

RESEARCH AT DURBAN INSTITUTE OF TECHNOLOGY

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## CONVERTING RESEARCH FINDINGS INTO PEER-REVIEWED ARTICLES

As part of ongoing interventions to enhance research output at the DIT, the Centre for Research Management and Development (CRMD) recently invited Professor Laurence Wright, Director of the Institute for the Study of English in Africa at Rhodes University. Professor Wright is the Managing Editor of "English in Africa", "Shakespeare in Southern Africa" and "New Coin". The activities of the Institute include research into South African literature, language and education policy. Professor Wright has published widely and is acknowledged as a leading figure in the Arts and Humanities both in this country and abroad.

The workshop on "Writing Research Articles for Publication" presented by Prof. Laurence Wright was hosted by Prof. Gansen Pillay and Prof. Brian Pearce at the CRMD on 24 May 2004. The workshop was aimed at academics and researchers in the Faculty of Arts.

Professor Wright emphasized that he did not represent Rhodes University, the ISEA, or the NRF, or any other organization but was speaking as a fellow academic. He noted the discrepancy in research outputs between Universities and Universities of Technology, and the ageing, gender and racial biases of South African researchers. In the 50s and 60s, he said, particularly in the Arts and Humanities, it was "not considered polite" to publish research articles. Lecturers were seen as imparters of received knowledge gleaned from beyond our shores rather than as originators of new investigations and new ideas. That situation has changed radically and now there is a huge drive towards research at all institutions of higher learning.

"At a time of mergers and restructuring", he said, "it is very easy for academics to



Prof Laurence Wright,
Director of the Institute for the Study of English,
Rhodes University

lose sight of their own research goals and ambitions". He argued that at such times we have to keep a very clear focus on our own research objectives. The theme of his talk was that researchers at our institution need to take responsibility for their research, and that it is up to the individual academic to take care of his or her own academic career. Academics need to find their own intellectual fulfillment, and the predominant means of realizing

themselves as academics was through ground-breaking research and publication. "We cannot", he argued, "expect the institution always to give us clear blocks of time for research. We have to create our own opportunities." "At the end of the day", he said, "however much teaching we do, however many committees we serve on, the institution is not going

to thank us for not doing any research. We must look beyond our own institution to our disciplines and to our individual contribution to our disciplines in an international context." Paradoxically, he noted that in doing this we will be serving both our own careers and our institution. He emphasized the importance of spending every moment of the day on writing research articles and remarked that, "even five minutes can be used profitably to write a paragraph." He argued that research in the arts was closely linked to the activity of writing, that writing based on new insights and fresh information was itself a mode of research and a form of intellectual enquiry. He also noted that there should not be a tension between teaching and research, that in his experience, the best researchers were also the best teachers in that they were at the cutting edge of knowledge and imparted a sense of that joy in the discovery of new ideas to their students. In the discussion that followed, he was asked about the relationship between art and research. He argued that creating art and undertaking research were different processes and that the two activities should not be confused. He believed that "art should be valued as art (and recognized as such in an institutional context)" but should not be forced to conform to the criteria of research 'outputs'.



Participants at the Workshop

#### MESSAGE FROM THE DIRECTOR



#### **Prof Gansen Pillay**

The importance of research at HEI's in South Africa is developing its own character. This is evident when one examines the latest information available from the Department of Education and the Council on Higher Education. The mission of the CHE is to contribute to the development of a higher education system characterized by quality and excellence, equity, responsiveness to economic and social development needs and effective and efficient provision, governance and management.

The mission of the CHE is to contribute to the development of a higher education system

As the first HEI merger in South Africa, it is crucial that the DIT consolidates its teaching, research and community outreach activities in line with the requirements articulated by the CHE so that, in the future, state funding for research can be optimized. According to the CHE, it is important that:

- Effective arrangements are in place for the quality assurance, development and monitoring of research functions and postgraduate education;
- Research functions and processes are supported and developed in a way that assures and enhances quality, and increases research participation, research productivity and research resources; and
- Efficient arrangements are in place for the quality assurance, development and monitoring of postgraduate education.

A number of interventions relating to research have been initiated at the DIT. These include seed funding, national and international conference grants, hosting of conferences, postdoctoral fellowships, grant for research equipment, etc. It is hoped that academics and researchers at the DIT will optimize the opportunities that are available. After all, you are the sculptor of your destiny!

This issue of RE@DIT covers numerous initiatives that are aimed at research capacity building and ensuring excellence in research activities. It reports on a workshop dealing with research policies and procedures, workshops on research funding and women in research, a workshop on publication writing, profiles of key DIT researchers, conference presentations and peer-reviewed publications, interinstitutional linkages, an update on TELP II, etc.

Good luck with your research!

## **RE-INVENTING THE FUTURE**

#### A workshop on research policies and procedures

As part of DIT's process of consolidation, the Interim Research Committee was replaced earlier this year by an Institute Research Committee (IRC) which was formally approved by Senate. One of the responsibilities of the Centre for Research Development (CRMD) and the Committee is to review all policies and procedures relating to research at the DIT.



The CRMD hosted a workshop from 23 to 24 July 2004 at Rawdons Conference Centre in the Natal midlands. The objectives of the workshop were:

- To rewrite an overall research policy for the DIT in line with the requirements of the HEQC;
- To examine all operating procedures relating to research from various national and international institutions;
- To develop, based on national and international good practice, a set of operating procedures for all research related activities at the DIT; and
- To develop corresponding user-friendly administrative forms.

Participants included all members of the IRC and the CRMD's secretariat. External participants included Prof. Bala Pillay (UKZN), Dr. Annette van der Mescht (Mangosuthu Technikon) and Mr. Ferdi van der Walt (ex NRF and independent Research Consultant). Drs. Prem Naidoo, Liz Lange and Mala Singh from the CHE were also present and discussed issues of alignment of institutional research policies in line with the requirements of the CHE.

Working groups were formed to deal with research activities affecting:

- Intellectual property;
- Contract research;
- Ethics:
- Postgraduate students; and
- Staff.



(left to right) Drs. Liz Lange and Prem Naidoo

The workshop resulted in an overall policy being developed for research at the DIT which will be presented at the next Senate meeting. Drafts of operating procedures were developed. The process will continue until a set of procedures are finalized for submission to Senate. CRMD take this opportunity of thanking all participants for their valuable input. Special thanks to Dr. Prem Naidoo and Dr. Liz Lange from the CHE.

#### **TEAM BUILDING:** one of the key ingredients to DIT's success

[An update on the Tertiary Education Linkages Project (TELP) II]

On 1<sup>st</sup> June, the grant period for both TELP II projects officially commenced at DIT with the award of the sub-contract agreement letters. These letters establish the formal relationship between the United States Agency for international Development (USAID), the United Negro College Fund Special Programmes (UNCFSP) and the DIT through the office of the Vice-Chancellor.

The two projects at the DIT are:

- The enhancement of quality of provision in the management of information at the DIT as a multi-campus merged institution (long term project of twelve months duration); and
- The quality management of curriculum in programmes offered at multiple sites of delivery in a merged institution (short-term project of six months duration).

Several teams are responsible for the implementation of each of the two projects, overseen by a Project Implementation Team (see RE@DIT, Vol. 2, Issue 2, May 2004). One of the first activities in the TELP II project focused around beginning to build the capacity of all the team members in project management and implementation. Thus, a workshop was held at the Tala Game Reserve on 11<sup>th</sup> June 2004 for fifty-one participants from the following sectors: Library, Finance, Information Technology and Management Information.

The main focus of the workshop was on exploring some of the theoretical aspects

of management and implementation of projects in general. The theories were then placed in conttext through considering specific instruments and tools that UNCFSP has developed to guide the implementation of



TELP II projects. *ICT working group during one of the sessions* Mr Robin Toli ably facilitated this activity, drawing on his experience and expertise in the management of projects that spans his current employment at the National Treasury, together with his previous experience as the TELPI coordinator at the former M L Sultan Technikon.



A second purpose of the workshop was to enable the teams to get to know each other better. Thus, whilst much of the day was spent in serious discussion, the teams took time out to participate in a team building experience drumming, facilitated by the Drum Cafe. An hour of intense interaction through making music stimulated a variety of responses vital to team work, such as listening, following, keeping a team rhythm, but also being able to express individuality.

The combined music from the rhythm and beat of over fifty drums was powerfully inspiring. The implementation of both the long and the 'short' TELP II projects will be gaining momentum over the forthcoming months, and the impact will be felt throughout the DIT as new role-players are drawn in and new initiatives commence.



Some participants during a team building exercise.

#### "WOMEN IN RESEARCH" at the DIT

In a number of countries, the numbers of female graduates are proportionately higher than those of male graduates. However, the labour market remains male-dominated. Women face obstacles to their academic research simply because they are women, and as a result, are under-represented in various research disciplines and in the decision-making bodies concerned with academic research issues. Achieving equal and full participation of women in all research disciplines and at all levels will enhance diversity, and promote further progress and excellence in research.

In an attempt to address this challenge at the DIT, the CRMD hosted a workshop at DIT's Hotel School Restaurant. The objectives of the workshop were, inter alia:

- to highlight research funding opportunities for women;
- to explore initiatives that can facilitate an increase in the number of women participating in research; and
- to identify interventions that need to be instituted to meet the challenges facing women researchers at the DIT.

The Vice Chancellor, Prof. Dan Ncayiyana and Prof. Gansen Pillay addressed the meeting. Participants were afforded an opportunity to discuss any aspects preventing them from reaching their full potential in research. At the workshop a needs analysis questionnaire was circulated and the data is currently being assessed.

The CRMD will be publishing a special bulletin on "Women in Research at the DIT". If you are a woman currently active in research at the M or D levels or carrying out research for non-degree purposes and have not been contacted by the CRMD, you are invited to submit a paragraph on your current research activities for inclusion in the forthcoming bulletin. Further details may be obtained from Ms. Charmaine Naidoo (X 2523).



Please do not litter. When finished reading, pass it to someone else or place in a paper recycling container. Thank you for your co-operation.

## RESEARCHER PROFILES

#### Dr. Sioux McKenna

Sioux received her PhD from Rhodes University on 2 April 2004. Her thesis, titled "A critical investigation of the discourses that construct Academic Literacy at the Durban Institute of Technology" received high acclaim from her examiners, who commented that her work will "provide a springboard for ongoing developments in higher education in coming years".



Located in a post-modern orientation, her PhD research uses critical discourse analysis to explore the ways in which academic literacy is constructed and experienced by staff and students. Academic literacy includes the discipline specific norms of higher education considered necessary for student success. The thesis not only poses questions regarding the appropriateness of some of these norms in a South African University of Technology but also shows how resultant practices can negatively impact upon and shape identities, most particularly those of students. Sioux has published three SAPSE accredited articles from her PhD in the last year and hopes to develop two further articles after presenting aspects of this research at the South African Association for Research and Development in Higher Education in Durban and at The Learning Conference in Havana, Cuba in June.

Sioux is also an NRF Thuthuka grantholder and runs a departmental research group called "ReAL" (Research in Academic Literacy). "When the merger was first upon us, I realized that we came together with a range of educational perspectives and different ways of working. Forming a departmental research group, with Professor Clarence-Fincham from UKZN as a mentor, seemed a good way of valuing these differences and encouraging cohesion. Through NRF funding, we have been able to attend a conference in Cape Town together, share readings and debates and supportively develop our capacity. This year our focus is on publishing our research projects", explains Sioux. She also supervises two Masters students within this project.

"I have presented papers at numerous conferences and have always enjoyed reflecting on my work at DIT as the basis for my research. The stumbling block for me was always publications. It felt very intimidating to send an article off to a journal. 'Peerreview' seemed to be an imbalanced power relationship rather than a collegial response," comments Sioux.

Now that Sioux has successfully jumped through what she calls the "publication hoops", she is looking forward to facilitating a series of workshops on Research and Supervision for all DIT staff. These will be co-facilitated by Ruth Searle from UKZN and a number of invited guests, and will be advertised in the *Monday Edition*.

Sioux is the Acting Director of CHED (Centre for Higher Education Development) until August 2005, while Professor Gawe is seconded to the TELP project in Pretoria. "Because CHED is relatively new and academic development is becoming a national imperative, this has been a particularly challenging role," says Sioux. "The broad range of higher education development projects demanded by national policy and institutional need makes it a difficult task to determine CHED's focus and priorities. On the other hand, each CHED intervention is a perfect research opportunity!"

#### Dr. Nirusha Lachman

Associate Professor Nirusha Lachman currently holds the post of Program Head of Anatomy in the Department of Human Biology in the Faculty of Health Sciences at the Durban Institute of Technology.

She is currently involved in the Anatomical Studies on direct HIS Bundle Pacing in Interventional Cardiology (Collaboration with Dr Shah-Harvard, Boston), research in Cardiovascular Anatomy, Medical Education, HIV-Cadaveric studies and Radiology.

The groundbreaking research that she was involved in at the University of Louisville, Kentucky, USA provided anatomical evidence for a morphologically distinct eleventh cranial nerve. This information was accepted and resulted in the alteration of the original concept of cranial nerve nomenclature thereby re-defining the system of cranial nerves.



She is currently supervising/co-supervision a number of M and D students at the DIT, UKZN and the University of the Witwatersrand. She has received numerous academic accolades which include, inter alia:

- Received Bob Symington Award from the Anatomical Association of Southern Africa for Excellence in Research, 1998
- Received grant from American Association of Anatomists in support of Education Research, 2001.
- Received University of Durban Westville, Faculty of Health Researcher of the Year, 2001 award.
- Received Fellowship to the Department of Plastic and Reconstructive Surgery at the University of Louisville, KY, USA: 1999-2000.
- Received Oppenheimer travel grant: 1999.
- Invited to Vanderbilt University, Nashville, USA: 2002.
- Invited to University of Louisville, KY, USA: 2002-2003.
- Invited to Mayo Clinic, Rochester, Minnesota, USA: 2003.
- Received commendation at the AGM of the AACA meeting in Gainesville, FLA, USA for the publication of paper titled "Anatomical evidence for the absence of a morphologically distinct cranial root of the accessory nerve in man". The paper was said to have increased the impact factor of the Journal "Clinical Anatomy" in which it was published.

The above paper received comment on the Editorial page of the Journal and cover-article status. Contributions from this research have impacted on anatomical information as it appears within standard texts and is currently being included in terms of factual amendment in the latest editions.

Nirusha co-ordinated and assisted in the organization of the 34th ASSA Conference, which was for the first time hosted by a Technikon. The conference is an annual event hosted by Anatomy Departments at all national Medical Schools. Over 120 delegates attended the meeting from National and International Universities with a record number of presentations.

In the future, Nirusha wants to participate in the editing of anatomy texts, continue with research, create more global linkages, establish a Fresh Tissue Dissection Lab at the DIT (first in the country), encourage postgraduate work in anatomy research, establish a research facility for Clinical and Applied anatomical study at DIT, and continue to serve her community, students and subject.

#### ATTENDANCE AT CONFERENCES

Staff who attended conferences locally and abroad include:

- 1. Sunder, R. Osteoporosis: The shifting scores of BMD. 17th National Society of Radiographers of South Africa, 22-24April 2004, ICC, Durban.
- 2. Mdletshe, S and Magojo, T.S. Factors that contribute into the late presentation with cancer of the rural Zulu speaking patients into the major cancer treatment centers in KwaZulu-Natal (KZN) (Prior to December 2000). 17th National Society of Radiographers of South Africa, 22-24 April 2004, ICC, Durban.
- 3. Fregona, C.M.M and Pete, M. Re-drivers, scaffolders and explicadors: the role of WebCT in knowledge design for 21st century learners. *WebCT Users Annual National Conference*, 5-6 *April 2004*, *University of Stellenbosch*.
- 4. Turkington, T. Free to speak: The making of DIT on-line. WebCT Users Annual National Conference, 5-6April 2004, University of Stellenbosch.
- 5. Ngcobo, J.N and Motha, M.J. The impact of public administration and management theories or approaches on public participation. *State of Public Administration and Management Theory in South Africa, 13-14 May 2004, Tshwane University of Technology.*
- 6. Kanny, K and Mahfuz, H. Cyclic characteristics of X-Linked and linear cored structures and elevated temperatures. 11th European Conference on Composite Materials, 31 May 2004 3 June 2004, Rhodes, Greece.
- 7. Pillay, P and Knight, S.E. An evaluation of the implementation of the National Guidelines on cervical cancer screening clinics within the eThekwini Municipality. *Public Health 2004 Conference*, 6-8 *June 2004, Holiday Inn Garden Court, Durban*.
- 8. Govender, V. HIV/AIDS dilemma in health care: Legal obligations vs political commitment. 2004 International Conference of the Global Business and Technology Association, 8-12 June 2004, Holiday Inn, Cape Town.
- 9. Madaree, A and Lachman, N. Case of rare division of the metopic suture: Anatomic, embroyologic and surgical consideration. 21st Annual Scientific Session of the American Association of Clinical Anatomists, 9-11 June 2004, St. Mary's College, Moraga, California.
- 10. Narsee, S.D. Navigating unchartered waters: Peace within hearts, hands and minds. *The 11th international Literacy and Education Research Network Conference on Learning on 24 June 2004* 3 *July 2004*, *Havana*, *Cuba*.
- 11. Pete, M. and Fregona, C.M.M. Sustaining online learning during times of change through a multi-disciplinary community of practice. *Ed-media 2004 World Conference on Educational Multimedia, Hypermedia and Telecommunications, 21-26 June 2004, Lugano, Switzerland.*



## Inter-institutional linkages: The DIT-Stellenbosch University collaboration in Biotechnology

Professor E van Zyl, Department of Microbiology, University of Stellenbosch

The Department of Biotechnology recently invited Prof. Emile van Zyl from the Department of Microbiology at the University of Stellenbosch to deliver a lecture and spend time in discussions with the Enzyme Technology research group led by Prof. Suren Singh and Dr. Kugen Permaul. The Departments at both institutions have a long standing association and have previously collaborated and jointly published their research in peer-reviewed journals.

On 24 May 2004, Prof. van Zyl delivered a lecture on "Designer yeast and fungi for enzyme and viral protein production" which was well attended by both staff and students. Prof. van Zyl engaged in scientific discussions with several students and encouraged exchangeships for M.Tech. and D.Tech. students willing to complete phases of their research at Stellenbosch University.

Prof. van Zyl is an accomplished scientist with a B rating from the NRF. He was also awarded a silver medal from the South African Society for Microbiology for exceptional contributions to Microbiology in April 2004. His current research focus is in the field of

- Heterologous production and secretion of Microbial enzymes for the enzymatic degradation and utilisation of the complex lignocellulosic substrates derived from agricultural sources; and
- Viral proteins with pharmaceutical value in Saccharomyces cerevisiae, non-Saccharomyces yeasts and Aspergillus species.

In addition, he has published 50 papers in international journals and has nine patents to his name. At least two students would be spending short periods of three months duration in Prof. van Zyl's laboratory in August/September this year.

## WOULD YOU LIKE TO PUBLISH YOUR RESEARCH IN A PEER-REVIEWED JOURNAL?

Should any member of staff or higher degree student who completed their research and is of the view that their research findings are worthy of publication in a peer-reviewed journal, then the following needs to be urgently done.

- Submit to the Centre for Research Management and Development (CRMD) the proposed title of the manuscript and the name of the journal you deem most appropriate in which the research should be published.
- Prepare a draft manuscript in line with the "Instructions for Authors" of the journal, and e-mail this to the CRMD.

You will then be invited to attend a 2-day workshop off campus, where your manuscript would be fine-tuned for submission. The CRMD will meet the costs of accommodation and meals.

Titles of manuscripts and draft manuscripts should be submitted directly to Prof. Gansen Pillay at the following address:

#### gansen@dit.ac.za

The CRMD looks forward to receiving your manuscripts.

#### **PUBLICATIONS BAROMETER**#

# Bold-faced author names indicate staff member/student of the DIT

- 1. Olaniran, A.O., **Pillay**, **D**. and Pillay, B. (2004). Haloalkane and haloacid dehalogenases from aerobic bacterial isolates indigenous to contaminated sites in Africa demonstrate diverse substrate specificities. *Chemosphere* **55**:27-33.
- 2. Olaniran, A.O., **Pillay, D.** and Pillay, **B.** (2004). Characterization of two bacteria isolated from a wastewater treatment plant in South Africa for aerobic dehalogenation of some aliphatic chlorinated compounds. *International Journal of Environmental Studies*. **In press.**
- 3. Singh, N., Somai, B.M. and Pillay, D. (2004). Smut disease assessment by PCR and microscopy in inoculated tissue cultured sugarcane cultivars. Plant Science. In press.
- 4. Singh, N., Somai, B.M. and Pillay, D. (2004). In vitro screening of sugarcane to evaluate smut susceptibility. Plant Cell, Tissue and Organ Culture. In press.
- 5. Sutherland, I. (2004). Paradigm shift: The challenge to graphic design education and professional practice in post-apartheid South Africa. Design Issues 20: 51-60.
- 6. Wells, K., Seinaert, E. and Conolly, J. (2004). The Siyazama project. A traditional beadwork and AIDS intervention programme. Design Issues 20: 73-89.
- 7. Godlee, F., Packenham-Walsh, N., Ncayiyana, D., Cohen, B. and Packer, A. (2004). Can we achieve health information for all by 2015? *Public Health* http://image.thelancet.com/extras/04art6112web.pdf
- 8. **Raju, J.** (2004). First level library and/or information science qualifications at South African universities and technikons: a comparative study of curricula. *South African Journal of Libraries and Information Science* **70**:9-19.
- 9. Moyo, S and Leach, P.G.L. (2004). Symmetry methods applied to a mathematical model of a tumour of the brain. *Proceedings of Institute of Mathematics of NAS of Ukraine* 50:204-210.

#### **INCREASING THE CRITICAL MASS OF SANPAD-FUNDED RESEARCHERS**

The South African Netherlands Research Programme on Alternatives in Development (SANPAD) is one of the external funding agencies for research at the DIT. In an attempt to increase the number of recipients of SANPAD funding at the DIT, the CRMD hosted a workshop on "SANPAD Funding Phase 2 (2003 2007)" at the Hotel School Restaurant on 25 May 2004.

The purpose of the SANPAD programme is to support collaborative research projects involving more than one HEI and involving a Netherlands collaborator. Proposals must focus on research that has a social development and policy related content that is multi-disciplinary, that is cross thematic and have a special focus on poverty reduction. In Phase 2 SANPAD will fund projects under the following themes:

- New approaches to economic development;
- Social development and quality of life;
- Natural resources and governance;
- Democracy, government and civil society;
- · Culture, identity and society; and
- Poverty reduction.

Prof. Bharti Odhav, a recipient of SANPAD funding highlighted her experiences with SANPAD and the requirements for a successful research proposal. She also pointed out that the research project undertaken must be of social and community value.

Prof. Anshu Padayachee, Director of SANPAD, was accompanied by her Netherlands' counterparts, viz., Dr. Nelke van der Lans, a Programme Coordinator of



Dr G. Raza, Prof A Padayachee, Dr M de Lange and seated; Prof B Odhav and Dr N van der Lans

SANPAD and Dr. Margreet de Lange, a member of the Netherlands National Committee and of the Joint Committee. Prof. Padayachee presented a general overview of SANPAD's role and responsibility to Higher Education in South Africa and highlighted the Research Capacity Initiative (RCI) of SANPAD geared towards capacity building. Dr. M. de Lange emphasized the added value of having a Netherlands collaborator in the research project while Dr. van der Lans clarified various issues relating to SANPAD grants.

Further information can be obtained from the SANPAD website (www.sanpad.org.za).

# Ms P Zondi. B. Tech. (Chemical Engineering) Ms L Maduna, B. Tech. (Financial Information Systems)

### "Scarce skills scholarships" scooped again by DIT lasses

The Department of Labour has awarded the NRF a further grant for distribution to postgraduate students in 2004 in areas where there is a scarcity of skills in South Africa. The fields that have been identified are accounting, auditing, actuarial sciences, agricultural sciences, bioinformatics, biotechnology, chemistry, computer science, demography, engineering, geology, information systems, mathematical sciences, physics, statistics, tourism and transport studies.

The CRMD takes this opportunity of congratulating the following students and their supervisors in successfully securing these scholarships. The value of the scholarship is R25 000 -00 per annum for a B. Tech degree.

- Ms. P. Zondi, B. Tech. Chemical Engineering
- Ms. L. Maduna, B. Tech. Financial Information Systems

Both lasses are in their 4<sup>th</sup> year of study and are considering continuing with their studies next year to complete the Masters in Technology degree in their respective disciplines.