 2001, p. 676), they are failing in their basic duties to serve knowledge. At these institutions, academic scholars are not able to produce quality research outputs. Furthermore, the lack of fulfillment of research tasks

causes harm to society (Riechi, 2008). Rasouliazar & Fealy (2012, p. 832) say that 'knowledge is based on research' and research 'pushes the frontiers of knowledge' and 'knowledge and competences are embodied in people' (Cox & Verbeek, 2009, p. 6). Universities must engage in research tasks for engagement in these tasks achieves a 'research-oriented culture' (Dundar & Lewis, 1998, p. 610) that oversees the management of time and resources to improve research.

The lack of adequate university funding inhibits the production of quality research outputs. For example, at the University of Cape Town in 2014, research activities within the Emerging Researchers' Programme, mainly Writers' Workshops (see below), decreased from 21 workshops in 2013 to 12 in 2014 due to lack of external funding. When adequate funding is compromised, universities may be 'asked to pay for an increasing part of their budgets through tuition and student fees, funds raised by consulting and selling research-based products' (Altbach, 2004). In such a scenario, there is a corresponding decrease in research support activity, which negatively affects the production of quality research outputs. It is reported that academics in institutions that provide adequate funding to support research are likely to be more productive in research outputs than academics in institutions that do not provide adequate funding for research (Harman, 2001, p. 245).

Finally, the lack of research facilities, or disruption in existing facilities (Rasouliazar & Fealy, 2012, p. 833), can deter research production. Research facilities encompass appropriate libraries, laboratories, offices, internet and other electronic resources. These facilities, according to Altbach, (2004), are responsible for the expansion of science and scholarship. The internet provides a rapid, worldwide dissemination of information to a much 'larger audience than in the past' (Peters, 2008) and connects scholars across space and time (Harloe & Budd, 1994, p. 83), at great benefit to researchers and the overall knowledge base, but at great infrastructure cost. Institutions must maintain their facilities notwithstanding economic downturns and shrinking state allocations to tertiary institutions (Goldstein & Caruso, 2004, p. 1) that may compel state or provincial governments to reduce their number. This happened in South Africa, for example, as the institutional landscape was altered dramatically by the merger of several higher education institutions due to a negative financial situation (Hay & Fourie, 2002, p. 115), among other factors.

University of Cape Town's Efforts to Overcome Inhibitors of Quality Research Output

At the University of Cape Town, the sectors that have had the most success in overcoming the inhibitors of quality research outputs are its faculties, research facilities, and most importantly, its Research Office's Emerging Researchers' Programme (ERP). ERP is charged with increasing the country's number of researchers. The program also aims to change the demographics of researchers in South Africa by developing more women and black researchers (De Gruchy & Holness, 2007, p. v). ERP was established to redress a national situation characterized by an aging population of researchers who were producing the majority of the country's research output (De Gruchy & Holness, 2007, p. viii), and who were not being replaced by a younger cohort. By increasing the number of its researchers (De Gruchy & Holness, 2007, p. v) South Africa envisioned ERP as a way to strengthen its overall research capacity.

The program was launched in February 2003. It is staffed by four coordinators and several Senior Research Scholars (SRS) (De Gruchy & Holness, 2007, p. vii-viii). The four coordinators have PhDs, publish in their respective domains, and are experienced in recognition of the research needs of emerging academics. The SRS are retired professors with internal National Research Foundation university ratings of “A” and “B” (Ratings landmarks for UCT, 2013) who are aware of the ‘width, multidimensionality and complexity of researcher development’ (Evans, 2013, p. 423), arising from their extensive and productive publication record. An “A” rated researcher with the South African National Foundation is one who is unequivocally recognised by their peers as leading international scholar in his or her ‘field for the high quality and impact of their recent research outputs’. A “B” rated researcher is one ‘who enjoy considerable international recognition by their peers for the high quality and impact of their recent research outputs’ (National Research Foundation, 2014).

The coordinators’ duties involve identifying scholars at UCT who are ‘new’ or ‘emerging’ academics, those with little or no publication record, and encouraging them to attend seminars and workshops organized under the auspices of the program. The SRS, given their more senior status as professors (Dundar & Lewis, 1998, p. 610), deliver seminars and facilitate workshops which are administered and coordinated by the coordinators. ERP support ranged from single interviews with the coordinators, to attendance of many workshops and seminars, to individual mentoring sessions with the SRS.

Table 1 shows the rapid growth in utilization of ERP since its inception in 2003 with an original cohort of 45 academics. By the end of 2012, 548 UCT academics had received some form of quality support from the program. One of the hallmarks of the program was to target emerging academics at a prime teachable moment early in their research careers to help them advance their academic standing (De Gruchy & Holness, 2007, p. v). The data shown in Table 1, in each year of

Table 1. Comparative Faculty Representation (2003 -2012)

	CHED	COM	EBE	HSC	HUM	LAW	FSC	TOTAL
2003	10	4	11	6	8	3	3	45
2004	10	10	17	16	24	8	17	102
2005	22	17	27	31	35	13	26	171
2006	29	32	26	32	42	14	29	204
2007	33	43	28	51	47	18	42	262
2008	35	52	34	54	43	20	51	289
2009	35	62	50	83	53	25	56	364
2010	35	69	56	107	71	24	70	432
2011	38	82	63	121	84	27	77	492
2012	40	90	72	142	97	31	76	548

ERP comparative faculty representation, i.e., Centre for Higher Education Development (CHED); Faculty of Commerce (COM); Faculty of Engineering and the Built Environment (EBE); Faculty of Health Sciences (HSC); Faculty of Humanities (HUM); Faculty of Law (LAW); Faculty of Science (FSC)

the program the faculty participants held junior rank of lecturer or senior lecturer (equivalent to assistant professor in United States education system), attesting to ERP's focus on development of emerging researchers. The participants were from all the seven faculties of the institution and their participation is voluntary and confidential.

ERP Coordinators

Before the single interview with a coordinator is conducted the emerging researcher is requested to provide in advance a copy of his or her curriculum vitae to give an idea of where the emerging researcher is in terms of research. During the interview the researcher shares personal issues relating to research dynamics that might be hindering their research progress, such as lack of enough time for research. As a solution, the coordinator advises the researchers of relevant content offered in seminars taught by the SRS. The coordinator also may probe the researcher to see if s/he would like to attend a seminar or take the matter further. The initial interview is followed up with emails, phone calls, and/or subsequent meetings, along with the request that the coordinator be informed of any developments relating to research. These could encompass, for example, 'PhD registration and graduation, a successful funding application, or acceptance of an article for publication' (De Gruchy & Holness, 2007, p.15-17).

ERP Seminars and Workshops

ERP seminars and workshops address a variety of issues. Research planning, for example, assists the emerging scholars with how to plan their research and how to commit to a research career. SRS discuss how emerging scholars should devote daily committed time, approximately twenty minutes a day, for academic writing. The emerging scholars hear that when this is done on a daily basis, it becomes a routine that would influence their attitudes, viewpoints, knowledge, understanding, and skills (Evans, 2013, p 426) and negates the oft-cited complaint of 'lack of time for research based on too much teaching commitments and administrative overload' (Schulze, 2008, p. 657). Furthermore SRS advise the seminar participants to have more than one article in progress at any one time. This practice solidifies the daily writing routine and, gives them something to fall back on once they have finished a particular paper. Research guidance provided by an infrastructure with efficient staff (Schulze, 2008, p. 656), is plainly in evidence in the management of these seminars. The emerging scholars use the seminars to model SRS research guidance in their own research planning.

The problem of lack of appropriate research knowledge is another topic addressed in seminars. Participants are guided as to what constitutes a good research paper. They are encouraged to consult directly with the SRS to improve their own research papers (Hadjinicola & Soteriou, 2006, p. 3). Seminar guidance encompasses searching the relevant literature using search engines, the prerequisites of an academic paper, and academic journal publication requirements. The discussion of academic papers entails what the paper intends to explore, the research question, the rationale for the research question, and the contribution the paper intends to bring to the debate under investigation.

Some departments hold annual Writers Workshops to facilitate the writing of research. These are financed by the Research Office and coordinated by the Research Office coordinators. The

workshop is an additional commitment by participants to research. It commits academics to get their articles in shape for publication. The Writers' Workshop brings together all ranks of academics – from lecturers to professors – in the department. As 'research performance is likely to increase as a result of greater interaction between department members' (Dundar & Lewis, 1998, p. 611), the workshop provides a necessary environment. The workshop also increases productivity by bringing together the senior and junior ranks of the department. Hadjinicola & Soteriou, (2006, p. 3) are of the view that 'seniority has also been shown to be a factor leading to higher research productivity'. To take better advantage of the workshop, each participant prepares a draft article which is circulated to the entire group of about 14 participants prior to the meeting. Each participant is allocated one article for which to prepare a response in advance, and three other articles preferably in cognate areas to read. Each participant attempts to identify an appropriate peer-reviewed journal for the article, and acquaints him/herself with the publication requirements of the journal.

At the workshop, each participant is accorded a 45-minute slot for discussion of his/her paper. The presentation takes approximately 20 minutes, followed by the response and plenary discussion. In some instances a block of time, several hours, is allocated for participants to implement recommendations made during the sessions, once all the presentations have been made. For this purpose, participants are encouraged to bring laptops or to make use of the computer facilities at the conference venue.

After the workshop, participants are asked to ensure submission of their articles to accredited journals within three months of the workshop. This is monitored by an internal faculty or departmental coordinator in liaison with the relevant research development coordinator. At the end of the workshop participants are requested to evaluate the workshop. The evaluations guide the research development coordinator as to what should be improved upon in future workshops.

The topic of funding opportunities is covered in ERP seminars and workshops (Dundar & Lewis, 1998, p. 612). Participants are guided as to where they can get funding for their research and benefit from the expertise of the SRS who have funding track records. The workshops cover both local and international funding. For researchers who desire to gain access to funding at the international level, ERP offers training on how to apply and compete for international funding.

To provide a broader foundation for research funding ERP has opened up its training to include new funding opportunities such as Research Professional Africa (RPA). The RPA is an online platform that allows UCT 'researchers access to the latest global coverage of research funding programmes' (Bond, 2012), as it covers a complete variety of research disciplines and sponsors. Within the RPA, subscribed 'members can search for funding opportunities in their fields of interest, see what funders are calling for, refer research opportunities to their colleagues and receive email alerts' (Bond, 2012).

ERP's Individual Mentoring with SRS

After the single interviews and the seminars and workshops, the third resource provided by ERP is individual mentoring sessions with SRS. Emerging scholars receive expert one-on-one guidance from SRS who are used in the program as role models, deployed uniquely to encourage

emerging scholars to engage in research activities. Through the seminars, workshops and one-to-one mentoring the SRS have been able to change negative viewpoints, mind-sets and perceptions (Evans, 2013, p. 423) of emerging scholars by implanting appropriate research knowledge. UCT's academics do not adhere to the notion that 'a publication is a publication' (Sauer, 1988, p. 857). They produce quality research outputs following the practices put in place by the university to assist and facilitate their research process.

UCT Research Administration and Facilities

The University of Cape Town has several internal and external funding opportunities for scholars. The funding opportunities are administered by UCT committees that oversee the functioning of the funding. Internal funding includes 'start up grants' for newly recruited academics; University Research Council (URC) funding for conferences; visiting scholars grants; as well as short-term research visit grants. External funding includes the National Research Foundation (NRF) funding. Some of these opportunities allow academics to buy off teaching related matters in order to concentrate on research as 'prolific researchers spend ... less time on teaching-related activities' (Hadjinicola & Soteriou, 2006, p. 3). The university accepts this situation because it wants to provide more support for research (Dundar & Lewis, 1998, p. 613).

UCT supports research in the form of libraries, laboratories, offices, internet and other electronic resources in order to enhance the production of quality research outputs. The institution provides well-equipped offices for all its academics. All academic offices have personal computers that are fully connected onto the network. Also, the institution has well-equipped laboratories for scholars in the basic sciences. The institution has a main library, the Chancellor Oppenheimer Library, and nine departmental libraries situated on UCT's various campuses (<http://www.lib.uct.ac.za/about-the-libraries>) that are well-resourced. The main library has a collection of 'more than 1.2 million volumes, including a number of special collections. The Libraries' journal holdings consist of over 72,000 e-journal titles and more than 28,500 print journal titles'. Furthermore, the main library has well-equipped electronic resources in addition to its print materials, with some materials in both print and electronic format. The main university library subscribes to approximately 190 electronic databases with 38,000 items of resources in audiovisual and other formats. The main library also provides facilities such as special study rooms, in the Research Wing, designated for academics and postgraduate students to carry out their research. By the size of the library, number of books and journals, and the use of technology (Dundar & Lewis, 1998, p. 613-614) it can be seen that UCT values research performance. Corroborating this view, Hadjinicola & Soteriou (2006: 3) are of the opinion that 'better library facilities further promote research productivity of researchers in terms of the number of articles and their quality'.

Taken together the ERP training series, hiring of dedicated staff, appointment of designated university research administration committees, availability of online platforms, and extensive research facilities are notable and indispensable UCT research resources. Hadjinicola & Soteriou (2006, p. 3) are of the view that 'the presence of a research center focusing on how to apply and administer internal and external funding increases research productivity and quality of articles'. These examples of UCT research capacity have helped to place UCT among the best in the world and the best in Africa (Ranking Web of World Universities, 2012).

Conclusion

For academics to engage in the many tasks that comprise the academic mission, it is necessary that institutions provide all necessary support and infrastructure of the types described here. UCT's ERP program accomplishes much of what is valued in research resources and infrastructure. In establishing the ERP program UCT has been able to build its research capacity, overcome traditional inhibitors of academic advancement, and redress a national crisis in research competitiveness, with lessons that can be learned by other institutions.

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