Research and development in technikons: lacunae and challenges

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ABSTRACT

This article is underpinned by the current changes in the South African higher education environment and its impact on research within the technikon sector. It is based on a case study of the M L Sultan Technikon (which has subsequently merged with Natal Technikon in April 2002 to form the Durban Institute of Technology). Instruments used include the weighted publication index for 2001 by amount of research activity and a survey of the structural and personal factors related to institutional research productivity. The rationale for the article is the growing sense of disillusionment among academic staff at previously disadvantaged technikons that have a legacy of poor governance and research capacity. Also, standards of research and teaching have come under increasingly close examination as can be seen with the release of the New Academic Policy for Higher Education. Evidence from parallel investigations in the United Kingdom (UK) (Bassey 1995) and Australia (Ramsden 1998) point to the crucial role of academic leadership at management level in maintaining morale, enhancing productivity and increasing research output. The key recommendation of the article points toward a change in the dichotomous model of technikon work (teaching versus research, practice versus theory) to continuous ones. More important to the Arts and Humanities is the need to devise appropriate measures of the range of scholarly outputs.

INTRODUCTION

Technikons have witnessed a dramatic change in their scholarly ethos. Many of the previously disadvantaged technikons have yet to transcend their primary mission of teaching and shift towards scholarly productivity with an emphasis on research and publications. The dichotomy between the universities and technikons has been addressed by The Higher Education Act of 1997 by placing the technikons firmly within the higher education sector as equal partners to universities. The National Plan for Higher Education of 2001 proposed a new landscape made up of different types of institutions and combining institutions. The National Working Group’s recommendation in May 2002 advanced bold and concrete proposals to reduce 36 institutions to 21 through mergers. The logic that underpins this rationality is both complex and controversial. A unique, yet appropriate view, of educational policy posited by Jansen (2000) is that it is hinged largely on political symbolism rather than the substance of change in education. The evidence of this standpoint is the growing distance between policy and practice in South African higher education. The pertinent question is: What has changed in higher education in spite of the numerous policy interventions of the past decade? Racial exclusivity has been eradicated in terms of student intake and academic appointments. However, there has been no shift from the bureaucratically centralised model of management nor the political authoritarianism of apartheid.

This article, based on a case study of a previously disadvantaged technikon (M L Sultan Technikon), will explore the following issues within the current context of a transforming Higher Education landscape:

- Issues around building a research ethos at technikons
- Research and career development
- A paradigm shift in terms of research output
- Rethinking institutional management.
ISSUES AROUND BUILDING A RESEARCH ETHOS AT TECHNIKONS

The technikons, in the light of its history, are placed in an invidious position in terms of two key factors of academic transformation: staffing and research infrastructure. Historically disadvantaged technikons have staff complements that are generally under qualified and this militates against its successful integration into the higher education sector. The absence of a research infrastructure, the low research outputs and the inability of staff to offer postgraduate programmes may lead to a rethink of the role of many previously disadvantaged technikons as higher education institutions.

Technikons are generally characterised by a highly defensive and territorial stance within the current context of mergers and rationalisation, a poor record of academic freedom, given its history of patriarchal autocracy, feelings of inferiority in relation to the universities and the lack of an academic and research ethos. The fundamental cornerstone of the transformational process is lacking in most technikons: a concrete transformational plan as well as an implementation document to complement the plan. There is no strategy towards a decentralising approach to management. Participation and entrepreneurship of the stakeholders is lacking and there is limited strategic reflection and renewal. The acceleration of the information and knowledge revolution as well as the great demand for research products poses new challenges for technikons. One of the consequences of massification (with most students being academically unprepared) should be a change from an elite system towards a form of mass system with greater participation, more democratic governance and a sense of quality focusing primarily on outcomes, chief of which is research. The change in the nature of the student corps concomitant with the demand for a more applied nature of training, the need for new and applied technology and the shift towards performance-based funding systems call for urgent strategic considerations. The research, teaching, community service and management must be characterised by the kind of objectivity and critical thinking that is intrinsic to excellent scholarly and scientific practice. The lack of an integration of the research, teaching and community service component needs to be addressed. The reconceptualisation of the synergy between the scholarships of teaching and research would lead to a creative, critical and innovative interaction with knowledge as well as the creation of a culture of research and critical thought.

The subtle ranking of institutions into “teaching” and “research” institutions, leads to the bulk of research funding going to those successful in the research ranking exercise. Funding is thus concentrated in a limited number of “centres of excellence”. Moves are also afoot in institutions to label specific departments as strong “research activity areas” concomitant with the lions share of institutional research funds channelled to those departments. The case study revealed that it is the science and engineering faculties, by virtue of their strong research ethos, that enjoy research support while faculties like the social sciences and the humanities are marginalised and viewed as irrelevant within the national and institutional research agenda. The dangers of this trend are that research capacity building is limited, research audits for the institution are low and a research culture is not engendered. It also results in a situation where the critical community of scholars is limited to a few departments and quality research across the faculties is lacking. In a situation of limited research capacity and scarce resources for a large section of the academe, of competition between individual researchers and between individual institutions, of the elevation of some institutions to centres of excellence at the expense of others, it is highly unlikely that a critical spirit will flourish.

The tradition of research in many technikons is limited (see table 1 on next page). The majority of the lecturers need to retool themselves as academics and transcend the role of teachers. Their disciplinary base is generally limited to a subject or two as opposed to a core social science or science discipline. The result of this limited training is that many lecturers find it difficult to lodge research projects within theoretical or policy paradigms. Their higher degrees are not viewed as a gateway to a post doctoral research career. The anti intellectualism runs through the system from top to bottom. The sad reality is that most of the senior academics (deans, heads of department and management) are such poor researchers themselves that they cannot make the kinds of demands on new researchers in their faculties for sheer lack of credibility (Jansen 2002:1).

Supervision is another major factor that affects quality research. The case study has revealed that many supervisors have no training in postgraduate supervision, are supervising students over a wide range of topics and using methodologies they have not practised themselves. The majority of supervisors and students do not have a basic knowledge of quantitative research methodologies resulting in an over dependence on consultants. A lack of interpretation skills result in invalid and unreliable empirical findings as well as difficulty with theses production. The teaching of research methodology needs serious consideration. Most lecturers do not have knowledge of basic research methodologies. They feel that what students learn in the process of doing research is important, not the product. Many institutions offer coursework postgraduate programmes without strong research components because of the lack of research methodology teachers. This situation is not limited to the Technikons. Jansen argues that master’s degrees with an up to 50% coursework component at many...
universities have become seriously devalued, and that the market is being flooded with students who have meaningless postgraduate qualifications: “... students cannot do basic statistics at master’s and doctoral levels, ... cannot talk intelligently about any major research tradition, or have not designed an even simple research instrument at any level of sophistication” (Jansen 2002:1).

There is little capacity to deliver higher education programmes at many of the historically disadvantaged Technikons. Credentialism (the paper chase) continues to be encouraged and rewarded. The soft option within such contexts is to read for degrees that fall outside the ambit of their teaching areas the current favourites are postgraduate education degrees and MBA degrees offered by private colleges. Many junior lecturers have taken up the challenge to upgrade their qualifications resulting in fewer takers of research funding for applied and/or basic research. The consequence is that the inability to conduct research not only results in embarrassingly poor showing in research audit reports for previously disadvantaged technikons (as evident in Table 1), but also the loss of potential revenue from business, industry and government for research outputs.

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(Republic of South Africa. Department of National Education)

RESEARCH AND SCHOLARSHIP/CAREER DEVELOPMENT

Institutions are more dependent than ever on their academic staff for their future survival and success. A study conducted by Katz and Coleman (2002) categorised academics into three areas in terms of research and scholarship: “establishment”, “advance ment” and “maintenance”. Lecturers in the age group 30–45 generally engage in research for extrinsic rewards like a higher degree concomitant with additional pay and promotion. They are either in the “advancement” or “maintenance” stage of their career and use research to advance their career. The “maintenance” category (in the age group above 45) can be further divided into three groups: “stars”, “solid citizens” and “decliners”. The “stars” and “solid citizens” view research as an activity that can contribute to their professional growth and self actualisation. They engage in research for intrinsic rewards like esteem, need for affiliation, relatedness and job autonomy. A fair number of academics fall into the “decliners” group. They do not engage in any research, do not have the capacity nor the motivation to participate in research activities, their quality of teaching and scholarship is low and they constitute a liability to the institution. The “establishment” category consists of a small percentage of academics who...
occupy junior lectureship posts and are in the early stage of their career. They view research as a strategy to gain a secure post in the academy.

Institutions need to advocate a more rigorous re search development programme that not only ensures credentialism (vertical), but also self directed re search resulting in horizontal career development. The low levels of academic qualifications during the juncture when technikons were reconceptualised as higher education institutions led to an unprecedented scramble towards credentialism. The case study reveals a dramatic shift in the percentage staff with higher degree qualifications from 20% in 1997 to 58% in 2001. This enthusiasm for a vertical career movement has not translated into a horizontal and more inclusive academic development resulting in research activity for self investment. Vertical career movement relates to salary, status, hierarchy and administrative responsibility. A horizontal career movement relates to individual’s areas of knowledge, skills and expertise and is concomitant with a research development model.

Institutions need to rethink the emphasis on credentialism and shift towards a research based model that confers intrinsic rewards on academics and this can take the form of respect, trust, responsibility, confidence and expertise instead of only promotion to a higher rank. The limited number of senior posts in the bureaucracy is leading to feelings of resentment, sadness, frustration and severe personal problems. Employee assistance programmes at many institutions identify work related stress as the chief problem experienced by academics. Central to the stress are issues around promotion and vertical movement on the hierarchical ladder. Challenges for research management at institutions are:

- How can research promote horizontal career development?
- How can research contribute to institutional development?

Reasons for a lack of scholarly productivity are both naive and complicated. Newly appointed and younger lecturers maintain that their programmes are very demanding and they also need to teach new courses and familiarise themselves with new content. Lecturers in the advanced stage of their careers identify factors like administrative responsibilities and committee work for their poor research output: A most interesting finding emanating from the case study is the increased interest and value of teaching. However, teaching excellence is generally excluded from evaluation mechanisms in institutions in favour of traditional research outputs. Lecturers appointed over a decade ago maintain that their job description did not include research and publications. Their heavy workload over the years left no time for research activities. The range of reasons for poor research outputs is wide. However, one fundamental issue that continuously emerges is the dichotomy between the scholarships of teaching and research. Teaching is placed on a lower plane than research instead of acknowledging the integrated role of both the scholarships and advancing the synergy between them.

Boyer (1990) posits interesting ideas for the rethinking of academic work to allow greater recognition of its diversity and argues for institutions and academics to adopt varying mixes of “four scholarships”:

- the scholarship of discovery (original research and the advancement of knowledge);
- the scholarship of integration (connecting ideas and synthesis across discipline boundaries);
- the scholarship of application (assembling knowledge through an interaction between intellectual and “real world” problems and practice); and
- the scholarship of teaching (transforming knowledge through bridging the gap between the scholar’s understanding and the student’s learning).

Boyer’s recommendation is an appropriate and relevant intervention within the current context of the unnatural divide between teaching and research concomitant with the exclusion of the scholarships of integration and application in many institutions. The essential thrust of Boyer’s model is the need to see teaching and research within a continuum and not distinct identities, more specifically as overlapping qualities of academic work. This model is also appropriate for the activities and products that constitute academic outputs in the arts and social sciences where products such as performances, artefacts, creative works, workshop and seminar presentations, and trained research students are common.

A paradigm shift in terms of research output

The consequences of individualism and researchers working in isolation from each other militate against a strong research ethos. Bassey (1995:128) analysed a sample of research output in a single year in the UK and concluded that: “Although there are some significant insights, overall the individualism and isolation of many of these researchers is unhelpful. There is too often a prevailing dilettante tradition of individual enquiry which looks like a game of trivial pursuit.” Bassey sees this “dilettante tradition” as a consequence of valuing involvement in research over and above its outcome. It stresses the act of searching for new knowledge rather than the contribution which the new knowledge may make to theory, policy or practice. It values the singing, not the song.

The demand for publications and the tension to
publish for the sake of survival in the academy has had negative consequences. The single authored publications are almost inevitably on too small a scale to result in significant findings. Academics find it less valuable to research together in teams because of hurdles of a systemic nature, one of them being research rewards. There is a strong focus on publication of research rather than its impact. It encourages the view that: “The more publications produced the better, the more words written the better, the more times a paper is cited is better, single authorship is preferable to multiple scholarship, and academic journals read by researchers are more valued than professional journals” (Bassey 1995:128).

Administrators of research place great emphasis on publications in overseas journals as opposed to national journals in order to enhance the individual’s and the institution’s reputation (Murray 2002:71). This works directly against the objectives of research in departments in the humanities like Design, Language and Communication, Education, Music and Journalism where the contribution to understanding local knowledge is central. It also militates against building a critical community of arts and social science researchers in South Africa intent on developing an inclusive and critical discourse.

These attitudes could be altered if funding agencies were to rethink the way they evaluate research output. The National Research Foundation (NRF) encourages team research with the aims of capacity building among targeted groups (black researchers, women researchers and previously disadvantaged institutions) and increasing efficiency. However, the emphasis seems to lie with interdisciplinary and cross institutional research, not with team research within individual departments. Also, a pertinent silence in the NRF policy is the exclusion of social scientists within natural science projects. The latter intervention would help to ensure a social commitment to natural science projects and, hopefully lessen the unfortunate and debilitating gap between the natural and social scientists in higher education institutions.

The researchers in the humanities are currently being rated by the NRF, similar to the system used exclusively for the natural science researchers in the past. The rating of researchers should take account of their contribution to understanding local problems, their innovative teaching strategies, novel approaches to contributing knowledge in their disciplines and not just a quantitative analysis of conference proceedings and accredited publications. Some of the urgent challenges facing institutions include the following: Are we producing good research? Are we producing relevant research? What is the quality of our research? Louis Crouch, an advisor to the Department of Education from the Research Triangle in the USA described the shortage of skilled personnel in the country as “scary” (cited in Murray 2002:72).

Crouch is particularly concerned about the poor quality of systems analysis, modelling and projects, resulting in plans which are inappropriate and unmanageable, and which could have benefited from a stronger tradition of enquiry and conceptual framing (Murray 2002:72). The emphasis on traditional research modes and products does not take into consideration the unique activities of the Technikon sector — the process model utilised by departments like computer and information studies, the production of artefacts in the design schools, exhibitions of visual and fine art, music composition and concerts, etc.

Research outputs in the arts need to be reconceptualised. No accreditation has thus far been awarded to works of art like theatrical and dance performances; graphic, textile and fine art artefacts; exhibitions; film and video productions; etc. The exercise of examining the way in which a scientific paper is written and its comparison to a literary piece, painting, music score etc. might allow us to understand where the work of art and the work of science are each located, as well as their means of symbolic representation (Cooper 2002:86). The questions that need to be addressed are:

- How different are the written and visual symbols of the literary, visual and performance arts from those of science, and in what way?
- How are the different meanings conveyed, and what is the realm of those meanings?
- Is a scientific paper a literary art, and if not, why not?
- Is a literary piece fulfilling a scientific function?
- Where does the work of art reside in the research paradigm?

It is evident that there is a great need to devise appropriate measures of the repertoire of scholarly and research outputs in the arts and humanities. The traditional benchmarks lodged within strongly positivist frameworks militates against research advancement in the arts.

Rethinking institutional management

One of the key lacunae that has been identified in the case study is the lack of an effective, participatory and transparent style of management. The need for managerial accountability is urgent. Self renewal requires fresh thought about managerial roles, skills and infrastructure. Many of the management structures have been used over long periods of time without reappraisal and rethinkng strategic directions. The endemic financial crises, high management turnover, poor research output, and low quality
graders are the consequences of poor academic management.

Management does not only need the capacity to manage change positively, but also to understand the ways in which the institution achieves its core function of the imaginative acquisition of knowledge, i.e. research. It is impossible to manage institutions in the old unwieldy “collegial” way (Scott 1995). The discipline based departments are the main organisational unit of the collegium model where the standards are set by the intellectual scholarly community and evaluation is by peer review. However, current management styles are generally bureaucratic and far from collegial. Focus is on regulation, consistency and rules. A group of senior administrators wield considerable power and decision making is rule based and students and academics are statistics. The autocratic nature of management has resulted in staff disillusionment, poor research output and poor scholarship concomitant with poor governance and weak financial systems. The irony of the “big stick” approach are:

- poor quality teaching and assessment processes that are targeted at failure; and
- ineffective and unenthusiastic presentation characterised by a lack of critical education, active participation, cognition and independent learning.

The changing nature of academic work demands a shift from the bureaucratic strategies toward an enterprise model where the focus is on competence. The enterprise model is appropriate for scholarship and research. It ensures devoted leadership, flexible decision making and emphasises accountable professional expertise.

The quality of management is one of the most important factors in the success of any organisation. There is an urgent need for both a management review and development in terms of organisational design within the context of the rapid change that higher education institutions are undergoing. Within the context of change, existing management should be reviewed and related to the nature, objectives and requirements of the whole institution. Central to management development are interpersonal skills, self organisational skills and high level business skills. These skills together with technical knowledge and expertise would enable management to achieve institutional goals in the most effective manner.

The key component of the design and delivery of management development is benchmarking against the following criteria:

- How is the institution performing in achieving its academic objectives?
- How effective is management in key areas of performance? and
- How does the institution compare with institutions with similar objectives and cultures?

Technical and functional skills are not sufficient for managers, they also need human and conceptual skills. The “boss boy” days are no more acceptable what we need are team leaders who will earn the respect of the academe. The approach needs to shift from a bureaucratic top down approach to a competency based approach. Management expects the staff to turn the institution into centres of scholarly and research excellence without them having any attributes of excellence. Appointments to management positions must have research and scholarship as chief criteria for selection. Benchmarks should be established to determine whether there is a shift towards a more efficient management. Management of most institutions have unfortunately not expanded their awareness of gender, race and class as interlocking systems of domination. In the guise of transformation, power has been re constituted unproductively through the renewed emphasis on administrative structures and hierarchies of mostly patriarchal domination that estranges and alienates itself from the academic functioning of the institution. Ramsden correctly articulates that academic work gets done better when the leadership is enabling, coherent, honest, firm and competent, when it blends a positive vision for future change with a focus on developing staff a focus on helping them to learn (1998:365).

CONCLUSION

The changing nature of academic work demands a shift from the bureaucratic management strategies towards an enterprise model where the focus is on competence. The enterprise model is appropriate for scholarship and research. Both management and lecturers need to be placed greater emphasis on accountability and professional expertise. Previously disadvantaged technikons need to rethink their commitment to research development by urgently addressing the lack of basic physical resources, the need to break the silence on issues like the dichotomy between the scholarships of teaching and research, inappropriate schedules for lecturers and the consequent poor performance in research audits. The continued marginalisation of the research outputs and products that emanate from the arts and humanities must be addressed. Other important challenges for transformation at previously disadvantaged Technikons is the creation of a relevant higher education ethos, the preparation of students to pursue research and the promotion of academic discourse that would assist in equipping staff to undertake research.
REFERENCES


