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LOW RESEARCH PRODUCTIVITY: TRANSFORMATION, INSTITUTIONAL AND LEADERSHIP CONCERN AT A SOUTH AFRICAN UNIVERSITY

ABSTRACT

A key indicator of the academic worth, value and development of a university is its research capacity and publications. The universities of technologies (UoTs) that merged from former technikons have been poorly ranked due to low research performance. Hands have been pointed at the academics, some school of thought blamed the institutions, others pointed at the government agencies in charge of higher education policies, regulation, and restructuring. The aim of this paper is to examine empirically from the institutional point of view, reasons for low research output in the UoTs. A qualitative research approach was adopted by conducting semi-structured interviews with 15 academic staff and a comprehensive focus group meeting among six academics from three faculties in the same UoT. Heavy workload, career ambiguity, poaching, staffing, sabbatical leave policy, large student numbers, unawareness of incentives, poor retention strategies, institutional history, understanding of research mandate, clarity of policies and procedures and poor time management emerged as the contributing factors to low research output in the UoT. According to the fourth dimension of systems archetype, the study contributes to knowledge by allowing a level of understanding into the problem under investigation. Strategic issues to be considered were suggested for the stakeholders as a way forward.

Keywords: *Transformation; productivity; institution; research; leadership; academics; policies.*

1. INTRODUCTION

On national unity, the consensus of the government in South Africa regarding higher education was in need of reformation. It was documented in the White Paper 3 on education that higher education must be transformed to redress the inequalities of the past, to serve a new social order and to meet the national need to address opportunities and realities. Twelve goals were spelt out on education in the White Paper 3, six of the goals are concerned with the issues of equity between learners and lecturers in the higher education reforms. A new institutional landscape was proposed by the National Working Committee that

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made provision for the foundation for establishing a higher education system that is in line with the vision, principles and values of a non-racial, non-sexist and democratic society that responds and contributes to the human resource and knowledge in South Africa. The era of university autonomy ended for government regulatory control and performance management (Akala, 2018).

On the challenges of the transformation of higher education institutions (HEI) in South Africa, in respect of ranking universities and relative policies, Mautin- Cairncross documented that:

> there has been a wide array of transformation-oriented initiatives seeking to effect institutional change *inter alia* the definition of the purposes and goals of higher education; extensive policy research, policy formulation, adoption, and implementation in the areas of governance, funding, academic structure and programmes and quality assurance; the enactment of new laws and regulations; and major restructuring and reconfiguration of the higher education institutional landscape and of institutions (2014:234).

Research reform is at the centre of university transformation programmes in South Africa, just as the standard is globally. Research profiles of universities, institutes and colleges are used as measures of ranking performance. Interests in research activities transcend the managerial discretion and internal control of governments. University administration and funders (international and national) are stakeholders in research stimulation with insights into specific contexts and institutional constrains. In the South African context, the UoTs that converted from technikons have been rated lowest in research productivity among the league of universities (Venter, 2016).

The educational transformation plans, programmes, vision and goals of the government of South Africa that appear robust with lots of promises have left many of the merged UoTs at the base of research performance. Research performance in South African universities has created a dichotomy and institutional class. The low research performance of these UoTs has awakened a salient question. What are the other high-ranking universities doing research-wise that has been neglected by the low ranks? This is a pointer to the factors that contribute to low research output and what should constitute the research characteristics of the UoTs in South Africa given their non-research background. The aim of this article is to affirm a deeper understanding of the barriers that mitigate against research productivity from the institutional viewpoint (Snowball & Shackleton, 2018:127). Studies that attempted to document this problem have muddled up the factors. However, the focus of this paper is on the management issues that call for the attention of university leadership and higher education agencies (Cele & Lekhanya, 2014).

1.1 Research contexts of the UoT in South Africa

The tripartite functions of the academics in HEIs are research, teaching and community engagement. Research has emerged as the most imperative of these three. A key indicator of the academic worth, value and growth of a university is its research publications. Research output influences the strength and funding of universities. It improves the university ranking, contributes to the growth and development of industries and formulation of governmental policies, thereby enhancing national and global development. The downfall of an institution is predicted on a heavy workload due to massification of student enrolment and academics' fear of termination of contracts (Moosa, 2018). Higher education in Africa has remained weak due to a communication gap between institutions and their academics. Many academics are of the view that a master's degree or Doctoral is the peak of their learning, only to discover that after

a PhD they have just been initiated to a career in research and publications. An ill-defined path amid competition is weighing down on many institutions (Masaiti & Mwale, 2017). Institutions' research proliferation is on the increase since it is a determinant of institutional prestige and status (Chipeta & Nyambe, 2012; Masaiti *et al.,* 2017). Academic poaching of talents has been on the increase, thereby reducing the chances of non-performing institutions.

Between 2000 and 2006, the total number of permanent academic staff decreased gradually despite the increase in student enrolment in the UoTs. Many academics in specific professions are lost to the industry due to better employment contracts. This has put untold pressure on the workloads of the academics as well as the burden of coping with daily academic activities, coupled with consistent research delivery (Cloete, 2009). Moreover, the ratio of students to staff remained well above the national target at 44:1, which is far above the institutional average (DHET, 2015). Universities that embrace the internationalisation agenda incorporated massified student enrolment and knowledge economy into their academic operations as a way of demonstrating transformation (Altbach, 2016). Institutional massification has impacted negatively on the UoTs, with student enrolment well in excess of the national average. In 2000, 5700 students were enrolled and by 2015 11 500 students were enrolled in one institution (DHET, SSAUF, 2015). Institutional policies need to be designed and monitored to improve employee working conditions in higher education. In a study conducted by Awung and Dorasamy (2016), respondents were asked to suggest policies that will contribute to institutional development and gender parity and 31.8% of them suggested sabbatical leave. Hoosen and Butcher (2019) examined the challenges of open educational resources reiterating that operation of sabbatical leave policy is a major hinderance on human resources.

Knowledge development, production and innovation in technologies are available in diverse forms to attract research interests. One of the major problems of knowledge development is the unawareness of research incentives for research activities by academics (Javed & Liu, 2018). Human resource practitioners are saddled with ways of designing, attracting and retaining skilled employees, which makes the labour market mobile and globalisation friendly. HEIs are forced to constantly be on the edge of their seats in search of strategies to retain academics (Noe *et al.,* 2017). The university challenges of social competitiveness and new demands that facilitate constant changes are little perceived by the academics (Ion & Castro Ceacero, 2017).

Observers of research policies have not been silent on research conditions in UoTs. As the number of people with doctoral degrees increase, funders of research are also interested to know the extent to which their investment in a researcher has achieved the purpose. To this end, funders are always on the neck of research institutions with new and engaging policies. The institutions are forced to comply with new policies of research funders (Scott, 2018). As the organisation of research shifts, several factors that are discussed in this paper are affected (Ipaye, 2018). Considering the research challenges faced by UoTs and HEIs in South Africa, how bold are we to refer to efforts at changing the institutional landscape transformation?

1. 2 Concept of system's archetype (transformation)

Edward Deming's knowledge on systems theory is based on the principle that "each organization is composed of a system of interrelated processes, and people which make up the components of the system" (Deming, 2019:2). Modern enterprise-minded universities have embraced the use of systems thinking archetypes, which suggest that relationship exists

between our experience of the world and our sense of coherence in explaining the story that supports the notion of "no theory, no learning" (Deming, 2021). Absence of a working theory results in having no means to integrate different experiences into an organised picture. Most organisations are so structurally large that people only see a fractional piece of the whole, they get a skewed picture of the large chunk. Therefore, learning as an organisation demands the creation of a theory about what we do not know, based on what we currently know (Kim & Lannon, 1997). There are four dimensions to the application of the systems archetypes. One is as lenses, which is like wearing a pair of glasses. It is applied by initiating a general enquiry into the nature of a problem. Understanding the main lessons (information taught) and key element (corner stone) and initiating an action or outcome that embodies each archetype. Two, as structured pattern templates, or "shifting the burdens" by asking different questions and giving attention to different things at the same time. Three, as dynamic scripts or tragedy of the commons. The concern of the archetype is not a question of which is right, but which offers unique insights to the archetypes. Four, as tools predicting behaviour or "trying on" different stories that lead to asking provocative questions that result in provocative conversations. Systems archetype enables a level of understanding that permits the analysis of a situation, identification of storylines at work, exploration of implications and gaining understanding of the problem under investigation (Kim & Lannon, 1997).

2. RESEARCH DESIGN

The design of this paper is rooted in hermeneutic phenomenology. This entails a credible and rigorous strategic approach that investigates the phenomenon under investigation. The aim was to understand the reasons for factors that are responsible for low research output in the UoT. The aim was to empirically interpret participant's journeys and experiences relating to the phenomenon. The main question asked dough-tailed on the aim of the research. The goal of this paper was to understand the phenomenon from the human perspective. The research paradigm is the interpretive research that considers the epistemology of ideas. By interpretive research, the focus is to access through understanding participants' experiences instead of explaining and predicting their behaviour. Researchers assumed that findings would emerge from participants as the research process progresses (Creswell, 1998).

3. RESEARCH METHODOLOGY

To produce rich text that describes the experiences of selected phenomena in individuals that relates collectively with the experiences of others, this research adopted a hermeneutic phenomenology (Smith, 2004). The frame of the research methodology of this paper depends on the research question and the philosophical approach of the question. Employee profile questions (demographic) were asked, and the principal question was what are the institutional factors that contribute to low research output at the UoT? The research design for the empirical research is adopted from the interpretive perspective and rooted in hermeneutics works with qualitative research. A qualitative research technique was adopted for this study, the researchers value the respondent's experiences, personality and cultural orientations at work which influences the way they perceive research (Buscatto, 2016). According to Rennie (1998), a qualitative method justifies a coherent logic of study. Ideological components of an established approach are identifiable (Maxwell, 2008). For a research study of this nature that involves exploration, definition, clarification and explanation of data gathered in a specific context, Mugenda and Mugenda (2003) recommend a qualitative research method.

The gathering of data, analysis of same and theory to share associations is permitted by the constructivist theory (Strauss & Corbin, 1994). The themes discovered in the interviews and focus group meeting were selected according to the responses of the participants (Fetterman, 2009). The researcher studied the workplace dispositions of the academics at the UoT and carefully carved out questions that would reveal the issues described in the statistics of employees. Information collected was in the context of the work of the institution of participants individually (interview) and collectively (focus group meeting). The interviews and a focus group meeting were conducted at the work environment of the respondents. The timing, rules and regulations for the data collection exercise were agreed upon by both parties prior to commencement of the procedure. The researcher dove tailed on the process of planning and procedures to conduct and analyse qualitative data, as recommended by Hennink, Hutter and Bailey (2020).

A purposive sampling method was applied as a non-probability sampling technique for the qualitative research design. This was adopted to produce information-rich cases and in-depth study of the reason for low research output in the UoT (Bless *et al.,* 2013).

This study employs qualitative interviews and focus groups as a data source. According to Walliman (2017), all qualitative research employs interviews, focus groups and participants as primary data sources as well as analysis of texts and documents. Fifteen senior academic staff of three faculties at the UoT were interviewed and six senior staff members participated in the focus group meeting. Participants were informed in advance before the interviews were conducted and facts obtained were duly consented to by both parties.

4. DATA ANALYSIS

The questions used in the interviews and focus group meeting were framed to respond to the data collected from participants with respect to their views about the factors that contribute to low research output in the UoT. The first names of the respondents in this study were documented sequentially and numbered from 1 to 15 and 1 to 6 respectively. The responses were documented initially on a spreadsheet to avoid data loss and to ensure trustworthiness, credibility and quality. Thereafter, the captured data were transferred to NVivo 12 software to make it easier to conduct content analysis. The software presented the coded data as nodes and child nodes thereby classifying the information into manageable groups and subgroups. From the coded and categorised data, core themes and sub-themes emerged. Coding was done deductively and inductively.

NVivo 12 software was utilised to organise the data collected through semi-structured interviews and a focus group. The information obtained from the set of non-numerical data was trusted and credible and could be relied upon, since it represented the participants' perspective of the problem under investigation. In this paper, data elicited from the semi-structured interviews and focus group was authenticated to validate the integrity of the findings (Le Roux, 2017). This was achieved by engaging two experienced researchers in the subject area who coded the data and conducted the essential comparisons. The used responses were numbered to further strengthen anonymity. Exact statements are also presented to validate the grouping of the themes.

5. RESULTS

The findings of this research are grouped into two distinct categories. One is the result obtained from the demographic questions and two, the result from the main question. The results follow each other respectively as follows:

5.1 Demography of participants

Table 1 below indicates the responses of fifteen participants.

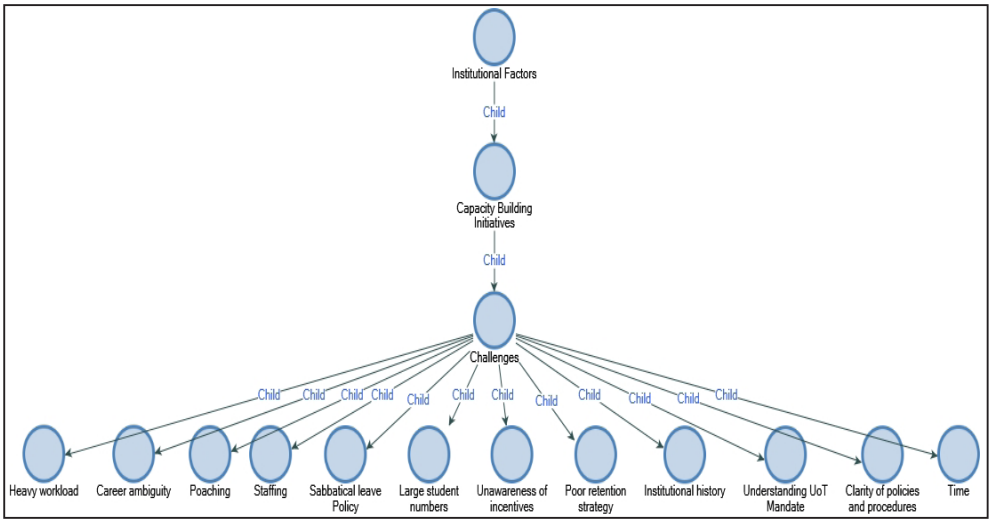
Table 1: Demographic schedule of analysis

Item	Questions	Participants (15)
Years in the university service	Number of years in university employment	over 20 years = 11 15–19 years = 1 10–14 years = 2 under 9 years = 1
Age of participants	How old are you now?	above 61 years =1 51–60 years = 2 41–50 years =9 31–40 years =2 25–30 years =1
Entry qualification	What was your highest entry qualification?	Masters & PhD =1 Bachelor's Degree = 12 Higher National Diploma =2
Current qualification	What is your current qualification?	Looking to obtain a master's degree =13 Have a bachelor's degree=2

From the description above, most of the academic employees that participated in the study have been in the employment of the university for over 20 years. Several of the respondents are between the ages of 41 and 50, most of the academics have only a bachelor's degree while almost all are looking forward to obtaining a master's degree. The interest of this research is not on the smaller contributions of participants but on the high contributions being mindful of the objective of the study.

5.2 Institutional factors that hinder research output

Figure 1 represents the flow of information from respondents in respect of the institutional factors that hinder research output at the university.



Contributory Factors to low research output

Table 2: Reasons for low research output

Themes	Summary of response from semi-structured interview	Summary of responses from focus group
Heavy workload	Respondents quoted an average number of academic lectures at 60 hours in a week instead of 48 hours.	None?
Career ambiguity	No clear path for career evolution. Professionals are forced to pursue degrees, not research.	We develop professionals for the industry and the care for our career is limited.
Academic poaching	Migration of intelligent academics to financially rewarding institutions.	Our institution is not interested in professional growth.
Staffing	The need for more qualified PhD holders with experience in research publications.	The university is circulating staff who have been long doing the same thing.
Sabbatical leave policy	Understanding of employees is limited. Self-interpretation is given to sabbatical leave.	Our understanding is that we are only qualified for sabbatical after we obtain a PhD.
Large student numbers	Massification of student enrolment weighs on UoT compared to other traditional universities.	Student enrolment policy at UoT is a horrible policy. For example, annually another university admits only 40 students for quantity survey, and UoT admits 180 students.
Unawareness of incentives	Incentives are in place, but many employees are ignorant of appropriate climate and organisational culture.	Lack of knowledge about the incentives and corporate climate on motivation of employees.
Institutional history	Background of the institution from technikon to UoT.	Our background as a technikon has affected our culture and orientation at the UoT.

Themes	Summary of response from semi-structured interview	Summary of responses from focus group
Understanding the UoT mandate	Academics have different views of the institutional mandate.	Adding research to the mandate of UoT is not in favour of the institution.
Clarity of policies and procedures	Respondents blame their human resources and management for not clarifying the various policies to them.	Management should employ experienced academics who can interpret rightly policies that change from time to time.
Time	Time devoted to teaching and learning activities leaves little room for research activities at the UoT.	We have no time in the university for research.

6. DISCUSSION

Universities are institutions that, in all societies, have performed basic functions that result from the combination of cultural and ideological, social, economic, educational and scientific roles that have been assigned to them. They are multi-purpose or multi-product institutions that contribute to the generation and transmission of ideology, the selection and formation of elites, the social development and educational upgrading of societies, the production and application of knowledge and the training of the highly skilled labour force (Enders, 2004). To achieve the tasks assigned to them, basic facilities, resources, and leadership must be in place.

Recently, research policy observers and academics have voiced their concerns about the potential impact of research conditions in UoTs (Shaw & Ward, 2014; Philips & Heywood-Roos, 2015). These concerns are often associated with recent shifts in the organisation of academic research, such as increased workloads, intensification and the pace of change (Petersen & Riccaboni, 2012; Sandy & Shen, 2019) and factors including those discussed below.

In this study, respondents overwhelmingly cited workload, which is the concentration of tasks or assignments that an academic employee is accountable for at work, to be heavy at the UoT. For example, in trying to paint a clear picture about the employee workload using the number of hours engaged at work, one respondent said:

> Well, the most important thing is that you need staffing. I mean right now an average lecturer is lecturing about 60 hours, or let us put it this way, a workload analysis reported 60 hours…

Another respondent referred to workload as administrative work (teaching and learning) and affirmed that it ate away 70% of the time available to do every other thing that needed to be done including research.

Furthermore, respondents identified career ambiguity as a problem that contributes to the low research output at the UoT. The phenomenon occurs when the institution has not been able to map out a clear career structure for its academic staff. In Watermeyer (2015), career progression was specific and tied to an interpretation of academic excellence derived from the productivity, prolificacy, status and reputation of the academic as researcher. In this study, respondents argue that they would have been better left with teaching and learning as the value of research was unnecessary. Respondents do not see the idea behind focusing on research since it clearly did not affect their career development.

This study found that the private sector, herein referred to as the "industry", was poaching highly skilled academics to work in companies. The rationale for academic poaching was based on a logic of cost reduction and "business efficiency", which was to be accomplished by importing artefacts of financial accounting ("assets", "cost centres", "added value") into the internal governance of HEIs (Shore & Wright, 2016:47). Respondents in this study were of the view that if the DHET makes the demand of research and additional qualifications, then they should be ready to increase their salary once the demand is met. This is because the industry would naturally approach the skilled academic and entice them with better benefits, reduced workloads and better conditions of work. According to a respondent: "Yes, and even if they are not head hunted, that is poaching, there are other opportunities that people are seeking for various reasons". Another respondent contended that their professional background leaves them with no option than to go with industry poachers who are ready to offer more incentives.

This qualitative study provides very substantive information regarding the human resource practices on sabbatical leave at the UoT. The concept of sabbatical leave was identified in the literature as an enabler of research (Snowball & Shackleton, 2018; Altmann & Kroll, 2018), but this study found that the academics in the UoT were either unaware of the sabbatical policy content or not abreast of its meaning and importance. Forward thinking institutions, through the human resources (HR) management, advise academics on the meaning and appropriate time for taking sabbatical leave in the institutions (Phillinger *et al.,* 2019). However, because of the heavy workload of teaching and learning, many UoTs allow six months' sabbatical leave. Traditional universities allow a year depending on the policy adopted by the institution. Sabbatical leave affords time for academics to work/research to attain a higher qualification. It becomes a challenge if the HR department of an institution is either unaware of the policy of sabbatical or ignores its importance altogether. The respondents in this study confessed they are not aware and do not understand the concept of sabbatical leave.

Respondents in this study are of the view that they need more knowledge on sabbatical leave and how it functions. With respect to sabbatical policy, the findings at the UoT are not consistent with extant literature (Straub, 2007; Furbish, 2009; Miller, Bai & Newman, 2012; & Heathfield, 2019). Despite the importance of sabbatical leave, the concept is misunderstood, misapplied and quite obscure at the UoT.

With respect to teaching large numbers of students, Cadez, Dimovski and Groff (2017) warned that research-based performance management may be detrimental to high quality teaching. Where an academic is a good teacher with good delivery, what if the teacher does not have publications to back up his good work? Or is tied down with many students to teach and no time for research? That is the case with the respondents in this study:

> I'll give you an example, a traditional university, say has got 40 students. Forty students per year average. We have got 180 students, a 180.

Another respondent said:

> we have got to deal with huge groups of class sizes, especially in S1, S2, even right up to S4. The classes are quite enormous to say.'

This result indicates that massification of student enrolment is seriously ongoing at the UoT. That speaks contrarily to the position of scholars. Dee and Goldhaber (2017) documented that massification would undermine quality as teachers reduce. This is because, where academics must carry out the administrative responsibilities attached to teaching and learning and aspire

to be productive in research, the expected outcome may not be better than what it is currently. As much as research is important, it must not be given more attention than teaching time. This is necessary in order to not sacrifice quality of teaching on the altar of quantity and research outputs as suggested by Blatchford, Russell and Webster (2016). The teacher-student ratio as found in this study has already matched and beaten the projections of the UoT for 2025 and rose exponentially from the audit of the UoT in 2012 (CHE, 2012).

Moreover, Cloete, Maasen and Bailey (2015) emphasised that the current conditions of the global knowledge economy, knowledge production and technological innovation have become the most important productive forces. Research output and outcome are often used as bases for measuring knowledge development and production and are predicted to be based on the support incentive mechanism of the institution directly involved (Javed & Liu, 2018). To encourage knowledge development, production and innovation in technologies, incentives for research are made available in different forms and ways to attract the interest of researchers. However, this is not without attendant challenges. One of the challenges is the unawareness of incentives for research purposes by academics in universities. The respondents in this study claimed that the academic staff of the university under investigation are unaware of incentives available for them. It is one thing to provide support, and it is another thing to make support known, available and accessible.

For the effective application of the system's archetype theory in this study, more than one of the perspectives of the theory is applicable. Applying the system archetype as lenses, we can understand the main lessons and comprehend the key elements but are not able to initiate actions or outcomes that embody the archetype. The tragedy of the commons is established on the basis that if the use of a common resource becomes too great for the system to support, the common will become overloaded or depleted and the result will be total diminishing benefits. Massification of student enrolment that has resulted in heavy workloads for academics and the institution has exponentially resulted in diminishing returns for the UoT. Through the application of the tragedy of the commons the study was able to identify between the research actions of the academics and the collective institutional result of low research productivity in the UoT (Shilling, Haki & Aier, 2017). The elements brought into this study are the factors that contribute to low research performance.

7. CONCLUSION

The investigation carried out in this UoT is limited to the institutional reasons for low research output in the UoT. There are also individual reasons for low research productivity that are outside the scope of the objective of this paper. The qualitative approach followed in the article revealed the need for the university to engage with capacity building initiatives and enhance those strategies that enable research output in the UoT. There are future avenues to explore in this regard, especially now that there is a change in the mode of delivery of teaching and learning. With more reliance on technological way of researching, the educational landscape may soon be predictable due to imminent changes in the laws, regulations and restructuring of the academic environment.

The state effort to use educational transformation as a tool to redress the inequalities of the past in South Africa has left a gap and disparity between performing and non-performing universities. In the bid to use research as an instrument of development in HEIs, policies that aided the growth of universities elsewhere have turned out to be an instrument of the downfall of others who are either ignorant of the applications of those

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