



HIGHER EDUCATION QUALITY COMMITTEE

CONFIDENTIAL

**Audit Report
on
Tshwane University of Technology**

**Report of the HEQC to the Tshwane University of
Technology**

May 2008

Didacta Building, 211 Skinner Street, Pretoria, 0002, P O Box 13354, The Tramshed, 0126,
Telephone: +27 12 392 9121, Fax +27 12 392 9117, E-mail: lange.l@che.ac.za
Visit our website at <http://www.che.ac.za>

HEQC Audit Report Number 18

211 Skinner Street
Didacta Building
P.O. Box 13354
The Tramshed
0126
South Africa

Tel: +27 12 392 9121

Fax: +27 12 392 9117

Website: <http://www.che.ac.za>

TABLE OF CONTENTS

| | |
|--|-----------|
| Overview of the Audit | 5 |
| Introduction..... | 5 |
| The Audit Process..... | 5 |
| Summary of Findings | 8 |
| Commendations | 8 |
| Recommendations | 8 |
| 1. Brief Overview of Tshwane University of Technology | 11 |
| 2. Institutional Mission and Transformation | 13 |
| 2.1 TUT’s Mission and Identity | 13 |
| 2.2 Transformation at TUT: Equity, Redress and Institutional Culture..... | 17 |
| 3. Institutional Planning, Resource Allocation and Quality Management | 21 |
| 3.1 Governance, Management, Planning and Resource Allocation..... | 21 |
| 3.2 The Quality Management System | 26 |
| 3.3 Benchmarking and Surveys..... | 27 |
| 4. General Arrangements for Teaching and Learning Quality | 29 |
| 4.1 TUT’s Conceptualisation of Teaching and Learning | 29 |
| 4.2 The Organisation of Teaching and Learning | 32 |
| 4.3 Management of Quality in Academic Support Services | 35 |
| 4.3.1 Academic Development..... | 35 |
| 4.3.2 Library..... | 37 |
| 4.3.3 Information and Communication Technology..... | 38 |
| 4.4 Management of Certification..... | 39 |
| 4.5 Management of the Quality of Short Courses | 39 |
| 4.6 Programme Development and Review..... | 40 |
| 4.7 Staffing and Development | 42 |
| 4.8 Management of Assessment..... | 43 |
| 5. Management of Research Quality | 45 |
| 5.1 Quality Related Arrangements for Research..... | 45 |
| 5.2 Research Administration, Management and Support | 46 |
| 5.3 Research Outputs..... | 46 |
| 5.4 Postgraduate Education | 47 |
| 6. Management of the Quality of Community Engagement at TUT | 50 |
| 6.1 Conceptualisation of Community Engagement at TUT | 50 |
| 6.2 Current Projects and Activities | 51 |
| 7. Conclusion | 51 |
| Appendix A Objectives of the HEQC Audit System | 52 |
| Appendix B The Audit Panel | 53 |
| Appendix C List of Documents Submitted by TUT | 54 |
| Appendix D The Audit Visit Schedule | 55 |

Acronyms

| | |
|------|--|
| AP | Audit Portfolio |
| CCPD | Centre for Continuing Professional Development |
| CDS | Curriculum Development Support |
| CE | Cooperative Education |
| CESM | Classification of Educational Subject Matter |
| DoE | Department of Education |
| DQP | Directorate of Quality |
| DVC | Deputy Vice-Chancellor |
| ED | Executive Dean |
| HEDS | Higher Education and Development Support |
| HoD | Head of Department |
| ICT | Information and Communication Technology |
| IF | Institutional Forum |
| IOP | Institutional Operating Plan |
| IP | Institutional Profile |
| ITS | Integrated Tertiary Software |
| LIS | Library and Information Service |
| NSSP | Non-State Subsidised Programmes |
| PQM | Programme and Qualifications Mix |
| RAM | Resource Allocation Model |
| R&D | Research and Development |
| RIP | Research, Innovation and Partnerships |
| RPL | Recognition of Prior Learning |
| SDS | Student Development and Support |
| SLP | Short Learning Programme |
| SRC | Student Representative Council |
| TLT | Teaching, Learning and Technology |
| TNG | Technikon Northern Gauteng |
| TNW | Technikon North West |
| TPTA | Technikon Pretoria |

Overview of the Audit

Introduction

The Higher Education Quality Committee (HEQC) of the Council on Higher Education (CHE) has a statutory responsibility to conduct institutional audits as indicated in the Higher Education Act of 1997. This responsibility of the HEQC is also recognised by the South African Qualifications Authority (SAQA) in the accreditation of the CHE as the Education and Training Quality Assurer (ETQA) for the higher education band.

The audit of Tshwane University of Technology, (hereinafter referred to as TUT) was conducted by the HEQC in terms of its mandate. This document reports on the audit process and findings based on the Audit Portfolio with its appendices provided by TUT, supplementary documentation requested from the institution, and interviews and observations made during the audit visit, which took place between 15 and 19 April 2007.

This report contains an overview of the audit visit, the findings of the Panel in relation to the audit criteria set by the HEQC, and a list of the commendations and recommendations made by the HEQC.

The Audit Process

In November 2005 the Executive Director of the HEQC secured the consent of the Vice-Chancellor and the executive management team of TUT that the University would participate in an institutional audit from 15 to 19 April 2007.

TUT conducted its institutional self-evaluation in the agreed time and produced an Audit Portfolio for review by the Audit Panel. The self-evaluation was carried out by six working groups, corresponding to each of the main audit criteria. The groups consisted of Deans, Campus Directors, academic and administrative staff and students. Workshops on the audit process and procedures were also held across the institution (AP: 4). The Vice-Chancellor chaired the central Audit Planning Committee, which included Deans, Directors of campuses, academics and students. The Audit Portfolio was approved by Senate on 22 January 2007 and then by Council. On 25 January 2007 TUT submitted to the Institutional Audits Directorate of the HEQC a comprehensive portfolio that included a self-evaluation document, a CD, and a file of supporting evidence. This file contains, *inter alia*, plans, policies and reports. An Institutional Profile (IP) was provided by the Directorate of Monitoring and Evaluation of the CHE.

The HEQC constituted an Audit Panel consisting of senior academics and academic administrators from the higher education community, all of whom had taken part in auditor preparation workshops run by the HEQC. An Audit Portfolio meeting was convened in Pretoria on 28 February and 1 March 2007 at which the Audit Panel considered the Audit Portfolio in preparation for the audit visit. During this meeting, the Audit Panel identified additional documents to be requested from TUT prior to the audit visit.

A senior member of the HEQC staff undertook a preparatory visit to TUT in March 2007. During that visit, the format and programme for the visit, and other details of the audit, were discussed with and agreed upon by the senior management of TUT.

In preparation for the audit visit, a sub-panel of the Audit Panel undertook visits to the urban and distant campuses during the week of 21 March 2007. At each site, interviews were conducted with management, staff and students.

The audit visit took place from 15 to 19 April 2007. The Audit Panel undertook a tour of the campus on 15 April and conducted interviews with senior management and members of various governance structures on 16 and 17 April. On the afternoon of 17 April and on 18 April, the Audit Panel split into three groups and interviewed a wide range of TUT's staff members, students and other stakeholders. Open sessions were also available for any staff or student member of the institution as well as members of the community to meet with the Audit Panel and make submissions. Some staff members and union representatives made use of the opportunity to address the Panel. Interviews were concluded on 19 April and oral feedback was given to the Vice-Chancellor and his executive management team on 20 April.

In 54 interview sessions during the audit visit the Audit Panel interviewed 312 people, including:

- Council members
- The Vice-Chancellor and members of his executive team
- Academic and academic support staff
- Administrative staff
- Full-time and part-time undergraduate and postgraduate students
- Civic and community representatives
- Alumni.

This report reflects the audit process and findings based on the Audit Portfolio provided by TUT, supplementary documentation requested from the institution, interviews conducted and observations made during the audit visit. Every effort has been made to understand the quality arrangements at the institution at the time of the audit visit and to base the Panel's conclusions on the documentation submitted, the interviews held and the observations made.

It is expected that TUT will use the findings presented in this report to strengthen its internal quality management systems and thereby improve the quality of its core academic activities. Decisions about the way this is done, and the priority accorded to the various recommendations, are the prerogative of TUT. It is expected that TUT will submit to the HEQC an improvement plan in response to the HEQC Audit Report, five months after the publication of this report.

The HEQC would like to thank TUT for the cooperative way in which it participated in the audit process and to express appreciation for the openness and confidence shown by TUT management in allowing the Audit Panel to conduct its work. The HEQC appreciates that although the merger context to some extent compromised the thoroughness of the self-evaluation, the institution leadership, staff and students were open and frank with the Panel in sharing their concerns about the University now and in the future. The preparations by the University did present some challenges to the

conduct of the audit visit, particularly in terms of availability of required documentation and other issues, but the assistance of TUT's personnel was appreciated, and Mr D Naidoo and his team in particular are thanked for preparing the documentation and for their cooperation throughout the process.

Summary of Findings

This section summarises the audit's main findings. The HEQC's commendations signal areas of strength, excellence and/or innovation which may require ongoing institutional support. Its recommendations signal issues which may require new or strengthened attention with regard to quality provision. The HEQC notes that TUT has itself identified many of these issues for attention. These and a number of other issues will need to be incorporated into the overall quality assurance planning and practice at TUT, with appropriate allocation of responsibility for implementation and monitoring.

A list of commendations and recommendations follows. These are not presented in any order of priority, but in the order in which they appear in the report. They are clustered below to provide a quick overview for the reader. The body of the report also draws attention to other issues for attention and consideration by TUT.

Commendations

1. The HEQC commends Tshwane University of Technology for developing and implementing a new organisational structure that provides a foundational structure for the institution to build upon.
2. The HEQC commends Tshwane University of Technology for the good practice established by DQP in the 2006 Faculty of the Arts Programme Reviews.
3. The HEQC commends Tshwane University of Technology for its investment in staff development to enable academics to acquire higher degree qualifications, which has the potential to yield significant returns for TUT's research capacity and research culture in the future.

Recommendations

1. The HEQC recommends that Tshwane University of Technology select appropriate international universities of technology as models that would help the institution to understand what it means to be a university of technology in substance, and to develop its own indicators so that it can measure its progress towards achieving this goal.
2. The HEQC recommends that Tshwane University of Technology strengthen its plans to attain its employment equity targets at all levels within the institution and ensure that these plans have clear time frames and allocation of responsibilities.
3. The HEQC recommends that Tshwane University of Technology develop and implement a strategy to ensure that there is open and inclusive communication across the institution and with all stakeholders.

4. The HEQC recommends that Tshwane University of Technology engages the local and provincial authorities in relation to the development of the Soshanguve and Ga-Rankuwa campuses in order to ensure that the relocation of faculties is done in the context of a social compact which supports the institution's efforts to attract staff, students and suitable industrial partners.
5. The HEQC recommends that Tshwane University of Technology give due consideration to the impact that the additional costs of the Faculty based campus model will have on the access to higher education of financially disadvantaged students.
6. The HEQC recommends that Tshwane University of Technology develop strategies that have clear time frames and allocation of responsibilities to ensure that there is an equivalent learning experience across campuses for all of its students. This includes giving attention to infrastructure, quality of staff, student and academic support.
7. The HEQC recommends that Tshwane University of Technology conceptualise its quality management system in such a way that it moves beyond compliance and focuses on provision of good quality teaching and learning, research and community engagement. For this to be possible senior management needs to take a more active role in providing intellectual and strategic direction in terms of the formalisation, implementation and monitoring of a quality management system across all campuses which suits the profile of a university of technology.
8. The HEQC recommends that Tshwane University of Technology give attention to the development of appropriate institutional systems for benchmarking, student and employer surveys, and impact studies which will include implementation plans with time frames and the allocation of responsibilities.
9. The HEQC recommends that Tshwane University of Technology develop and implement a comprehensive academic plan based on its new identity as a university of technology. This would also provide a framework for making decisions about the rationalisation of its existing programme and qualifications mix.
10. The HEQC recommends that Tshwane University of Technology ensure that every student in a programme with an experiential learning component is placed appropriately, that there is a functioning system to record, monitor and assess the content and progress of the student's learning experience in the workplace, and that the system is implemented consistently and monitored across all campuses.
11. The HEQC recommends that Tshwane University of Technology make the improvement of the quality of teaching and learning an institutional priority and that strategies and resources are put in place for this purpose. In doing this, the institution might want to consider the development of appropriate mechanisms of support to professionalise teaching as a way of responding to the pedagogic challenges posed by TUT students

12. The HEQC recommends that Tshwane University of Technology discontinue the practice of admitting unsuccessful diploma applicants to short courses and instead develop and implement appropriate foundation provision to meet the needs of these students.
13. The HEQC recommends that Tshwane University of Technology reconceptualise its access and academic development programmes to ensure that students are optimally prepared and supported throughout the duration of their studies and that such programmes are implemented across all sites of delivery.
14. The HEQC recommends that Tshwane University of Technology ensure that the number of full-time academic staff is sufficient to create an enabling teaching and learning environment for students across all campuses.
15. The HEQC recommends that Tshwane University of Technology find innovative ways to develop and resource a five-year growth plan for its libraries that will ensure sustainability and equivalence of provision across campuses.
16. The HEQC recommends that Tshwane University of Technology develop an ICT policy that addresses the use of IT facilities, including adequate Internet access for students and equitable access to IT facilities for all students across campuses, and ensure that such provision is monitored and evaluated.
17. The HEQC recommends that Tshwane University of Technology investigate the quality of the considerable number of short courses currently being offered and their impact on the mainstream activities of departments and Faculties
18. The HEQC recommends that Tshwane University of Technology establish a Higher Degrees Committee to lead the further development of a research culture at the institution that will embrace responsibility for postgraduate student supervision and student completion, the need for consistency in the application of research student policies and procedures, and student publication requirements.
19. The HEQC recommends that Tshwane University of Technology engage in an institution-wide debate on who constitutes its community for purposes of engagement, develop a framework, policies and implementation plans by means of which community engagement can be quality managed and integrated into the curriculum, establish an institutional structure to direct its activities, and allocate responsibilities.

1. Brief Overview of Tshwane University of Technology

Tshwane University of Technology (TUT) is a large, residential, multi-campus university. It is mainly a contact learning institution, but has a distance learning component. It has six campuses in four provinces (Gauteng, North West, Limpopo and Mpumalanga) and nine teaching and learning delivery sites. The largest campus, with 24,000 contact students and 11,000 distance education students, is *Pretoria West*, which also houses the University's management. The other campuses are *Arcadia* and the *Arts* in central Pretoria; *Soshanguve North* and *Soshanguve South* in Pretoria North; *Ga-Rankuwa* in North West Province; and three distant campuses: *Polokwane* in Limpopo, and *Witbank* and *Nelspruit* in Mpumalanga. TUT also has service centres in Durban and Cape Town, which offer courses in the Faculty of Humanities.

TUT, like other South African universities of technology, is the result of an evolutionary process. The original Colleges for Advanced Technical Education, founded in 1967, became technikons in 1979, which awarded certificates and diplomas in a range of vocational programmes. TUT became a degree-awarding institution in 1994, and finally a university of technology in 2004.

TUT was established at the beginning of 2004 as a result of a merger between Technikon Northern Gauteng (TNG), Technikon Pretoria (TPTA) and Technikon North West (TNW) as part of the restructuring of the higher education system. TNG and TNW were historically disadvantaged institutions with mainly African student enrolments. TPTA was a historically advantaged institution with a predominantly white student population and the medium of instruction was Afrikaans. Between 1995 and 2003, each of the three institutions underwent a period of rapid expansion in headcount enrolments. TNG grew by 72.4 percent, TNW by 156.2 percent, and TPTA by 164.4 percent, with its student enrolment becoming predominantly African and English its medium of instruction (IP: 15). At the time of merging, TNG constituted 21.72 percent, TNW 8.5 percent and TPTA 69.78 percent of the headcount of the new institution (IP: 14).

TUT offers 429 national diploma and degree qualifications, including doctoral degrees (AP: 34). It has 70 departments, organised into seven Faculties: Science, the Art, Humanities, Economics and Finance, Engineering and the Built Environment, Information and Communication Technology, and Management Sciences. The institution has a number of Centres and Institutes.

In 2005 TUT offered 122 approved national diplomas, 117 Bachelor of Technology degrees, 83 Master of Technology degrees, and 3 Honours degrees (AP: 10). It also offered approximately 160 Short Learning Programmes (SLPs)/Non-State Subsidised Programmes (NSSPs) (AP: 117).

In 2005, student registration was approximately 60,000, making TUT South Africa's largest university of technology and the second largest university in South Africa after UNISA. Ninety-three percent of its students were undergraduates. Eighty-one percent were contact and 19 percent distance education students – the latter mostly in teacher education (IP: 8). Almost 10,000 of its students live in 20 residences across its campuses (AP: 16).

In 2005 TUT employed 8,047 staff members, of whom 2,629 were permanent appointments and 5,418 temporary appointments. The large number of temporary appointments was partly the result of post-merger restructuring and the consequent moratorium on appointments.

2. Institutional Mission and Transformation

This section of the audit report focuses on TUT's mission and how, in the context of this mission, the institution positions itself within both the higher education system and South African society as a whole. The section is organised into two parts. The first part looks at the various elements of the institution's mission and identity and how they are translated into the core functions, and the second at the way TUT responds to the national objectives of equity and redress, both in relation to staff and students.

In analysing TUT's mission, the Panel became aware of the inherent difficulties of a merger that brought together institutions with unequal resources and different histories, modes of operation, academic cultures and track records of student throughput and success rates, all of which affected the length of time needed to consolidate the new institution. The focus of the institution since 2004 has been on the operational aspects of the merger and TUT at the time of the audit visit was still consolidating a range of institutional systems, policies, processes and procedures. The complexity of the merger process was further compounded by the change in the institution's designation from technikon to university of technology. The pervasiveness of the transitional context challenged TUT's ability to engage with the implications of creating a new higher education institution in terms of defining a new academic identity and purpose and embedding quality management in the institution's processes and structures.

2.1 TUT's Mission and Identity

TUT's vision and mission were developed in September 2003 during the pre-merger phase, with the merger coming into effect in January 2004 (AP: 19). They were informed by the fact that TUT would soon be awarded the status of a university of technology. The Panel heard during interviews with executive management that, as it was now three years since the institutional name change, the vision and mission needed revision and therefore also the strategic plan. Such revision, however, would not be substantial but would be in line with the Institutional Operational Plan (IOP) which was submitted to, and accepted by, the Department of Education (DoE) during the last quarter of 2006.

While the executive managers, key strategic staff members and union representatives of the three merging institutions participated in developing the vision and mission, students were not invited to participate. The Panel was pleased to learn that students will be involved in the strategic planning process for the years 2008–2012 (AP vol.1: 19).

The current vision of TUT is

To be the leading higher education institution with an entrepreneurial ethos that promotes knowledge and technology, and provides professional career education of an international standard, which is relevant to the needs and aspirations of southern Africa's people. (AP vol.1: 20)

The mission statement asserts that, to achieve its vision, the institution will

- offer **cooperative professional career education programmes** at undergraduate and postgraduate levels.
- implement an **entrepreneurial approach** in its endeavours to
 - create, apply and transfer knowledge and technology,
 - make knowledge useful,
 - focus on applied research and development, and
 - extend the parameters of technological innovation.
- strive for **international** recognition.
- serve and empower society.
- meet socio-economic development needs.
- establish and maintain a **strategic partnership network** locally and internationally. (AP vol.1: 20)

Teaching and learning and are explicitly mentioned in the mission statement, as are public good and fitness of purpose. However, the Panel was concerned that community engagement was not addressed in the mission statement and as a consequence is not conceptualised, planned or budgeted for as an integral part of the institution's core functions. The Panel heard during interviews with executive management that a strategic discussion about this core function was under way. Community Engagement is considered in Section 6 of this report.

There are five dimensions to TUT's vision and mission: (i) entrepreneurial ethos, (ii) research through the promotion of knowledge and technology, (iii) teaching and learning in terms of professional career education, (iv) an international standard, and (v) relevance to the needs and aspirations of South Africa's people. These are considered below, with the exception of (ii), which is discussed in Section 5 of this report.

It was unclear to the Panel how the institution conceptualises and plans to inculcate an entrepreneurial ethos (i). Although the mission statement expands on the idea of 'entrepreneurship', this appears to be largely related to research and to underpin the way research is undertaken; in other words an entrepreneurial approach. For example, the Panel found an understanding of entrepreneurship as technology stations working with small business to assist business growth. During interviews with the executive management committee the Panel heard that entrepreneurship is 'part of the life of the institution' but a clear understanding of what this means did not emerge. The Panel noted during interviews with management that the notion of 'entrepreneurship' in the institution is interpreted in different ways. One member of senior management understood that it had to do with the way the business of the different units was carried out; for example, identifying outcomes, ensuring that appropriate resources are available, and putting in place indicators so that performance can be measured. Other members indicated that the aim was to integrate entrepreneurship into the curriculum so that students are equipped to become job creators. The Panel found this interpretation to be underdeveloped. However, given the country's need for graduates to be innovative in starting up small businesses and contributing to the growth of established ones, the Panel encourages the institution to retain this element of its mission by first developing a common conceptualisation of what entrepreneurship means in a university of technology, and secondly considering how this understanding may be translated into the three core functions of teaching and learning, research and community engagement, and then establishing the resource implications.

Regarding teaching and learning in terms of professional career education (iii), the mission statement makes clear that teaching and learning at TUT is centred on professional, career oriented higher education, in which the focus is the ‘undergraduate curriculum offering largely national diplomas and BTech degrees, using outcomes based education and training to inform its teaching and learning philosophy’ (AP: 11). In revising its mission and its plans to give effect to the mission, the institution might want to consider the role of vocational and professional education and the elements that need to be present in the curriculum in a university of technology. This would allow it to develop a niche in the provinces in which it is located and in the higher education system generally, and contribute to socio-economic development in these areas.

The Panel did not find a clear elaboration of the statements about (iv) international standards and (v) relevance to the needs and aspirations of South Africa’s people in documentation or during interviews with management and staff that would have enabled it to assess their usefulness. In the higher education policy context in South Africa, TUT, like all other higher education institutions, has a responsibility to meet South Africa’s socio-economic imperatives, and in this respect particularly link them to the core function of teaching and learning. While statements in the mission statement and strategic documents refer to responsibility, the Panel was concerned about the lack of a coherent strategy to give substance to them. This lack became apparent in the way that the HEQC’s open-ended questions were addressed through Faculty Reports (AP vol.1: 141–51).

The Portfolio states that ‘Leadership in the application of technology and leading through the utilisation of technology is identified as a strategic feature for TUT as a University of Technology’ (AP vol.1: 12). The Panel noted that three purposes of a university of technology were identified in the Portfolio. These are:

- stimulating social development and economic growth,
- contributing to a modernising economy through R&D, technological innovation, technology transfer, entrepreneurial development, and specialising in the application of knowledge and technology, and
- developing a community of skilled graduates with relevant and specialised knowledge and skills within an applicable profession, as well as an entrepreneurial focus. (AP vol.1: 13)

The Panel noted firstly that these purposes are generic in nature and so cannot have measurable outcomes. Secondly, although the purposes seem to be necessary for realising the designation of a university of technology substantively, they may not be sufficient. And besides this, they could equally be applied to a number of different types of institutions.

TUT has been involved in a number of discussions with bodies such as SA Technology Network and the Australian Universities of Technology Association in an attempt to gain an understanding of what it means to be a university of technology. The Panel learned during interviews with a wide range of staff and other stakeholders that there is awareness of the change in status from technikon to university of technology. However, the Panel found that there was no common understanding amongst management and staff of what needs to be changed for this new status to be achieved substantively. Some interviewees indicated that (i) the move to Faculty based campuses will achieve this (see Section 3.1); others that (ii) the programme and qualifications mix (PQM)

needs to be changed, particularly at bachelor level and above; while yet others suggested that (iii) there would need to be changes in the staff profile (see Section 2.2) and the research output of the institution.

Regarding research through the promotion of knowledge and technology (ii), Table 1 below shows that in 2005 the majority of national diplomas offered (i.e. 40.5 percent) were in Science, Engineering and Technology (SET), followed by Business, Commerce and Management with 35.1 percent (IP: 25). The highest number of Bachelor of Technology programmes was in SET, with 45.4 percent enrolments, followed by education with 21.4 percent.

Table 1: TUT distribution of headcount enrolments per field of study by qualification type, 2005 (IP: 25)

| | Business, Commerce & Management | | | Education | | | Humanities & Social Sciences | | | Science, Engineering & Technology | | | Total | | |
|------------------------|---------------------------------|------|------|-----------|-------|------|------------------------------|------|------|-----------------------------------|-------|------|--------|-----|------|
| | No. | R%* | C%* | No. | R% | C% | No. | R% | C% | No. | R% | C% | No. | R% | C% |
| Professional 1st | 0 | 0.0 | 0.0 | 656 | 100.0 | 7.3 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 656 | 100 | 1.1 |
| PG Dip/Cert | 0 | 0.0 | 0.0 | 43 | 100.0 | 0.5 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 43 | 100 | 0.1 |
| Honours | 0 | 0.0 | 0.0 | 1,813 | 100.0 | 20.2 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 1,813 | 100 | 3.1 |
| Masters | 85 | 40.1 | 0.5 | 127 | 59.9 | 1.4 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 212 | 100 | 0.4 |
| Doctoral | 0 | 0.0 | 0.0 | 11 | 100.0 | 0.1 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 11 | 100 | 0.0 |
| UG Dip/Cert half years | 0 | 0.0 | 0.0 | 3,343 | 100.0 | 37.3 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 3,343 | 100 | 5.8 |
| Nat. Cert | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 31 | 20.1 | 0.3 | 123 | 79.9 | 0.6 | 154 | 100 | 0.3 |
| NH Cert | 1,970 | 94.4 | 11.4 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 116 | 5.6 | 0.6 | 2,086 | 100 | 3.6 |
| Nat. Diploma | 13,820 | 35.1 | 79.9 | 20 | 0.1 | 0.2 | 9,607 | 24.4 | 86.6 | 15,976 | 40.5 | 77.5 | 39,423 | 100 | 68.0 |
| NHDip | 0 | 0.0 | 0.0 | 14 | 70.0 | 0.2 | 0 | 0.0 | 0.0 | 6 | 30.0 | 0.0 | 20 | 100 | 0.0 |
| BTech | 1,373 | 17.0 | 7.9 | 1,921 | 23.8 | 21.4 | 1,113 | 13.8 | 10.0 | 3,669 | 45.4 | 17.8 | 8,076 | 100 | 13.9 |
| MDIP Tech | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 1 | 100.0 | 0.0 | 1 | 100 | 0.0 |
| MTech | 48 | 2.7 | 0.3 | 1,016 | 56.6 | 11.3 | 302 | 16.8 | 2.7 | 429 | 23.9 | 2.1 | 1,795 | 100 | 3.1 |
| DTech | 10 | 9.4 | 0.1 | 0 | 0.0 | 0.0 | 22 | 20.8 | 0.2 | 74 | 69.8 | 0.4 | 106 | 100 | 0.2 |
| Occasional enrolments | 0 | 0.0 | 0.0 | 4 | 1.7 | 0.0 | 18 | 7.8 | 0.2 | 210 | 90.5 | 1.0 | 232 | 100 | 0.4 |
| Total | 17,306 | 29.9 | 100 | 8,968 | 15.5 | 100 | 11,093 | 19.1 | 100 | 20,604 | 35.5 | 100 | 57,971 | 100 | 100 |

*R: percentage calculation in relation to the row figures

*C: percentage calculation in relation to the column figures

The Panel learned during interviews with senior management that the PQM is being revised (i) to avoid duplication between the programmes offered by the three institutions which constitute TUT, (ii) to respond to the socio-economic needs of industry and business and (iii) to give substance to TUT's status as a university of technology. Given the lack of a shared understanding across the institution of what it means for TUT to be a university of technology, the Panel encourages the institution to use the experience of international universities of technology to help formulate for itself what it means to be a university of technology in substance and to develop appropriate terms of comparison and indicators, particularly in relation to performance in the core functions, that would allow the institution to chart its progress towards the attainment of this goal.

Recommendation 1

The HEQC recommends that Tshwane University of Technology select appropriate international universities of technology as models that would help the institution to understand what it means to be a university of technology in substance, and to develop its own indicators so that it can measure its progress towards achieving this goal.

2.2 Transformation at TUT: Equity, Redress and Institutional Culture

As noted earlier, TUT is the result of a merger of three technikons, two of which, TNG and TNW, were historically disadvantaged. At both of these, African students made up in excess of 99 percent of the total enrolments. The third, TPTA, was a dual medium historically advantaged institution, but at the time of the merger the majority of its enrolments were African students. In terms of student profile, as can be seen from Table 2 below, in 2005 TUT's student population was 85.8 percent African, 1.1 percent coloured, 0.8 percent Indian, and 12.3 percent white, which was more or less representative of the demographics of the areas in which TUT is located (IP: 19). The Panel noted that gender representation was fairly equal. Of the total student enrolment in 2005, 52.4 percent were female. When the table was disaggregated in terms of race; African females were the only subset that outnumbered males: 54.4 percent to 45.6 percent.

Table 2: TUT distribution of headcount enrolments by race and gender, 2005

| | African | | | Coloured | | | Indian | | | White | | | Total | | |
|-------|---------|-------|--------|----------|------|--------|--------|------|--------|-------|-------|--------|-------|--------|--------|
| | No. | R% | C% | No. | R% | C% | No. | R% | C% | No. | R% | C% | No. | R% | C% |
| F | 27024 | 89.6% | 54.4% | 279 | 0.9% | 43.7% | 174 | 0.6% | 36.0% | 2700 | 8.9% | 37.8% | 30177 | 100.0% | 52.1% |
| M | 22691 | 81.6% | 45.6% | 360 | 1.3% | 56.3% | 309 | 1.1% | 64.0% | 4434 | 16.0% | 62.2% | 27794 | 100.0% | 47.9% |
| Total | 49715 | 85.8% | 100.0% | 639 | 1.1% | 100.0% | 483 | 0.8% | 100.0% | 7134 | 12.3% | 100.0% | 57971 | 100.0% | 100.0% |

Although the student demographic profile of TUT is reflective of the population, issues of equity and redress have not been resolved when it comes to success and graduation rates. Given that at the undergraduate level white, Indian and coloured students have a higher success rate than African students in all categories (see Table 3), the Panel was of the view that this points to the need to address the consequences of poor schooling for students who come from historically disadvantaged backgrounds with academic support and the professionalisation of teaching and learning.

Table 3: TUT Success rates by CESM category per qualification level and race, 2005

| | Business, Commerce & Management | Education | Humanities & Social Sciences | Science, Engineering & Technology | Table total |
|----------|---------------------------------|-----------|------------------------------|-----------------------------------|-------------|
| A | 63.09% | 69.34% | 65.53% | 65.89% | 65.26% |
| C | 78.75% | 90.98% | 70.29% | 68.66% | 72.98% |
| I | 75.95% | 99.80% | 73.19% | 74.36% | 75.14% |
| W | 79.20% | 96.30% | 83.04% | 76.54% | 79.00% |
| UG total | 64.22% | 72.81% | 67.86% | 68.15% | 67.37% |
| PG total | 53.85% | 31.23% | 44.02% | 58.42% | 44.13% |
| Total | 64.17% | 70.26% | 67.63% | 68.06% | 67.09% |

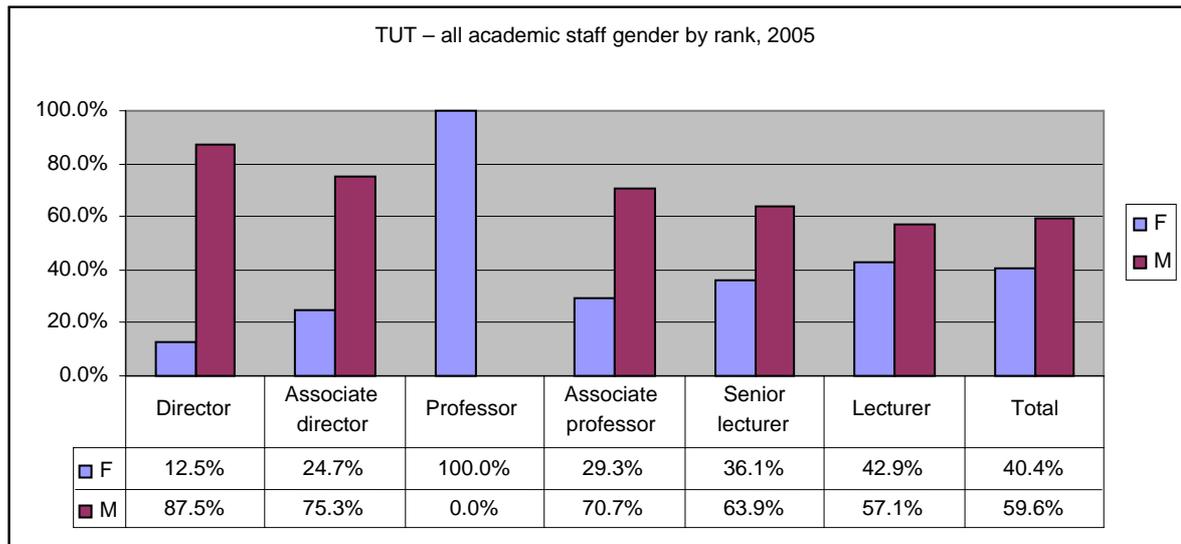
In terms of its academic staff demographic profile, TUT has not made progress comparable to that of the student profile. In 2003, African permanent academic staff at TNW and TNG accounted for 81.3 percent and 57.3 percent of the total staff, respectively. At TPTA white staff accounted for 84.5 percent of the academic staff and, furthermore, were in the majority at both academic and administration levels while Africans occupied the lower levels of the academic workforce (IP: 52). By 2005, academic staff in the newly merged institution were predominantly white, at 61.48 percent (IP: 53). As can be seen in Table 4 below, white academic staff members constituted 82.86 percent of directors and 86.52 percent of associate directors.

Table 4: Permanent academic staff by rank and race group at TUT, 2005

| | Director | | Associate director | | Professor | | Associate professor | | Senior lecturer | | Lecturer | | Total | |
|----------|----------|--------|--------------------|--------|-----------|-----|---------------------|--------|-----------------|--------|----------|--------|-------|--------|
| | No. | C% | No. | C% | No. | C% | No. | C% | No. | C% | No. | C% | No. | C% |
| African | 5 | 14.29 | 11 | 12.36 | 1 | 100 | 1 | 33.33 | 64 | 25.10 | 215 | 43.26 | 297 | 33.75 |
| Coloured | 1 | 2.86 | 0 | 0.00 | 0 | 0 | 0 | 0.00 | 3 | 1.18 | 7 | 1.41 | 11 | 1.25 |
| Indian | 0 | 0.00 | 1 | 1.12 | 0 | 0 | 0 | 0.00 | 11 | 4.31 | 19 | 3.82 | 31 | 3.52 |
| White | 29 | 82.86 | 77 | 86.52 | 0 | 0 | 2 | 66.67 | 177 | 69.41 | 256 | 51.51 | 541 | 61.48 |
| Total | 35 | 100.00 | 89 | 100.00 | 1 | 100 | 3 | 100.00 | 255 | 100.00 | 497 | 100.00 | 880 | 100.00 |

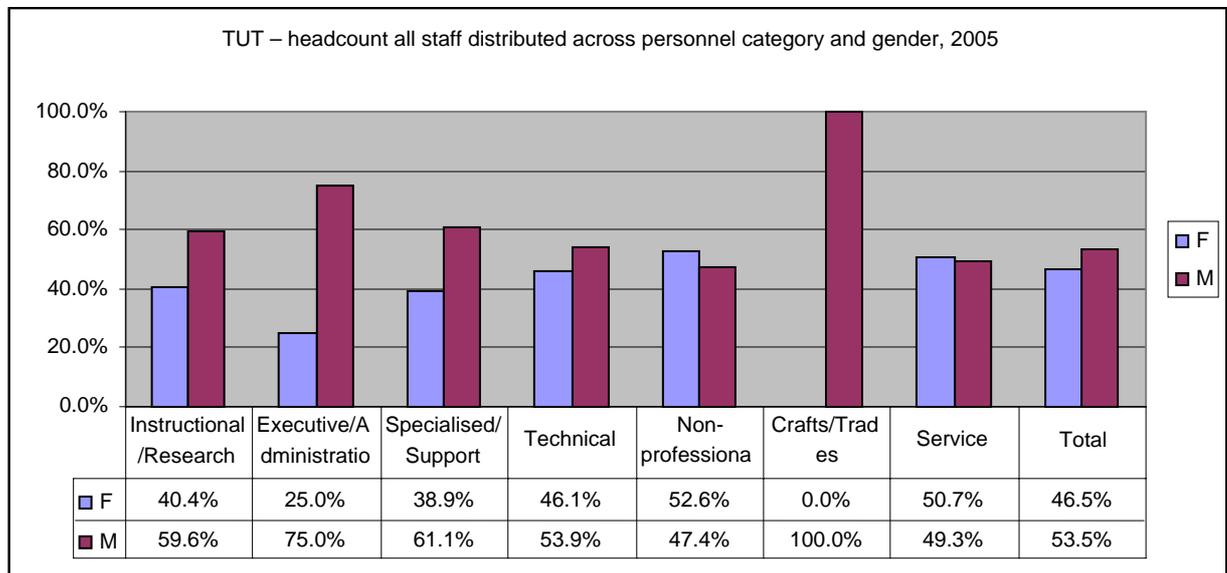
In terms of gender, Figure 1 below shows that female academics are clustered in the lower echelons of academic staff. For both permanent and temporary staff in 2005, females accounted for 42.9 percent of lecturers, 36.1 percent of senior lecturers, 29.3 of associate professors, 100 percent of the professors (1), 24.7 percent of the associate directors and 12.5 percent of the directors.

Figure 1: Gender of all academic staff per rank, 2005



Furthermore, Figure 2 shows that the traditional stereotypical patterns remain, with males outweighing females in management, academic and professional categories and females dominating in the non-professional and service categories. Changes in the demographic composition of management have addressed representation in terms of race but have left gender almost untouched. The Panel encourages the institution to give attention to issues of gender equity in senior positions at TUT.

Figure 2: All staff by gender and personnel category of employment, 2005



The Panel is of the view that efforts are needed to support the equity agenda through staff development. It heard during interviews with management of the importance that the institution places on developing its academic staff both as a means to achieve equity and redress and to help TUT give substance to its goal of becoming a university of technology (AP vol.1: 76). The Panel was informed by senior management that a workplace skills plan has been developed from its Teaching and Learning Strategy. This plan is aligned with skills development policies and the IOP and takes into account

the new status of university of technology. However, as discussed in Section 4.7 of this report, this plan need to be consistently applied across all levels of academic staff on all campuses. The Panel encourages TUT to continue with its strategy to address staff equity and redress, particularly at senior levels in the institution.

Recommendation 2

The HEQC recommends that Tshwane University of Technology strengthen its plans to attain its employment equity targets at all levels within the institution and ensure that these plans have clear time frames and allocation of responsibilities.

With regard to institutional culture, the Panel heard during interviews with executive management that although the three institutions have as common denominator their technikon background, the differences in institutional culture in terms of academic project, work ethic and policy environments meant that there was a lengthy interim period. For instance, the appointment of the new executive management was only completed in December 2006 (AP vol.1: xi).

During interviews with senior management the Panel heard of the problems associated with the integration of the separate cultures of the three institutions and the negative effects of the extended transitional post-merger period. The Panel concurs with the institution that this resulted in a decline in staff morale and has to some extent negatively impacted upon the teaching and learning programmes.

During interviews with academic staff the Panel learned that the Internet and communication through the line function were the main mechanisms used by TUT to involve staff in developing a new identity. Staff indicated that this has been a difficult process, characterised by an overload of new policy development and, in some cases, overhasty policy adoption and changes in the practical situations of staff, all of which created confusion and uncertainty. Nevertheless, the Panel found that staff generally felt part of the change process and were supportive of the emerging new institutional culture, especially that of the research culture. The Panel acknowledges the progress made by TUT in relation to the operationalisation of the merger and is pleased to hear from the broader university community that there is some consensus about the direction and purpose of the new university. The Panel encourages TUT to ensure that the process of change is managed more systematically at all levels throughout the institution.

The Panel noted with concern that issues of ideology, race, language and work ethic generally constitute a source of tension among and between staff. While these are being addressed through policies, such as the Language Policy, Employment Equity Policy and Policy on Ethical Behaviour of Staff, the Panel is of the view that they are not being sufficiently systematically considered and discussed as part of the development of a new institutional culture. The Panel urges the institution to give due consideration and attention to the disparate cultures, particularly in terms of race, language and work ethic, that exist at TUT and to provide appropriate conditions that allow all stakeholders to participate in creating a new and inclusive identity. In this regard the Panel is of the view that the Faculty based campus model provides the institution with the opportunity to identify the values which will underpin the forming of a new institutional culture, develop a new work ethic and consider the type of experience that the institution as university of technology wishes to provide for its students.

3. Institutional Planning, Resource Allocation and Quality Management

This section of the report looks at TUT's conceptualisation of management governance and its operationalisation. First, it analyses the relationship between institutional planning and the organisation of the quality management of the core functions, and the management and monitoring of institution level goals in relation to the three core functions. Second, it looks at how these arrangements support the realisation of TUT's mission and vision.

3.1 Governance, Management, Planning and Resource Allocation

At the time of writing the Audit Portfolio, the governance structures of TUT were still in the process of being finalised and the Institutional Statute as provided for by the DoE for merging institutions was used instead. (AP vol.1: 24). The documented governance structures are: the Council and its Committees, the Senate, the Faculty Boards, the Student Representative Council (SRC) and the Institutional Forum (IF). The Panel learned during interviews with members of the IF that this forum felt that it has not been given the opportunity to discharge its statutory responsibility in advising Council, which has made difficult for the IF to fulfil its role in the life of the institution. The Panel urges the institution to ensure that the IF is empowered to carry out its mandate.

TUT has a central SRC located in Pretoria West, which deals with student related institutional policy issues. There are also local SRCs on the various campuses, which deal with operational issues. The Panel heard during interviews with SRC members across the campuses of tensions between these local SRCs and the central SRC and of inadequate communication between them. The Panel heard in interviews with staff and students at the Arts and Arcadia campuses that they do not have a full SRC as these campuses are seen as part of the Pretoria West campus. (There is only one SRC member for the two campuses, representing about 3,000 students.) Noting that the SRC is still an interim committee based on old structures and statutes, the Panel encourages the institution, when considering the new SRC constitution, to ensure that all the campuses have functional SRCs. When these deliberations are complete, the Panel urges the institution to finalise the statutes and put in place the new constitution.

TUT's executive management committee is led by the Vice-Chancellor, who is assisted by four Deputy Vice-Chancellors and the Registrar. The Deputy Vice-Chancellors are responsible for:

- Teaching, Learning and Technology
- Research, Innovation and Partnerships
- Institutional Planning and Operations
- Finance and Business Development. (AP vol.1: 25)

TUT is managed through a committee system, the main committees being the Executive Management Committee, the Academic Committee, the Administrative Support Committee, the Information and Communication Technology (ICT) Steering Committee, the Ethics Committee, the Central Research and Innovation Committee, the

Finance Committee, the Central Audit and Planning Committee, the Employment Equity and Training Committee, and the Tender Committee (AP vol.1: 24).

The seven Faculties are each headed by an Executive Dean who, in some cases, is supported by an Associate Dean. Academic departments are led by Heads of Departments (HoDs) and, where necessary, HoDs are assisted by a Section Head (AP vol.1: 25). The Panel confirmed in interviews with management and academics that academic departments have not yet been consolidated and that the process of appointing staff, particularly heads of departments, is not yet complete. It is clear to the Panel that the delay in finalising this process could negatively affect the quality of teaching and learning and therefore constitutes a potential risk for the academic reputation of the institution. The Panel urges senior management to finalise the appointment of staff, particularly at the HoD level, as the uncertainty at middle management level is having a negative impact on the quality of provision and contributing to the already low staff morale throughout the institution. The Panel is of the view that, once this is finalised, attention needs to be given to the negative impact that the concern with the more operational aspects of the merger has had on the quality of the institution's degrees and the effect that this may have had on its reputation.

The Panel is aware that the obstacles to the finalisation of the 'match and place' exercise have to do with disagreements between management and internal constituencies, and among internal constituencies themselves. This may in part be because there is insufficient understanding across the institution of the rationale for the model proposed by TUT's leadership, and not merely an indication of the prevalence of individual interests in the negotiation process.

The Panel suggests that the institution might want to develop a way of ensuring that there is constructive communication with the unions in order to create a bridging space during this transitional period. The Panel understands that senior management has tried to communicate with the various constituencies within the institution. However, interviews with students and staff who do not necessarily belong to unions suggest that targeted and more frequent information from senior management might help to achieve a better understanding of the strategic goals the institution is trying to achieve. While the Panel realised that there might be difficulties in the way that different constituencies are interpreting some of the changes that the institution is implementing, management may like to identify what the issues are and find ways to address these.

Recommendation 3

The HEQC recommends that Tshwane University of Technology develop and implement a strategy to ensure that there is open and inclusive communication across the institution and with all stakeholders.

The Panel noted that in order to deal with the challenges of merger which involves nine campuses and seven faculties the institution has chosen a single Faculty location model, which is currently in the process of implementation (AP vol.1: 25). The Panel is of the impression that senior leadership has thought carefully about the implications of this decision and weighed its transformative potential against its possible drawbacks. It seems to the Panel that, once all the environmental, logistic, resourcing and project management aspects and implications of the relocation of Faculties are addressed, TUT may well have created a solid and innovative base from which to grow the university. The Panel is of the view that the use of this model is a strong indication that the

institution is seeking to provide equivalence of provision in the long term and to develop into a unified university which integrates the three constituent institutions. This model also enables the institution to develop a new and inclusive institutional culture that provides equivalence of experience for students at a university of technology.

Commendation 1

The HEQC commends Tshwane University of Technology for developing and implementing a new organisational structure that provides a foundational structure for the institution to build upon.

However, on the matter of the relocation of Faculties, the Panel would like to point out that the development of the urban campuses might present larger developmental challenges than TUT can deal with on its own. During its visits, the Panel observed the poor infrastructure and facilities at the Soshanguve and Ga-Rankuwa campuses. The Panel heard during interviews with the Executive Deans that this unevenness has the potential to damage the viability of the single Faculty location model. It may be that upgrading the infrastructure and support services available at, for example, Ga-Rankuwa and Soshanguve, will have to be accompanied by an integrated development plan in which TUT can partner with provincial and municipal governments, and local communities. The Panel is aware that integrated development moves at a much slower pace than the institution would hope. It would like to encourage TUT to continue with the operationalisation of its plans for finalising the single Faculty location model while it engages with national and local role players about the socio-economic development of these areas.

Recommendation 4

The HEQC recommends that Tshwane University of Technology engages the local and provincial authorities in relation to the development of the Soshanguve and Ga-Rankuwa campuses in order to ensure that the relocation of faculties is done in the context of a social compact which supports the institution's efforts to attract staff, students and suitable industrial partners.

During a range of interviews with academics and students the Panel heard concerns about issues of access. The move to a Faculty based model may compromise poor and rural students' ability to access higher education; for example, potential students would no longer be able to enrol for their preferred course at the nearest campus to their home but might have to travel from Nelspruit to Witbank. This places another cost burden on already poor students. It also has implications for the institution in terms of its future student profile with respect to South Africa's demographic profile. The Panel therefore urges the institution to give attention to this issue and to develop mechanisms to ensure that access is not compromised.

Recommendation 5

The HEQC recommends that Tshwane University of Technology give due consideration to the impact that the additional costs of the Faculty based campus model will have on the access to higher education of financially disadvantaged students.

The Panel noted in interviews with management that Executive Deans have been, or are in the process of being, appointed. In accordance with the single Faculty location model these Deans will serve also as Campus Directors. (Where there is more than one Executive Dean on a campus, they will rotate. This means that the Executive Dean assumes the role of Campus Director for a period of time and then hands over to the next Dean.)

The Panel learned from interviews with management and staff that the campus management model is a source of tension between staff at the different campuses and those at the Pretoria campus, where the seat of the administration is. The campuses operate within a highly centralised governance and management structure. There is a matrix system with dual reporting lines. According to the organogram provided to the Panel, the dotted line is to the Campus Director with the solid line for all campus functional units to the relevant department/unit at the Pretoria West campus. The Panel heard in interviews with Executive Deans and Campus Directors of the problems arising from the centralisation of academic and administrative support structures and was told of an attempt to overcome this through the appointment of a campus coordinator. However, this has not fully addressed the issue, as all support units still have a direct reporting line to officials at the main campus. The Panel heard during interviews with Deans that representations are being made to the executive management committee to address this matter.

The Panel understands that the complexity of the merger makes heavy demands on the time and attention of senior managers. In the case of Executive Deans, especially where the Dean is also a campus head, the current level of administrative demands is unlikely to be sustainable and could undermine the Dean's capacity to focus on strategic issues at Faculty level. The Executive Deans, moreover, have been singled out as key players in the system of academic accountability at the institution. The Panel heard during interviews with some Executive Deans that supporting mechanisms need to be put in place to ease their administrative burden so that they are able to engage effectively with this system and give expression to the strategic objectives of the institution at Faculty level. Furthermore, in the context of the implementation of the single Faculty location model, the Panel suggests that senior management explore the idea of including the Executive Deans in the Executive Management Committee as a way to (i) prevent Deans from managing their Faculties as separate disconnected entities within the institution, and (ii) give expression to the search for a new academic identity for TUT; firstly as a university and secondly as a university of technology.

At the urban campuses the Executive Deans perform the function of Campus Head and reports to the Deputy Vice-Chancellor: Teaching, Learning and Technology (TLT), who has overall responsibility for the urban campuses for academic matters and the relevant line function for non-academic matters. However, at the three distant campuses (Polokwane, Nelspruit and Witbank) there is a full-time Campus Director who reports to the Deputy Vice-Chancellor: Research, Innovation and Partnerships (RIP) (AP vol.1: 25). The Panel noted the difference between the reporting lines for managing the urban campuses and those for managing the distant campuses and is concerned that this may have a negative impact on the quality and the equivalence of the teaching and learning provision across the institution. The Panel would like the institution to consider whether these reporting lines should be revised.

The Panel heard during interviews with the Executive Management Committee and observed during the site visit that Polokwane has a particularly poor infrastructure and facilities in terms of safety, staffing and student support. The Panel heard that this severe lack of equitable provision in terms of the learning environment is a matter of concern for the executive management but the institution does not have the funds to improve the campus. The Panel found from its site visit and interviews that Polokwane generally has an enthusiastic and committed management and staff. It also heard from external and industry partners that the campus is contributing to Polokwane's human resource needs. The Panel urges the institution to engage in constructive discussion with the relevant role players to find ways to develop this campus so that it will be able to offer its students a safe and proper learning environment.

The Panel learned that the two Mpumalanga campuses are being aligned with the National Institute for Higher Education (NIHE) and the Mpumalanga Province Growth and Development Strategy. The Panel noted that for these campuses have strategic focus areas have been identified partly to avoid duplicating programmes in the province and partly to meet the human resource needs of the two areas. To this end, industry-type programmes will be offered at Witbank and services-type programmes at Nelspruit (AP vol.1: 15). This change will also serve to position the campuses when the NIHE comes into operation during 2007. The Panel noted with appreciation the enthusiasm of staff members who were interviewed at these campuses for the academic project but it was concerned about equity of provision.

Planning and resource allocation is done centrally. TUT employs the Resource Allocation Model (RAM) to inform the distribution and expenditure allocations to, and from, different categories. The process is supported by an annual budgeting cycle which is informed by a custom-built Financial Planning Tool (AP vol.1: 26). The institution is of the view that the strength of the RAM lies in the way funds are distributed to the academic function and support services of the institution. The Portfolio states that 'this is not the ideal way for the support services and should only form a departure basis. Benchmarks are then determined, a gap analysis performed and then a migration strategy developed through a scientific exercise'. This ensures sufficient budget allocation to support services (AP vol.1: 26). The Panel heard during interviews with management that the RAM goes some way towards ensuring that all the learning sites are adequately catered for. It learned from interviews with managers that a request for funding for a department or unit needs to be accompanied by a business plan, which provides the link between resource allocation and planning.

The Panel was of the view, however, that this model would not address the historical imbalances, in particular at the Soshanguve and Ga-Rankuwa campuses, which have serious infrastructural problems that need to be addressed. During interviews with the Executive Deans, the Panel heard that this model also does not address infrastructural differences across Faculties and as a result there is no equivalence of provision across sites, even when students are in the same Faculty. The Panel heard of the hope, as noted earlier, that this would be addressed by funding from the DoE. The Panel would like to encourage the institution to take into account as far as possible, when allocating resources, the inequitable infrastructure that TUT has inherited.

Recommendation 6

The HEQC recommends that Tshwane University of Technology develop strategies that have clear time frames and allocation of responsibilities to ensure that there is an equivalent learning experience across campuses for all of its students. This includes giving attention to infrastructure, quality of staff, student and academic support.

3.2 The Quality Management System

Quality arrangements are governed by an institutionally approved Quality Assurance Policy, which states that TUT should ‘deliver quality services and products by establishing, maintaining and resourcing appropriate structures and procedures for the execution, monitoring, controlling, auditing and continuous improvement of all education, and training as well as support services and products’ (AP vol.1: 28). The quality management cycle is based on an input-process-output and review model (AP vol.1: 29).

The following principles guide quality at TUT:

- Quality remains a line function; that is, all environments within the university are responsible and accountable for the quality of their services or products.
- Quality is managed using the electronic quality management system, where each environment is expected to record their policies, map their procedures, document their records and report on their efficiencies and effectiveness.
- Quality is monitored and promoted by the central Directorate of Quality Promotion (DQP).
- The DQP advises, conducts reviews and reports on the state of institutional quality.
- Senate and Council provide oversight over the state of quality at the institution. (AP vol.1: 29)

The DQP reports annually to the Executive Management Committee and Council on all self-assessments, audits, procedures and processes and performance trends, as well as on the outcomes of external validations and accreditation. Despite this, the Panel is concerned about the lack of a strategic and conceptually informed approach to quality management at the institution. The Panel urges senior management to take a more active role in steering the institution’s quality agenda and to play an integral part in this endeavour. Furthermore, the institution should consider a conceptualisation of quality appropriate to a university of technology that goes beyond compliance and embeds quality in the core functions.

The Panel noted that the quality management system is only expected to be operational in the course of 2007. The Panel heard during interviews with management that initial attempts at drawing staff into the quality management system processes failed as some staff members were unwilling to invest time and resources in what they perceived as an uncertain environment occasioned by the restructuring process at TUT. The Panel concurs with the institution that the quality assurance arrangements are fragmented and uneven across departments, Faculties and campuses (AP vol.1: 31). The Panel encourages TUT to develop strategies to ensure that the quality management system is

implemented consistently and that review mechanisms are put in place that include the implementation of the identified enhancements, thus completing the quality cycle.

Recommendation 7

The HEQC recommends that Tshwane University of Technology conceptualise its quality management system in such a way that it moves beyond compliance and focuses on provision of good quality teaching and learning, research and community engagement. For this to be possible senior management needs to take a more active role in providing intellectual and strategic direction in terms of the formalisation, implementation and monitoring of a quality management system across all campuses which suits the profile of a university of technology.

The Panel learned in interviews with management that the DQP is responsible for assisting with programme accreditation and programme reviews and promoting quality across the institution (AP vol.1: 30). The Panel was pleased to learn that the HoDs expressed satisfaction with the support provided by the DQP in this context.

The Panel noted that the management of quality at TUT is concentrated on the teaching and learning core function (AP vol.1: 29–30). A variety of units deal with quality issues at TUT. While some, such as the DQP, focus on implementing and supporting the development of quality assurance processes others, such as the Higher Education and Development Support (HEDS), which was formed in February 2007, focus on areas of development and training. During interviews with staff the Panel heard that due to the newness of HEDS, that a working relationship between the two units has still to be established. The Panel suggests that as the institution reconsiders its mission and strategy it might give attention to reviewing the current location of DQP within the institutional structure to ensure that there is optimal use of institutional resources and benefit for the academic project.

3.3 Benchmarking and Surveys

The institution does not engage in formal benchmarking activities. It does benchmark itself against some national targets; for example, success rates, and throughput rates at postgraduate level. The Panel found during interviews with management and academics that internal benchmarking takes place with regard to pass rates across all departments and campuses. This is done for every module examination. The Panel urges the institution to develop and implement a benchmarking system. This is particularly important as the institution will be able to use its benchmarking activities to help chart its path to becoming a substantive university of technology.

The Panel did not find evidence of an institutional approach to user surveys and impact studies. It did find, however, that some surveys take place; for example on library services (AP vol.1: 97). No evidence was found of employer satisfaction surveys being conducted. During interviews with employers the Panel heard that there is considerable unhappiness with the quality of degrees that the institution awards. The Panel urges the institution to develop and implement employer surveys, which would allow TUT to assess the relevance and value of its qualifications in the labour market.

Recommendation 8

The HEQC recommends that Tshwane University of Technology give attention to the development of appropriate institutional systems for benchmarking, student and employer surveys, and impact studies which will include implementation plans with time frames and the allocation of responsibilities.

4. General Arrangements for Teaching and Learning Quality

This section of the report looks first at TUT's conceptualisation of teaching and learning; second, at the organisation of teaching and learning, and how these arrangements give effect to this conceptualisation; and third, at the structures that support teaching and learning at the institution and the arrangements for ensuring the quality of teaching and learning activities, including staff development.

4.1 TUT's Conceptualisation of Teaching and Learning

While TUT has not yet finalised its academic plan, it has a number of strategies and of policies to guide and monitor its academic provision. These are:

- The Teaching and Learning Philosophy
- The Teaching and Learning Strategy
- The Research and Development Strategy
- The Technological Innovation and Technology Transfer Strategy
- The Student Enrolment and Growth Strategy
- The Student Exchange Programme. (AP vol.1: 35)

The Panel noted that these strategies and the associated policies are in different stages of development, approval and implementation (AP vol.1: 37); for example, the Teaching and Learning Strategy was only approved in the last quarter of 2006.

The Teaching and Learning Philosophy and the Teaching and Learning Strategy state that TUT is an innovative leader in the field of technology-enhanced teaching and learning and that it supports outcomes based education (AP vol.1: 23)

The Teaching and Learning Strategy also provides a framework for the teaching and learning activities at TUT. It sets out:

- The approach to teaching, learning and the educational use of technology at TUT.
- The strategic goals and objectives in relation to teaching and learning.
- The academic development and support approaches for staff and students.
- The monitoring of teaching, learning and technology. (AP vol.2: 4–8)

The Panel was of the view that the Teaching and Learning Strategy has the potential to provide institutional direction with regard to this core function. The IOP provides details of the proposed academic programme topography with criteria to determine the seat of the Faculty and specific duplicated departments (AP vol.4: 87). An academic topography is provided for each site.

The Panel received confirmation during interviews with Deans and HoDs that while there is a suite of policies for teaching and learning, these documents are new and in some cases their status is uncertain. Furthermore, the Panel heard of problems with the implementation of approved documents. The Panel concurs with the institution that the main issue in terms of policy is implementation (AP vol.1: xii). It urges the institution

to finalise, consolidate, implement and monitor the many policies that affect the quality of teaching and learning and consider their resource implications for the institution.

The Panel learned from documentation and interviews with academic staff, management and students of the serious quality challenges posed for the institution by the need to concentrate on the operational aspects of the merger. It noted that the institution has embarked on a process of integration and consolidation of programmes and has begun to rationalise its academic offerings. It encourages the institution to consider during this process the curriculum implications (and resource implications) of driving strategic issues such as ‘cooperative learning’ and ‘blended learning’. It suggests that the institution decide whether these modes of learning are to be engaged with across all offerings or only in certain programme niche areas. It was of the view that the lack of an academic plan consistently applied and resourced across the institution has a negative impact on the quality of teaching and learning at the institution.

Recommendation 9

The HEQC recommends that Tshwane University of Technology develop and implement a comprehensive academic plan based on its new identity as a university of technology. This would also provide a framework for making decisions about the rationalisation of its existing programme and qualifications mix.

According to its mission statement, TUT is committed to providing cooperative career focused education. This constitutes ‘an integrated approach to teaching and learning for the attainment of qualifications and specifically encourages and enhances learning partnerships between all role players which includes students, university staff and employers’ (AP: 92). The Panel noted that there is a Cooperative Education Central Committee (CECC), and that the operationalisation of cooperative education is the responsibility of the Faculties, which have full-time coordinators responsible for its management (AP vol.1: 92). Cooperative education includes experiential learning (AP vol.1: 92). A policy and strategy document containing directives for the quality management of experiential learning was approved by Senate for implementation in 2006/7 (AP vol.1: 92). The role and responsibilities of academic staff, students engaged in experiential learning and the employers are clearly documented, as are the associated administrative procedures (AP vol.1: 55). The Portfolio states that mechanisms are in place to assure the quality of experiential learning in all the programmes offered by TUT (AP vol.1: 93). The Panel learned in interviews with HoDs, academics and students of differences in the management of experiential learning across departments, including placements. It also heard that quality mechanisms for evaluating and monitoring experiential learning are not standardised or equally implemented across programmes at all campuses. The Panel moreover heard that work-placements are not managed by the institution and that often students need to find placements by themselves.

In its Teaching and Learning Strategy, there is no indication of how TUT as a university of technology will prepare students for experiential learning in a way that will fully equip them with technical and non-technical skills and enable them to access the job market. The Panel is of the view that the degree of success of student placements depends on the degree to which students are prepared for experiential

learning. It strongly urges that specific student interventions be put in place to ensure the preparedness of students for the workplace. It learned from interviews with a range of staff that the process for recording, monitoring and assessing the experiential learning component is uneven across campuses. Furthermore, interviews with students indicated that some are unable to complete their qualification because they could not find placements. The Panel encourages the institution to give urgent attention to this issue.

Recommendation 10

The HEQC recommends that Tshwane University of Technology ensure that every student in a programme with an experiential learning component is placed appropriately, that there is a functioning system to record, monitor and assess the content and progress of the student's learning experience in the workplace, and that the system is implemented consistently and monitored across all campuses.

The Panel heard during interviews with management and academics that one of the objectives of the university is to integrate cooperative education in all career focused programmes. However, it found from a range of interviews with academics that this is not seen as a strategic direction in all programmes. The Panel encourages the institution to clarify the extent to which cooperative education should be incorporated into the curricula, and at the same time take into account the resource implications of any decision taken in this regard.

In terms of blended learning (multi-mode teaching), the Portfolio describes TUT as being one of the first institutions of its kind to 'demonstrate the practicality and potential of the utilisation and management of technology in education by integrating technology in the curriculum and capturing its essence in the teaching, learning and technology (academic) strategy of the institution' (AP vol.1: 83). There is an established directorate to deal with this function. Three approaches define the function:

- Technology for Teaching and Learning
- Teaching and Learning with Technology
- E-learning Design and Development. (AP vol.1: 84)

Programmes are delivered using an updated infrastructure and instructional modes (such as Web CT, Telematic Education and Internet access). The Panel found during visits to the campuses, and received confirmation in interviews with staff, that the infrastructure and instructional modes are not fully accessible to all students across campuses and that staff training has not occurred across all campuses. This has negative implications for success and throughput rates. The Panel urges the institution to expand its broadband width so that students have access to the various instructional modes offered by TUT.

The Panel noted that the Integrated Technology Plan for educational technology still needs to be formulated and that policies and strategies need to be revised (AP vol.1: 87). Given that most students enrolled at TUT are from poor and rural backgrounds, the Panel encourages the institution to monitor the use of electronic teaching in order to assess the efficacy of such a model in terms of success and throughput rates. The Panel proposes that the institution determine as a matter of urgency the extent to which the use of technology in teaching and learning is to be an institutional strategy and allocate resources accordingly. Strategies for monitoring the

quality of such programmes are needed within the institutional quality management systems, as well as systems for tracking the extent of blended learning across the institution.

In sum, the Panel suggests that the institution consider the implementation issues of strategic curriculum thrusts such as cooperative education and blended learning. As the institution defines a new mission and vision in the context of its search for a new identity as a university of technology, it needs to engage in debate on these issues.

In terms of using information for academic planning, the Panel learned from Deans and HoDs that they have access to academic data through the ITS MIS. The Panel heard that while the system could allow HoDs to identify at-risk students, this rarely happens since classes are so large. The Panel is of the view that there is a need for institutional data to be collected, analysed and made available with regard to at-risk students, throughput rates, and graduate tracking. During interviews with management the Panel heard with appreciation about the efforts made by the institution to develop a management information system that will provide reliable and accurate data for planning purposes and that will constitute the basis for interventions to improve teaching and learning. The Panel encourages TUT to continue developing and implementing this system so as to enable the institution to access critical information for decision-making purposes.

4.2 The Organisation of Teaching and Learning

A number of planning and support structures have responsibility for the quality of teaching and learning at TUT. Senate acts as the overseer of academic quality, and the Academic Committee, a subcommittee of Senate, is responsible for all academic affairs, including quality assurance for teaching and learning. The committee is chaired by the DVC: TLT and brings together the Deans, academic support directors, library staff and strategic management support staff (AP: 36).

The Panel heard during interviews with the Executive Deans that the work of this committee has been focused mainly on operational issues related to the merger, and that it needs to shift its attention to implementing policies and achieving strategic targets for teaching and learning. One such target is throughput rates. A subcommittee of the Academic Committee has been constituted with this purpose. The Panel learned during interviews with management and academics of the priority given to success rates. Course results are checked to determine in which subjects and at which campuses there are low pass rates. The marks are compiled per subject per campus and circulated to all campuses. Campus pass rates are compared at subject committee meetings and lecturers have to explain why their pass rates are low and how they plan to improve them. Departments are expected to put measures in place to improve pass rates. The responsibility for academic support rests with the individual lecturer. The Panel heard that a target has been set for a 70 percent pass rate per subject. The Panel concurs with academic staff that this is an unrealistic target unless formal mechanisms and resources are put in place to support the academic endeavour. While the Panel understands that so far the operational demands of the merger have been such, that concerns about the quality of the teaching and learning core function were not prioritise, it is important that

the institution prioritises the improvement of teaching and learning as a matter of urgency.

Recommendation 11

The HEQC recommends that Tshwane University of Technology make the improvement of the quality of teaching and learning an institutional priority and that strategies and resources are put in place for this purpose. In doing this, the institution might want to consider the development of appropriate mechanisms of support to professionalise teaching as a way of responding to the pedagogic challenges posed by TUT students.

Although the Panel heard during interviews with students across campuses about lecturers' commitment to assisting students, there was little by way of foundation support. The Panel found that institutionally driven strategies and support mechanisms for addressing foundation provisioning were lacking at some of the campuses. The Panel noted from the TUT prospectuses that the institution offers what it calls 'foundation studies' in many of the Faculties, but it found during interviews with a wide range of managers and academics that most of these are in fact short courses.

The Panel learned with concern during interviews with staff and students across the campuses that short courses are being offered in two ways. Firstly, they are offered to students who are unsuccessful in their applications for admission to diploma programmes. Secondly, they are offered to applicants for the formal academic programmes once these are 'fully subscribed'. In both instances, short courses are being used as foundation programmes. The Panel heard during interviews with a range of academics that these short programmes are often very similar in content to the formal programmes. It heard with grave concern during interviews with academic staff that, contrary to students' expectations, successful completion of the short course does not guarantee a place in the formal learning programmes. The Panel urges TUT to discontinue the use of short courses for the purpose of admission and access. It should instead consider the wider use of foundation provision.

Recommendation 12

The HEQC recommends that Tshwane University of Technology discontinue the practice of admitting unsuccessful diploma applicants to short courses and instead develop and implement appropriate foundation provision to meet the needs of these students.

The Panel noted from the Portfolio and heard during interviews of the confusion between the role played by bridging courses, on the one hand, and the DoE funded foundation provision, on the other, as a student development throughput and success strategy (AP vol.3: 52). The Panel suggests that TUT consider the broader use of extended curriculum foundation provision as an institutional student development initiative.

Recommendation 13

The HEQC recommends that Tshwane University of Technology reconceptualise its access and academic development programmes to ensure that students are optimally prepared and supported throughout the

duration of their studies and that such programmes are implemented across all sites of delivery.

The Panel noted from documentation and heard in interviews with academics that the institution has policies, guidelines and procedures in place to ensure that all the academic programmes meet minimum quality standards and criteria (AP vol.1: 53). HoDs are responsible for the overall planning of the department and fulfil in most of the cases the role of programme coordinators (AP vol.1: 43–4). Subject coordinators were appointed during the merger process to facilitate programme integration and coordination at the various campuses (AP vol.1: 43). Subject coordinators ensure that where subjects are offered across campuses students follow the same syllabus and are assessed in the same ways. The Panel heard in interviews with academics that the institution has flat communication structures in place and that there are regular meetings which allow lecturers, including those at campuses participate fully in all decision-making processes (AP vol.1: 44).

The Panel learned that at the distant campuses the Campus Directors participate in the academic enterprise at the level of Senate and the Academic Section Heads at the level of Faculty Board. The Panel was told during interviews with Executive Deans and Campus Directors that they find this arrangement adequate. Nonetheless, the Panel received confirmation during interviews with Executive Deans, HoDs and academics that the quality of programme management is currently uneven across the campuses, which, as discussed earlier, is largely due to the interim appointments of HoDs and the ongoing consolidation of departments and programmes (AP vol.1: 45). This constitutes a major academic risk for the institution in terms of student experience, quality of graduates and reputation. The Panel urges the institution to ensure that there are substantive HoDs in all areas of the institution. Furthermore, it is important that academic leadership at HoD level is properly prepared, through some form of induction or training, so these staff will be able to manage the quality of programmes.

As an institution with multiple campuses, TUT has yet to put effective quality measures in place which will enable it to ensure comparable standards of student experiences. There is a great disparity in the application and effectiveness of teaching and learning quality management arrangements across campuses and the Panel is concerned that there may be serious inconsistencies in the quality of tuition provided across Faculties and campuses. It is of the view that the Faculty based campus model may go some way towards addressing this issue.

The Panel was concerned to learn about the large percentages of part-time academic staff across the campuses; in 2005, 60.5 percent of TUT's academics were temporary. The Panel learned during interviews with academic managers of at least one department that is staffed entirely by part-time lecturers, with the exception of the academic sectional head. One of the concerns about the large numbers of part-time staff is the inaccessibility of part-time staff to students. While many academic section heads have put in place various mechanisms to manage part-time staff and student expectations, it was generally acknowledged that the problem is being contained rather than resolved. The Panel understands that this problem has been aggravated by the merger. However, the Panel urges the institution to ensure that the number of full-time academic staff is sufficient to create an enabling teaching and learning environment for students across all campuses. This should be done balancing the need for permanent staff with the need to provide industry experience for the students.

Recommendation 14

The HEQC recommends that Tshwane University of Technology ensure that the number of full-time academic staff is sufficient to create an enabling teaching and learning environment for students across all campuses.

All problems notwithstanding, the Panel noted with appreciation the dedication and commitment of many lecturers at all campuses and was pleased to note students' enthusiasm about the quality of education offered at TUT. The Panel also heard positive remarks from external partners about the new status of TUT as a university of technology and expectations that this would enhance graduate capabilities. Some representatives from the employer sector, however, were concerned that the quality of TUT's graduates may have declined as a result of the merger. The Panel would like to impress upon the institution the importance of improving the quality of its graduates and of building and sustaining stakeholder and employer confidence in its graduates and of assuring external stakeholders and partners that the institution is taking the necessary steps to minimise the impact the merger may be having on the quality of provision.

4.3 Management of Quality in Academic Support Services

TUT states that 'higher education development and support is understood to include specialist support services that add development and supportive value towards the effective promotion of student learning' (AP vol.1: 67). Such support services include: Curriculum Development Support (CDS), Telematic Education (TE), Centre for Continuing Professional Development (CCPD), Cooperative Education (CE), Student Development and Support (SDS), Library and Information Service (LIS), Financial Aid, and Leadership Development.

The Panel noted that the restructuring exercise in August 2006 repositioned SDS, TE, CDS and CE under Academic Development, which is the responsibility of the DVC: TLT. The institution anticipates that this restructuring will enhance effectiveness through the creation of cross-functional project teams. The Panel was not able to comment on the effectiveness of this restructuring since it has yet to be fully operationalised.

4.3.1 Academic Development

Student Development and Support offers a range of interventions for students, such as life skills and learning skills. While programmes for student development are guided by various policies and operational plans, the Panel did not find evidence that these plans were being implemented with any consistency.

In interviews with students, staff and the Director of SDS, the Panel heard that student development programmes are only fully implemented in the Pretoria West campus and unevenly across the other campuses. The Panel heard during a range of interviews with staff and students across all campuses of a number of issues pertaining to student development and support. These included: inadequate financial resources for

financially disadvantaged students to engage successfully with the demands of higher education, and students not sufficiently supported in study skills and soft skills which would enable them to enter the labour market successfully. The Panel concurs with the institution that the challenge is to ensure equity and equivalence of these services across all campuses (AP vol.1: 69–74). Student development needs to be more equitably offered across campuses and integrated into programmes, and it needs to take into account national student development research.

While TUT has some policies which pertain to student life, such as the Policy on Student Life Events and the Policy on Student Gatherings, the Panel found these to have an unspecified institutional status. The Panel received confirmation during visits to the campuses and interviews with management that student life activities from the previous institutions have not been unified. It urges the institution to give attention to developing an institutional ethos on student life so that the student experience at all campuses is of the same quality.

During site visits and in interviews with staff and students at the campuses, the Panel found that residence facilities and their services are unequal across campuses. The residences at Soshanguve are particularly poor in comparison with those at Pretoria West. There are also issues of safety and security, in particular for female students. The Panel urges the institution to take steps to improve the quality of its residences so that students have a comparable residence experience across the institution.

The Panel also noted that the residence admission policy is largely determined by academic performance. This poses a financial challenge for financially disadvantaged and rural students who upon failing a course may continue to study at the institution but have to look for private accommodation. The Panel would like TUT to give consideration to reviewing those aspects of its Residence Policy which might not be supportive of disadvantaged students.

TUT recognises the importance of financial aid as a means of ensuring access to higher education study for the financially disadvantaged (AP vol.1: 101). There is a Policy on Financial Aid that was approved in 2005. The Panel found this policy appropriate for TUT, as reports of the Financial Aid Directorate to the Student Services Council, including one as recent as September 2006, do not indicate problems with the policy or its implementation. The institution is also aware of the need for new policies and procedures so as to ensure policy relevance and currency (AP vol.1: 104).

The Panel noted in the minutes of the Financial Aid Directorate (May 2005 and November 2005) and heard during interviews with staff across campuses the emphasis placed on assisting students. Efforts are also made by the institution to raise funds from the private sector as there are insufficient funds available to assist the large number of students in need of financial support. The Panel was pleased to learn in interviews with some students that they were aware of financial opportunities and the process to be followed to obtain financial aid and that there was support from staff at all campuses.

4.3.2 Library

The merger brought together three libraries. The Portfolio states that ‘In order to render cost-effective services, LIS has a hybrid model of service delivery in which client services are decentralised at the campuses/sites and the library support services are centralised’ (AP vol.1: 95). The prescribed and most of the recommended texts are stocked in the libraries, as well as supplementary reading material. Students may borrow prescribed texts through short loan. There are on-line journals and databases. The Panel heard during interviews with library staff of high levels of usage of its databases and learned with appreciation during interviews with staff and students that the quantity and quality of these databases is good.

The campus librarians report to the Executive Director: Libraries, who in turn reports to the DVC: RIP. The librarians keep statistics on usage and compile monthly reports, using the prescribed template, that are sent to the Office of the Executive Director. The reports are supplemented by random user satisfaction surveys. The Panel heard that these will be undertaken on a quarterly basis from 2007. It was found from the surveys that the library services do not adequately meet the needs of postgraduate students and research staff. Problems with space, access for the disabled and outdated equipment were also identified. During visits to the campuses, the Panel found that there is a lack of seating space for students to study, insufficient access to computers and insufficient copies of prescribed and recommended books. Pretoria West has good library facilities, but these are not matched by the other campuses. The Panel found that there was no equivalence of library provision across the campuses in terms of infrastructure and provision. The Panel learned that TUT has not taken steps to attend to these issues owing to a lack of financial and human resources (AP vol.1: 97). The Panel urges the institution to try to develop and implement a plan to address these concerns.

During site visits the Panel found that the libraries across campuses are open from Monday to Friday during normal working hours. It heard during interviews with campus librarians that there are plans for library hours to be extended until 22:00 during weekdays and from 9:00–17:00 on Saturdays. A new approved staffing structure was approved in November 2006 as a result of which additional library staff members will be appointed at each of the campuses to service the extended library hours. At the time of the audit visit this had not yet been put into practice. The Panel encourages the institution to ensure that this policy is implemented.

Each campus has an Electronic Resource Centre, which is linked to the library but functions as a separate unit (AP vol.1: 95). This is an outsourced function. The Panel found during interviews with staff and students that these centres are well used but that the space and facilities are inadequate for the number of students enrolled at the campuses. It found that there are two of these centres at the Pretoria West campus, and that these are open longer than the usual library hours. The Panel again noted the inequitable provision of facilities across campuses.

Recommendation 15

The HEQC recommends that Tshwane University of Technology find innovative ways to develop and resource a five-year growth plan for its libraries that will ensure sustainability and equivalence of provision across campuses.

4.3.3 Information and Communication Technology

At the time of the merger, all three institutions were using the ITS system. Some modifications have been necessary to ensure that all campuses of the newly formed TUT were using the same version of the software and that uniform codes were being used. The Panel heard during interviews with management that since these initial difficulties have been resolved the institution has a functioning ITS system across all campuses.

ICT facilities are classified into two categories. The first category is ICT provision for ICT based teaching for learning programmes, such as engineering, information technology and office management technology. The second is ICT provision for student support and enhancement of learning, allowing students to access the Internet and Microsoft Office.

Regarding the first category, the Panel found that the computer laboratories in the various departments are effectively supported by the Computer Support Services. There are service level agreements and operational level agreements between the Computer Services Support unit and departments. However, the Panel found during campus visits and confirmed during interviews with staff and students that the student-to-computer ratios across departments and campuses are too high and uneven to support the institutional core functions of teaching and learning and research adequately. For example, at Witbank the ratio is 1:78 and at Nelspruit it is 1:75, while those at Ga-Rankuwa and Soshanguve are substantially higher. At all the campuses other than Pretoria West the Panel heard about the short period during which students could access computers (laboratories close at 16:00), and the length of time each student was allowed computer access. The Panel urges TUT to develop a system that will ensure delivery and monitoring of equitable student access to computers across all campuses.

Regarding the second category, the physical infrastructure is well budgeted for and there is commitment from the leadership of the institution to improve technological support for the core functions of TUT. However, the Panel heard during interviews with staff and students that IT support across the campuses is inadequate and uneven. The support at some of the campuses typically consists of one person who is responsible for servicing all the academic and administrative units, as well as attending to student needs. Given the critical importance of IT in teaching and learning, the Panel urges the institution to strengthen its capacity to provide IT support across all the campuses. It suggests that the institution develop a system to address the issue of equitable access to IT and that student access to ICT be monitored across all campuses.

Recommendation 16

The HEQC recommends that Tshwane University of Technology develop an ICT policy that addresses the use of IT facilities, including adequate Internet access for students and equitable access to IT facilities for all students across campuses, and ensure that such provision is monitored and evaluated.

4.4 Management of Certification

Certification is done in the Central Certification Office (AP vol.1: 109). The Office identifies possible graduation candidates and ensures that they meet the statutory requirements. This information is then captured using the internal Graduation Information List (GIL) software (AP vol.1: 110). Verification, by comparing the student's academic record with relevant documentation, is undertaken by two graduation advisors. After successful completion of this process, the student is informed of the graduation date (AP vol.1: 111). There are a number of policies and procedures which govern the certification process, for example, the Certification and Issuing of Qualifications document (AP vol.1: 109). ITS is at the centre of the administrative process and controls all the subsystems, which have built-in security features (AP vol.1: 110).

It is stated in the Portfolio that a number of quality checks are in place, such as checking for outstanding admission documentation, outstanding or incorrectly registered subjects or courses, outstanding or incorrectly captured marks, outstanding exemptions or recognitions or outstanding fees (AP vol.1: 111). The Panel noted that a number of quality risks have been identified, one of which is the failure of staff to adhere to approved policies and procedures. This constitutes a risk for the institution with regard to the integrity of its qualifications. The Panel urges TUT to put in place a monitoring system to ensure the consistent implementation of its certification policies and procedures.

Regarding the preparation of certificates, the Panel found that blank certificates, which have a watermark, are ordered from outside South Africa. The printing of certificates is done by a reputable company in Johannesburg. The certificates have built-in security features such as microscopic wording in strategic places. Each certificate is numbered, and both external and internal printing takes place. The Panel noted that TUT has developed six quality improvement initiatives in order to improve the certification process (AP vol.1: 111). It was unable to ascertain whether these initiatives have been implemented.

4.5 Management of the Quality of Short Courses

TUT states that the 'provision of SLPs is related to the mission of the university and is offered by academic department to further TUT's aims and objectives'. The SLPs (Short Learning Programmes) are initiated by academic departments, as a supplement to the formal curriculum or as a result of an industry request (AP vol.1: 117). The SLPs or NSSPs (Non-State Subsidised Programmes) are administered by the Central Management Unit (CMU). This unit is responsible for registering, monitoring and capturing all the SLPs at TUT, and there are approximately 160 of these (AP vol.1: 117).

Post-merger, a new set of SLP policies, together with academic and administrative procedures were devised (AP vol.1: 116). The policies, procedures and guidelines include steps to be followed when initiating NSSPs, the necessary documentation to be submitted to various structures for approval, the status of NSSP students, the remuneration of NSSP initiators and managers, and the issuing of certificates. The

finalised policies were posted on the DQP website and provided to all Faculties. However, TUT has established that these policies have not been consistently and correctly implemented by all Faculties across campuses and that no evaluation procedures are in place for these programmes (AP: 116). The Panel was pleased to learn that user surveys and reviews (AP: 118) have been instituted to address these issues and that these will be implemented in 2007. Further recommendations for improving the quality of TUT's NSSPS have been made by KPMG's audit and a Task Team has been commissioned to implement these recommendations (AP vol.1: 117).

In interviews with management the Panel heard that improvements have been made to the administration of short courses and that enrolled students are being registered on the ITS system. A new policy on short courses has been approved by the Academic Committee but not as yet by Senate and Council. The Panel was assured by management that, when fully implemented, the new policy will take care of all of the concerns raised by the KPMG audit, except for 'two technical financial issues'.

The Panel was not clear about the impact that the full suite of short courses would have in furthering the aims and objectives of the institution or about the responsive of short courses to industry, regional or national needs. The Panel heard during interviews with managers and students across the campuses that some academic staff members are not available for their mainstream teaching responsibilities as a result of their involvement in teaching short courses. The Panel is concerned that the short courses could have a detrimental effect on the provision of mainstream academic programmes. The Panel urges the institution to give attention to the impact of the provision of short courses on formal qualifications offered by the institution.

Recommendation 17

The HEQC recommends that Tshwane University of Technology investigate the quality of the considerable number of short courses currently being offered and their impact on the mainstream activities of departments and Faculties

4.6 Programme Development and Review

The Curriculum Development Policy and the Quality Assurance Policy provide guidelines and procedures for the development of programmes (AP vol.1: 39). In planning a new programme the HoD consults with the Strategic Support Office to determine whether the proposed programmes fit into the PQM. The DQP is also asked to provide guidance and support (AP vol.1: 39). The CDS unit is asked to provide advice on curriculum development. The HoD conducts a needs analysis by consulting industry, the profession and/or government (AP vol.1:39). The Panel received confirmation during interviews with management that a business plan that includes infrastructural and budgetary requirements for the programme is developed for each programme to ensure that it will be adequately resourced. While it is stated in the Portfolio that the use of advisory boards ensures that external stakeholders are involved (AP vol.1: 39), the Panel found during interviews with academics that not all programmes have advisory boards and heard of instances that where they do exist, meetings do not take place. The Panel urges the institution to put mechanisms in place to ensure that advisory boards are constituted and are functional across all programmes. The Panel concurs with the institution that all future programmes need to go through a

rigorous quality assurance process to ensure consistency with internal and external quality standards (AP: 38).

The Panel heard during interviews with HoDs that there is a moratorium on the expansion of the PQM, although there have been some exceptions. The Panel found that clear procedures exist for programme development, and support structures exist for staff involved in this process. However, because of the moratorium on programme development the Panel did not have enough information to judge the effectiveness of the programme development policy.

A programme review system is included in TUT's quality management system and there is also a programme review manual (AP vol.1: 46). The Panel learned that this system has been put into operation in the Faculty of Information and Communication Technology. Programme reviews are linked to Faculty reviews, which are conducted triennially according to the approved programme and Faculty review schedule (AP vol.1:47). The Panel found from interviews with academic staff that they are unclear about the different roles played by the DQP and the CDS in the programme review process. It encourages the institution to clarify the roles and responsibilities of the DQP and CDS and ensure that these are communicated effectively across the Faculties.

The Panel noted that HoDs and academics are expected to review programmes annually by using student performance data, lecturer evaluations and student course evaluation surveys. The review process should involve various stakeholders, such as experts from industry, members of advisory boards, members of professional bodies, academic peers from other Faculties and academic peers from other universities (AP vol.1:47). The Panel learned during interviews with Deans and HoDs that the advisory boards for programme reviews were often of limited value. Furthermore, it heard during interviews with academics at the urban campuses that some boards are not functional at all. The Panel was pleased to note that the Engineering Council of South Africa (ECSA) provides regular feedback on engineering programmes and these are used to improve the programmes. It urges the institution to put mechanisms in place to ensure that all programme advisory boards are functioning and that monitoring and review procedures are implemented.

The Panel learned in interviews with academics that student academic performance data and programme evaluation surveys are used as well as advisory boards with industry and subject specialists were used by DQP to triangulate programme performance in the Faculty of the Arts. The Panel concurs with TUT that this is an example of good practice and should be extended to all Faculties (AP vol.1: 52).

Commendation 2

The HEQC commends Tshwane University of Technology for the good practice established by DQP in the 2006 Faculty of the Arts Programme Reviews.

It is indicated in the Portfolio that the programme groups will generate an improvement plan after receiving their review report (AP vol.1: 48) and that the implementation of the plan will be monitored by the DQP. However, the Portfolio indicates that the DQP has not, as yet, monitored and evaluated improvement plans because of 'institutional factors' (AP vol.1: 50). Nevertheless, the Panel urges the institution to ensure that there

are clear lines of accountability between programme coordinators, HODs and the Dean to follow up on the recommendations from a programme review.

During interviews with academics the Panel found a number of inconsistencies in the understanding and conducting of programme reviews. It concurs with the view expressed during interviews with management that the institution needs to embark on continuous training for all participants, including academic staff and students, to familiarise them with the benefits of a self-evaluation exercise (AP vol.1:52).

The Panel heard that the DQP is revising its programme review processes in order to facilitate the outcome of the review process (AP vol.1:50). An improvement in the turnaround time has been initiated by means of 'quality alerts' where a summary of the findings from the programme review will be submitted to the programme group, executive management committee and Council within a month of the review. The programme review manual will be continuously revised to ensure relevance (AP vol.1:50). The Panel noted with appreciation the efforts made by DQP to strengthen the review process.

4.7 Staffing and Development

TUT has a suite of policies pertaining to staffing. These include Recruitment, Affirmative Action, Gender Equality and Employment Equity (AP vol.1: 77). The Panel heard during interviews with management that these policies are unevenly implemented across the institution. As noted in Section 2.2, TUT is making slow progress in changing its staff profile to being more representative of the demographics of the country.

A document entitled *Guidelines for the Appointment and Promotion of Academic Staff* is available. Promotion takes place on the basis of a favourable assessment of excellence in accordance with the Performance Management System, and subject to the individual's qualifications and other requirements. The Panel heard during interviews that the system was not yet fully operational and so was unable to judge its efficacy. The Panel noted that the Performance Management System will only become operational once the 'match and place' exercise is completed, as discussed in Section 3.1.

Responsibility for academic staff development moved from the Centre for Continuing Professional Development (CCPD) to the Curriculum Development Support Unit (CDS) in January 2006 as a result of the merger process (AP vol.1: 75). The HEDS unit has recently been established and reports to the DVC: TLT. The Panel heard from the DVC: TLT that the HEDS is responsible for training and developing academic staff. The CCPD Unit in the HR department plays a supportive role in these processes and provides administrative support.

The CCPD continues to oversee the Workplace Skills Plan for TUT and to offer generic skills development for all staff at the institution. According to the Portfolio, while the DQP, CCPD and HEDS 'report to a different senior manager, greater cooperation and coordination is achieved through Academic and Administrative committees' (AP vol.1: 67). There is an educational training and development plan, including a

professional development plan with various methods of delivery (AP vol.2: 28). It is envisaged that all three units will work together to ensure that the training and development strategies at TUT will be 'aligned to training needs identified in the Personal Development Plans (PDPs) to ensure an individual focus' (AP vol.1: 77). During interviews with a range of staff, the Panel confirmed the institution's concerns about a lack of synergy between the various units responsible for the training and development of academic staff and confusion about the roles, relationships and functions of the various units/sections. The Panel encourages the institution to clarify the roles and responsibilities of the CCPD, HEDS and DQP and ensure that their efforts are coordinated.

TUT has a policy that all new academic staff (full-time and part-time) must participate in an induction programme run by CCPD; this includes the preparation of a teaching programme. The Panel found that this policy is being adhered to and heard positive reports about this programme during interviews with academic staff, in particular those at the distant campuses. Staff development opportunities are advertised on the Intranet and individual staff members can register directly for the courses. Whilst academic staff members are aware of the courses, the Panel found during interviews that there are budgetary and time constraints which limit participation in the courses, particularly for those staff at the distant campuses. Where sufficient third stream income has been generated by departments, this is used for staff development activities. Where enough staff at a campus wishes to participate in a course, CCPD or CDS will deliver the course at the campus. The Panel encourages the institution to consider ways in which staff development can be accessed across all campuses in a consistent manner.

4.8 Management of Assessment

TUT has a Policy on the Assessment and Moderation of Learning (AP vol.1: 53). This policy sets out the rules for assessment methods, question papers, memoranda, invigilators, examination rules, processing and publication of results, and so on. The Panel appreciated the wide ranging content of this policy, but was concerned that it does not articulate TUT's conceptualisation of assessment, particularly in the light of being a university of technology.

While there was a consultative approach to the development of the policy, the Panel noted the statement in the Audit Portfolio that it was difficult for the Faculties 'to participate fully ... as they were in the process of being reconfigured' (AP vol.1: 53). As a result, a workshop was held in March 2006 to discuss areas which were deemed to be in need of refinement (AP vol.1: 55). These areas have yet to be incorporated into the Policy.

The Panel confirmed during interviews with a range of academics the unevenness of the implementation of the Assessment Policy and its procedures across Faculties and Departments. During interviews with students the Panel heard of assessed scripts being returned well after the due date. The Panel concurs with the institution that mechanisms should be developed and implemented across all Faculties and campuses to ensure consistency in TUT's assessment practices.

Despite the policies and rules for moderation, the Panel found that the moderation administration process is problematic across the campuses. It heard that (i) moderators are not always appointed, (ii) if moderators are appointed, they do not get the examination papers timeously, and (iii) academic coordinators do not always receive the moderators' feedback.

The Panel heard during interviews with academics and staff that supplementary examinations follow immediately after the regular examinations, within two weeks of the examination period, and that this does not allow sufficient time for the papers to be moderated, results to be published, and students to study for the subjects in which they are being re-examined. The Panel urges the institution to reconsider its scheduling of supplementary examinations as the limited time for marking, moderating and publication of results between the examinations seem to be having a negative effect on the quality of the academic process.

With regard to student records, while the operational process for student records is centralised, each campus has a student records or filing section responsible for application, registration and, in some cases, graduation records (AP vol.1: 113). The Panel found that there are adequate safety mechanisms in place to ensure the integrity of student records. It noted, for example, that the Registration Operational Plan for 2006 requires that all student applications and registration information are electronically recorded and audited immediately (AP vol.1: 114). The Panel found that that the procedures for ensuring the integrity of student records are applied consistently across all campuses.

TUT is in the process of scanning all source documents and student records in order to overcome storage problems (AP vol.1: 114). Confidential records, such as examination scripts, mark sheets, final marks and results, are kept in strong rooms but, owing to a lack of space, some past student records have to be kept in administration offices. TUT has identified quality measures that would improve the safekeeping of all student records. However, the Panel heard during interviews with staff that owing to a lack of financial resources it cannot implement the identified improvements. The Panel encourages the institution to identify resources so that this project can be finalised.

The Recognition of Prior Learning (RPL) Policy 2005 outlines the process and procedures for access to higher education at TUT through this route (AP vol.1: 63). RPL decisions are ratified at Senate. RPL is used predominantly for purposes of access, subject exemptions and status; i.e. where there is an apparent discrepancy between the programme credit that a student has obtained and the prerequisites for entry into a programme. CDS and CCPD are responsible for training staff in RPL (AP: 64). Although no training has been offered since the merger the RPL Office provides support to academic on request. The Panel encourages the institution to re-introduce training in RPL.

5. Management of Research Quality

This section of the report looks first at TUT's conceptualisation of the research function and its relationship with the institution's broader strategic goals; second, at how the management of the research function is organised and the notions of research development and support to which it gives effect; and third, at the organisation and support of postgraduate education. Finally, it examines the nature and scope of TUT's research production (journal publications) and the strategic implications these have for the institution.

5.1 Quality Related Arrangements for Research

Research at TUT is in the developmental stage (AP vol.1: 122). Although there is no overall research policy approved by Senate informing quality arrangements for research, innovation and partnerships, there are a number of research related policies. These include the Policy on Ethics, the General Research Competency Course Programme and Manual, the Guidelines on attending conferences, the Copyright Policy, the Intellectual Property Policy and the Technology Transfer and Technology Innovation Strategy (AP vol.1: 122–31).

The Panel heard during interviews with management and a number of academics of the drive to establish a research culture across all TUT campuses. Professors of Research and Innovation have been appointed at various Faculties and report directly to Deans. Their role is to develop a research culture through capacity development workshops and by providing advice to academic staff on publications and conferences.

In addition, the institution has instituted a number of mechanisms to give substance to TUT's status as a university of technology. These include annual junior and senior researcher awards and the allocation of research funds to researchers who have contributed to subsidised journals (AP vol.1: 132). The Panel acknowledged these initiatives with appreciation.

Academics are required to engage in research activities. The institutional expectation is 0.18 publication output per year by each permanent academic staff member. Funding, both in terms of study leave and research leave, is available for staff wishing to pursue higher degrees. The Panel congratulates the institution for its commitment to the further development of the research and innovation function and the improvement of staff qualifications.

Commendation 3

The HEQC commends Tshwane University of Technology for its investment in staff development to enable academics to acquire higher degree qualifications, which has the potential to yield significant returns for TUT's research capacity and research culture in the future.

The Panel acknowledges the steps being taken by the institution to develop a new architecture for the research portfolio that includes innovation and partnerships, and is of the view that the research function at TUT is beginning to be aligned to its new status as a university of technology. However, the institution still needs to develop a comprehensive research policy that addresses and defines research, innovation and partnerships, and a strategy that prioritises research focus areas.

5.2 Research Administration, Management and Support

Quality assurance and promotion of research at TUT are undertaken by the Research Directorate under the leadership of the DVC (RIP). The management of the research function at TUT is the responsibility of the Director of Research, Innovation and Partnerships. The Director; RIP is supported by a Directorate: RIP. The Central Research and Innovation Committee (CRIC) guides the Directorate in its operations. The Directorate reports to the CRIC which reports to Senate. There are also Faculty Research and Innovation Committees (FRICs) and Departmental Research Committees (DRICs) (AP vol.1: 121). The Panel acknowledges the research administrative processes put in place by TUT.

TUT has established an Innovation Office to drive the commercialisation of research. Understandably, its work remains in its infancy and appears to be done on an ad hoc basis. There is a broad understanding among researchers that innovation and partnerships are integral to becoming a university of technology in substance. However, the Panel found during interviews with management that there appears to be some misconception about the role that needs to be played by the institution in pursuing its commercialisation objectives. In this regard, the Panel suggest that TUT consider defining its place in the commercialisation continuum through the facilitation of partnerships with relevant industry groups.

In terms of the research budget, the Panel would like to impress on TUT the need for strategic investment in research infrastructure which aligns budget provision with research focus and niche areas on a sustainable basis, as well as the need to invest in a formal management information system in the Research Office to support the monitoring of the research function.

5.3 Research Outputs

As noted in the previous section, TUT has developed and is in the process of implementing a number of strategies for increasing its research output in line with being a university of technology. Table 5 below shows the number of articles published by TUT in accredited journals in 2004 and 2005.¹ No information on research output for previous years was provided to the Panel. In 2004 TUT produced 75.58 research outputs of which 50.58 units were in journals. In 2005, the total output was 76.38 of which 58.28 units were publications in journals (AP Vol.3: 54–5). Given the large number of academics at TUT, the number of staff who publish is very small.

¹ Units awarded in 2004 and 2005 for the 2002 and 2003 reporting years respectively.

Table 5: Subsidised research output at TUT, 2004, 2005

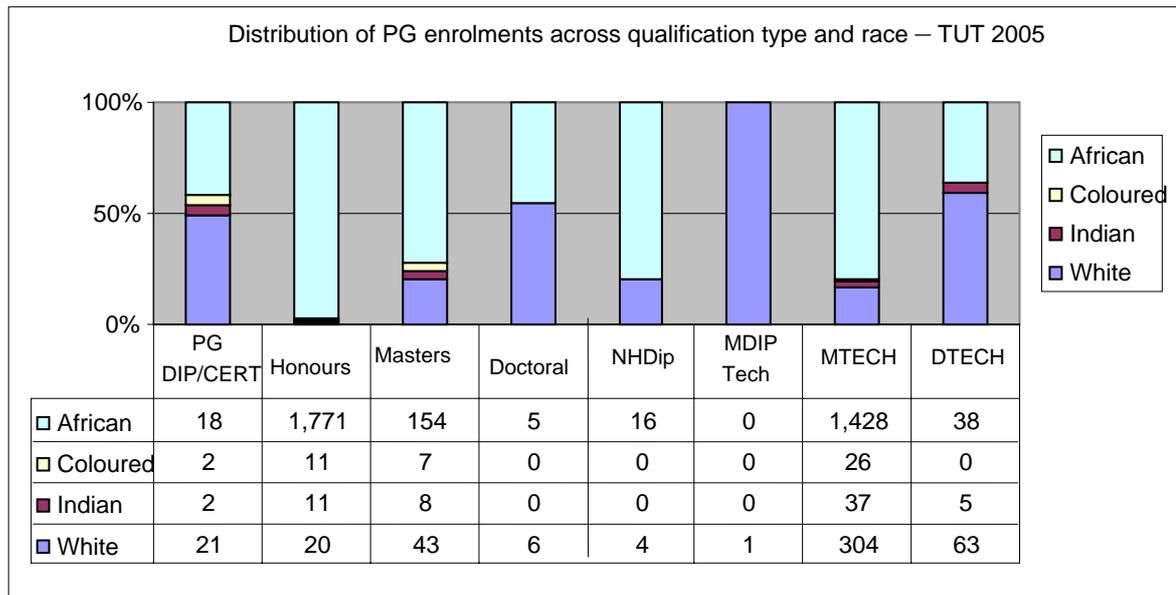
| Faculty | 2004 | | | | | 2005 | | | | |
|--|--------------|----------------------------|--------------------------|------------------------|--------------|--------------|----------------------------|--------------------------|------------------------|--------------|
| | Journals | Technological publications | Patents and/or artefacts | Conference proceedings | Total | Journals | Technological publications | Patents and/or artefacts | Conference proceedings | Total |
| Agricultural Sciences | 6.39 | 0.06 | 0 | 0.78 | 7.22 | 1.71 | 0.87 | 0 | 0.02 | 2.61 |
| Arts | 1.5 | 0.24 | 0 | 0.12 | 1.86 | 0 | 0 | 0 | 0 | 0 |
| Economic Sciences | 0 | 0 | 0 | 0 | 0 | 2.0 | 0 | 0 | 0 | 2.0 |
| Education | 3.83 | 0.01 | 0 | 0.42 | 4.26 | 0.5 | 0 | 0 | 0.09 | 0.59 |
| Engineering | 8.38 | 0 | 13.9 | 1.01 | 23.29 | 9.6 | 0 | 10.94 | 0.21 | 20.75 |
| Health Sciences | 4.92 | 0.17 | 0 | 0 | 5.09 | 11.24 | 0.64 | 1.0 | 0.01 | 12.89 |
| Information and Communication Technology | 0.5 | 0.04 | 0 | 0.9 | 1.44 | 0 | 0 | 0 | 0.12 | 0.13 |
| Management Sciences | 0.3 | 0.09 | 0 | 0.75 | 1.14 | 1.0 | 0 | 0 | 0.53 | 1.53 |
| Natural Sciences | 20.2 | 0.06 | 0 | 2.24 | 22.5 | 18.81 | 0.13 | 2.06 | 0.11 | 21.11 |
| Social Sciences | 2.49 | 0.02 | 0 | 0.45 | 2.96 | 4.66 | 0.87 | 0 | 0.21 | 5.74 |
| Tourism, Hospitality and Leisure | 0 | 0 | 0 | 0.36 | 0.36 | 0 | 0 | 0 | 0.08 | 0.08 |
| Other | 2.33 | 0.1 | 3.1 | 0 | 5.46 | 8.76 | 0.12 | 0 | 0.07 | 8.95 |
| Total | 50.58 | 0.78 | 17.0 | 7.03 | 75.58 | 58.28 | 2.64 | 14.0 | 1.46 | 76.38 |

The Table also shows the distribution of article equivalent per Faculty. The fields in which publications are highest are in the Natural Sciences and Engineering with 21.11 and 20.75 units respectively in 2005. This is consistent with the profile of a university of technology. Furthermore, Engineering had an output of 10.94 units under Patents and/or Artefacts. The Panel is of the view that the various initiatives that TUT has embarked on will contribute to an increase in research output, including publications, in the Science, Engineering and Technology disciplines, and thus support the institution's objective of becoming a substantive university of technology.

5.4 Postgraduate Education

As noted in Section 1. TUT is primarily an undergraduate teaching institution. Nevertheless, as signalled in its current mission statement, TUT is committed to growing its enrolments in postgraduate education in keeping with its new status as a university of technology. TUT has a policy and procedures on postgraduate studies (AP vol.1: 122). Doctoral programmes by research are offered, while at the Master's level both research and structured programmes are offered (AP vol.1: 122). Between 1995 and 2003 postgraduate student enrolments at the three technikons were less than seven percent of the total enrolments at any of the three merging institutions. TPTA had the highest number of postgraduates at the time of the merger, 6.9 percent (IP: 64). As can be expected, this low proportion of postgraduate to undergraduate enrolments has been reproduced at the merged institution, with a larger number of students in degrees at Masters' level than at doctoral level (see Figure 3 below).

Figure 3: Postgraduate enrolments per qualification level by race at TUT, 2005



For a student to register for a research Master’s or a doctoral degree, TUT requires that a research proposal be developed and evaluated by the relevant Departmental Research and Innovation Committee, and by the Faculty Research and Innovation Committee (FRIC) before serving at Senate for approval (AP vol.1: 123). The Panel was pleased to receive confirmation during interviews with research managers that a supervisor is appointed to help the applicant develop the proposal (AP vol.1: 123). The Panel concurs with the institution that the absence of clear criteria for the evaluation of proposals could lead to uneven standards in their acceptance (AP: 125). It learned that there have been some instances of proposals gaining Senate approval without having gone through the correct procedure (AP: 126). The Panel concurs with the institution that the establishment of a Higher Degrees Committee could help eradicate inconsistencies across departments and Faculties. This could also help TUT in its drive to expand postgraduate provision.

Recommendation 18

The HEQC recommends that Tshwane University of Technology establish a Higher Degrees Committee to lead the further development of a research culture at the institution that will embrace responsibility for postgraduate student supervision and student completion, the need for consistency in the application of research student policies and procedures, and student publication requirements.

It is stated in the Portfolio that no student has completed a Master’s degree within two years or a doctoral degree within the three years as specified by national benchmarks (AP vol.1: 127). The Panel heard during interviews with students and academics of the need to review the extent and format of the research training provided. The appointment of research and innovation professors in the Office of the Deans is one of the ways the institution is addressing this need. The Panel concurs with the institution that a database of postgraduate students should be developed so that students’ progress

can be monitored and interventions made to help them complete their research within the recommended time.

TUT has procedures in place to govern the relationship between the supervisor and the postgraduate student (AP vol.1: 128). The Panel learned during interviews with postgraduate students of instances of poor communication between students and supervisors. It heard in interviews with academics of the high workload in terms of both undergraduate teaching and postgraduate supervision. The Panel noted with appreciation the steps the institution intends to take to address this issue, including decreasing the supervisor-to-student ratio, increasing the pool of supervisors, and appointing Professors Extraordinaire (AP vol.1: 133).

TUT has a Postgraduate Assessment Policy which describes the process for the internal and external assessment of theses and dissertations (AP vol.1: 129). The appointment of internal and external assessors is initiated at the departmental level, approved at Faculty level and ratified by Senate (AP vol.1: 129). The Panel noted in documentation provided and heard during interviews with postgraduate students and staff that the policies and procedures are not rigorously adhered to across departments and campuses. The uneven assessment of theses constitutes an academic risk for the institution in terms of the quality of its graduates. The Panel encourages the institution to develop mechanisms which will ensure the consistent application of policies and procedures across all Faculties and campuses.

The Policy for the Assessment of Postgraduate Studies stipulates that, to be considered for the award of a Master's degree, the candidate must submit one article for publication in an accredited journal together with the dissertation. In the case of doctoral degrees, evidence must be provided that two articles have been submitted to accredited journals for publication (AP vol.1: 130). While the Panel appreciates the importance that the institution attaches to the publication of students' postgraduate research, it is concerned that this requirement is unrealistic. Furthermore, in view of the long completion times between students enrolling and graduating at the institution, the Panel suggest that TUT consider the efficacy of these requirements and, in the light of the outcome of its deliberations, the type of support that needs to be made available to postgraduate students.

6. Management of the Quality of Community Engagement at TUT

This section considers first TUT's conceptualisation of community engagement, the location of this function in the academic governance of the institution and how this conceptualisation finds expression in the institution, and second the arrangements for managing the quality of community engagement, in particular its integration and alignment with teaching and learning and research.

6.1 Conceptualisation of Community Engagement at TUT

As noted in 2.1, the mission and vision of the institution does not address community engagement although the mission statement refers to a 'strategic partnership network' (AP vol.1: 20). The Audit Portfolio contains little about community engagement, other than a statement of intent: 'Community engagements are structured to be responsive to regional, national and international developmental needs; but in particular to the needs of surrounding communities and the region' (AP vol.1: 12). The Portfolio goes on to say that the 'establishment of strategic and vibrant partnerships with higher education, the government, industry, and communities at regional, national and international levels will provide TUT with a platform for development and networking (AP vol.1: 12).

The Panel noted that there is no formal framework or strategy that defines what community engagement means for TUT as a university of technology. Initial draft frameworks and strategic documents on this core function have not been followed up. A workshop involving the DVC: RIP and Executive Deans was held in November 2006 to deliberate on this core function. The Panel heard during interviews with management that the idea of who constitutes the community needs to be clearly formulated.

The institution is fully aware that despite the existence of community engagement projects in various departments and Faculties, there is no conceptualisation or strategy that would give direction to existing and future activities in this area. The Panel agrees with the institution that defining TUT's communities might be a first and necessary step in the development of community engagement as an important core function of the new university. The Panel encourages the institution to use the process of reviewing TUT's mission and vision to engage with this issue and to take as its point of departure the range of already existing activities in its Faculties and campuses. This exercise will also have to engage with the development of appropriate mechanisms for managing the quality of community engagement.

Recommendation 19

The HEQC recommends that Tshwane University of Technology engage in an institution-wide debate on who constitutes its community for purposes of engagement, develop a framework, policies and implementation plans by means of which community engagement can be quality managed and integrated into the curriculum, establish an institutional structure to direct its activities, and allocate responsibilities

6.2 Current Projects and Activities

In 2005 TUT conducted an audit of its community engagement activities. 94 projects were identified which cost the institution R14.6m (AP: Addendum). The Panel received confirmation during interviews with Executive Deans and academics that most of the Faculties are engaged in some kind of community engagement project. The following are some of these. The Faculty of the Arts Economics and Finance serve on various Audit Committees and organise personal development workshops (AP vol.1: 142); the Department of Architecture designs annually a building needed by the community (AP vol.1: 143); the Department of Chemical Engineering adopts a school in Pretoria and offers programmes to equip students with basic knowledge and skills to pursue higher education studies in chemical and metallurgical engineering (AP vol.1: 144); and the Faculty of Humanities represents South Africa on the World Council of International Federation of Modern Language Teaching Association (AP vol.1:145).

7. Conclusion

TUT is entering a new phase in the consolidation of the merger which created the institution in 2004. With its approximately 60,000 students, its nine campuses spread across four provinces, its designation as a university of technology, and its growing research and technological innovation profile, TUT could make a valuable contribution to the goals of South African higher education and particularly to the socio-economic development of its immediate region. It could do this through providing access with success to previously disadvantaged students, by giving effect to a differentiated mission (that of a university of technology), by forging research and training partnerships with the world of work, and by contributing to social development through its community related initiatives.

The university has taken some of the initial steps towards achieving its potential, for example in improving staff qualifications, in foregrounding its research activities, and putting policies and initiatives in place for quality improvement.

The institution knows that its main challenges have to do with developing a new identity for the merged institution, resourcing all its campuses equitably, improving the quality of teaching and learning, and ensuring its financial sustainability. The institution has identified the processes and structures to help it to respond to these challenges; one of them is the Faculty based campus model. The next few years will be crucial not only for consolidating and implementing policies that will give effect to the institution's identity and mission but also for building the necessary internal consensus to reposition TUT in the higher education system. Firm and visionary leadership and commitment on the part of staff and students will be necessary for the realisation of a project that by its very nature requires individuals to leave behind their own personal affiliations and preferences. The risks that the stalling of academic processes through individualistic behaviour or through the concentration of institutional energies only on the operational aspects of the merger poses to the reputation and future of the institution are serious. TUT's senior management needs to be aware of this and put in place mechanisms to mitigate these risks.

Appendix A Objectives of the HEQC Audit System

The general objectives of HEQC audits are to:

- Encourage and support higher education providers to maintain a culture of continuous improvement, by means of institutional quality processes that build on HEQC and institutionally set requirements;
- Validate the self-evaluation reports of institutions on their quality arrangements for teaching and learning, research and community engagement;
- Enable higher education institutions to develop reliable indicators that will assure institutional stakeholders and the HEQC that their policies, systems, strategies and resources for assuring and enhancing quality in teaching and learning, research and community engagement, are effective;
- Provide information and evidence that will enable higher education institutions and the HEQC to identify areas of strength and excellence as well as areas in need of focused attention for planned improvement in the short, medium and long term; and
- Enable the HEQC to obtain baseline information in the targeted areas through the use of a common set of audit criteria for all institutions. Such information will:
 - Help to identify and disseminate good practices in quality arrangements in the higher education sector;
 - Facilitate capacity development and improvement programmes by the HEQC and other role players;
 - Form part of the rationale for granting self-accreditation status to institutions; and
 - Enable the HEQC to generate a national picture of quality arrangements in higher education, and to monitor system and sector-level quality improvement.

(From the HEQC *Framework for Institutional Audits*, June 2004)

Appendix B The Audit Panel

Prof. Gansen Pillay, Director: Research Management and Development, Durban University of Technology (Chairperson)

Prof. Henk de Jager, Executive Dean: Faculty of Engineering, the Built Environment and Information Technology, Nelson Mandela Metropolitan University (NMMU)

Dr Sioux McKenna, Senior Lecturer: CHED, Durban University of Technology

Prof. Edmund Zingu, Vice-Principal (Academic), Mangosuthu Technikon

Prof. Ana Naidoo, Executive Dean: Education, Nelson Mandela Metropolitan University

Dr Stephen Fourie, Registrar, Rhodes University

Dr Mvuyo Tom, Deputy Vice-Chancellor, University of Fort Hare

Prof. Dolina Dowling, Independent Consultant

Mr Ian Hawke, Assistant Director General (International, Non-State and Higher Education), Department of Education, Training and the Arts, Brisbane, Australia (International Auditor)

The Panel was supported by the following HEQC staff:

Mr Bheki Mbhele, Manager: Institutional Audits, HEQC (Audit Officer)

Dr Lis Lange, Executive Director, HEQC

Dr Mark Hay, Director: Institutional Audits, HEQC

Ms Christelle Visser, Project Administrator: Institutional Audits, HEQC (Audit Administrator)

Mr A B Heyns, Consultant (Scribe)

Ms Thandile Makubalo, Manager: Institutional Audits, HEQC (Observer)

Appendix C List of Documents Submitted by TUT

- Tshwane University of Technology: Institutional Self-Assessment Report (Volumes 1 and 2)
- Tshwane University of Technology: Institutional Self -Assessment Report (Volume 3 – Data Tables)
- Tshwane University of Technology: Institutional Self-Assessment Report (Volume 4 – Institutional Operating Plan)
- Tshwane University of Technology: Institutional Self-Assessment Report (Volume 5 – Distance Campus Review Reports)
- Tshwane University of Technology: Institutional Self-Assessment Report (Volume 6 – Programme Review Report)
- Tshwane University of Technology: Institutional Self-Assessment Report (Volume 7 – Prospectuses – CD and hard copies)
- Tshwane University of Technology: Institutional Self-Assessment Report (Volume 8 – Policies)
- Tshwane University of Technology Self-Assessment Report – 26 January 2007 (– CD)

Additional documents submitted before the site visit:

- Addendum to the Institutional Self-Assessment Report, 2007, Internationalisation, Innovation and Community Engagement.

Additional documents received during the site visit:

- Staff Qualifications Profile
- Staff Qualifications Profile: Management Sciences
- Staff Qualifications Profile: Economics and Finance
- Staff Qualifications Profile: Arts
- Student Enrolment Profile by Faculty, Campus and Programme – 2006
- Student Enrolment Profile by Faculty, Programme, Level and Campuses
- Student Enrolment Profile by Faculty, Programme, Level of Study and Campus: Engineering and the Built Environment
- Headcount Enrolment per Programme, Department, Level of Study and Learning Site 2006: Faculty of the Arts
- Student Recruitment Strategy 2007
- Draft – Student Recruitment Strategy 2007
- Report on the Central Management Unit for Non-State Subsidised Programmes: January 2006 – 31 December 2006
- Draft – Position Paper on the Ombudsman for Students’ Academic Complaints
- Policy on the Ombudsman for Students’ Academic Complaints
- Lodging a Complaint: Procedure
- Quality Promotion Charter and Mandate

Appendix D The Audit Visit Schedule

| Council on Higher Education Higher Education Quality Committee | |
|---|---|
| TSHWANE UNIVERSITY OF TECHNOLOGY | |
| Audit Visit Schedule | |
| 16–20 April 2007 | |
| Day 0 – Sunday 15 April | |
| 10:00 – 10:30 | The Panel arrives at the institution |
| 10:30 – 11:00 | Brief welcome and presentation by the Vice-Chancellor (VC to decide who is to be present) on any matter that relates to the audit process |
| 11:00 – 17:00 | Agenda: Revisiting purposes and conduct of audit, including the role of chair, sub-chairs and auditors Updates and other analyses since the portfolio meeting Reminder of the rationale and logic of the site visit schedule Preparing the questions for the sessions of first two days Allocation of reading tasks for the review of on-site supporting documentation Reading of on-site supporting documentation |
| 17:00 – 18:00 | Campus tour for members of the Panel |
| 18:00 – 19:00 | Continued reading by auditors of the on-site supporting documentation |
| 19:00 | Panel returns to the hotel |
| 19:30 – | Dinner Auditors to continue their preparations |

| DAY ONE (Monday, 16 April) FULL PANEL | | |
|--|---|--|
| SESSION 1 08:00 – 09:00 | The Panel to interview the Rector and Vice-Chancellor | |
| 09:00 – 09:30 | Panel review | |
| SESSION 2 09:30 – 10:30 | The Panel to interview members of the Executive Management Committee | |
| 10:30 – 10:45 | Panel review | |
| SESSION 3 10:45 – 11:45 | The Panel to interview the Executive Deans | |
| 11:45 – 12:00 | Panel review | |
| SESSION 4 12:00 – 12:45 | The Panel to interview members of Council | |
| 12:45 – 13:15 | Panel review and lunch | |
| SESSION 5 13:15 – 14:15 | Panel to interview members involved in Planning and Resource allocation structures | |
| 14:15 – 14:30 | Panel review | |
| SESSION 6 14:30 – 15:30 | The Panel to interview the Project Management Team charged with the implementation of the Merger | |
| 15:30 – 15:45 | Panel review | |
| SESSION 7 15:45 – 16:30 | The Panel to interview those responsible for Quality Management at the Institution | |
| 16:30 – 17:00 | Panel review | |
| 17:00 – 17:15 | Chairperson, ED and Audit Officer to have a brief meeting with the VC and the contact person. | |
| 17:15 – 19:30 | Panel review of day 1 Reflections, conclusions and follow-up. Overview of the big issues at the institution. Consider who should be recalled. Preparation for day 2 & 3 Preparation of spoken feedback begins. | |
| 20:00 – 21:15 | Dinner | |
| | Panel members continue to update their notes and prepare comments. | |

| DAY TWO (Tuesday, 17 April) FULL PANEL | | |
|---|---|--|
| SESSION 8 08:00 – 08:45 | The Panel to interview those responsible for Distant Campuses and Urban learning sites | |
| 08:45 – 09:00 | Panel review | |
| SESSION 9 09:00 – 09:45 | The Panel to interview Campus Directors and those Deans who have a campus management role from Urban learning sites | |
| 09:45 – 10:00 | Panel review | |
| SESSION 10 10:00 – 10:45 | The panel to interview members responsible for staff recruitment and development | |
| 10:45 – 11:00 | Panel review | |
| SESSION 11 11:00 – 11:45 | The Panel to interview members of the Institutional Forum | |
| 11:45 – 12:00 | Panel review | |
| SESSION 12 12:00 – 12:45 | The Panel to interview those members responsible for student recruitment | |
| 12:45 – 13:15 | Panel review and lunch | |
| SESSION 13 13:15 – 14:15 | Panel to interview members of the Central SRC | |
| 14:15 – 14:30 | Panel review | |
| SESSION 14 14:30 – 15:15 | The Panel to interview staff unions | |
| 15:15 – 15:30 | Panel review | |
| SESSION 15 15:30 – 16:30 | The Panel to interview external partners, Provincial, City, Community and Business | |
| 16:30 – 17:00 | Panel review | |
| 17:00 – 17:15 | Chairperson, ED and Audit Officer to have a brief meeting with the VC and contact person | |
| 17:15 – 19:30 | Panel review Reflections, conclusions and follow-up. Overview of the big issues at the institution. Preparation for day 3 & 4 Spoken feedback discussion continues. | |
| 20:00 – 21:30 | Dinner | |
| | Panel members continue to update their notes and prepare comments. | |

| DAY THREE (Wednesday, 18 April) | | |
|--|---|--|
| GROUP ONE (TEACHING AND LEARNING) | | |
| SESSION 16 08:00 – 09:00 | The Panel to interview DVC: Teaching and Learning and Technology | |
| 09:00 – 09:15 | Panel review | |
| SESSION 17 09:15 – 10:15 | The Panel to interview the Executive Deans | |
| 10:15 – 10:30 | Panel review | |
| SESSION 18 10:30 – 11:15 | The Panel to interview members involved in Programme design and approval | |
| 11:15 – 11:30 | Panel review | |
| SESSION 19 11:30 – 12:15 | The Panel to interview members involved in programme management and reviews | |
| 12:15 – 12:30 | Panel review | |
| SESSION 20 12.30 – 13:15 | Panel to interview members involved in examination and assessment structures (incl RPL) | |
| 13:15 – 13:45 | Panel review and lunch | |
| SESSION 21 13:45 – 14:30 | The Panel to interview Heads of Departments and Academic Section Heads | |
| 14:30 – 14:45 | Panel review | |
| SESSION 22 14:45 – 15:30 | The Panel to interview Academic and Academic Support staff | |
| 15:30 – 15:45 | Panel review | |
| SESSION 23 15:45 – 16:45 | The Panel to interview undergraduate students | |
| 16:45 – 17:30 | Panel Review and reading of on-site documentation | |
| 17:30 – 17:45 | Chairperson, ED and audit officer to have a debriefing meeting with the VC and contact person | |
| 17:45 – 18:30 | Sub-group panel review of afternoon sessions | |
| 18:30 – 19:30 | Full panel review | |
| 20:00 – 21:30 | Dinner | |
| | Panel members continue to update their notes and prepare comments | |

| DAY THREE (Wednesday, 18 April) | | |
|--|---|--|
| GROUP TWO (RESEARCH) | | |
| SESSION 24 08:00– 08:45 | The Panel to interview the DVC: Research, Innovation and Partnerships | |
| 08:45 – 09:00 | Panel review | |
| SESSION 25 09:00 – 09:45 | Panel to interview members of the Research Ethics Committee | |
| 09:45 – 10:00 | Panel review | |
| SESSION 26 10:00 – 10:45 | Panel to interview members of the Library Committee | |
| 10:45 – 11:00 | Panel review | |
| SESSION 27 11:00 – 11:45 | The Panel to interview members of the Central Research Committee | |
| 11:45 – 12:00 | Panel review | |
| SESSION 28 12:00 – 12:45 | The Panel to interview those involved Faculty / Departmental Research Structures | |
| 12:45 – 13:15 | Panel review and lunch | |
| SESSION 29 13:15 – 14:00 | The Panel to interview those responsible for Technology Transfer | |
| 14:00 – 14:15 | Panel review | |
| SESSION 30 14:15 – 15:00 | Panel to interview TUT external partners in Research, Innovation and Technology Transfer | |
| 15:00 – 15:15 | Panel review | |
| SESSION 31 15:15 – 16:00 | The Panel to interview postgraduate students | |
| 16:00 – 16:15 | Panel review | |
| SESSION 32 16:15 – 17:00 | Panel to interview Supervisors of Postgraduate students | |
| 17:00 – 17:30 | Panel Review and reading of on-site documentation | |
| 17:30 – 17:45 | Chairperson, ED and audit officer to have a debriefing meeting with the VC and contact person | |
| 17:45 – 18:30 | Sub-group panel review of afternoon sessions | |
| 18:30 – 19:30 | Full panel review | |
| 20:00 – 21:30 | Dinner | |
| | Panel members continue to update their notes and prepare comments on the criteria | |

| DAY THREE (Wednesday, 18 April) | | |
|---|--|--|
| GROUP THREE (INFRASTRUCTURE AND SUPPORT) | | |
| SESSION 33 08:00 – 08:45 | Panel to interview those responsible for the design, development and management of Short Courses | |
| 08:45 – 09:00 | Panel Review | |
| SESSION 34 09:00 – 09:45 | Panel to interview staff from Faculties who are involved in Community Engagement activities | |
| 09:45 – 10:00 | Panel Review | |
| SESSION 35 10:00 – 10:45 | Panel to interview the DVC: Research, Innovation and Partnerships on institutional arrangements for Community Engagement | |
| 10:45 – 11:00 | Panel Review | |
| SESSION 36 11:00 – 11:45 | Panel to interview the Executive Director: Student Affairs and Residence Operations | |
| 11:45 – 12:00 | Panel review | |
| SESSION 37 12:00 – 12:45 | Panel to interview staff of the Bureau for Student Development | |
| 12:45 – 13:15 | Panel review and lunch | |
| SESSION 38 13:15 – 14:00 | Panel to interview staff of the Bureau for Student Governance | |
| 14:00 – 14:15 | Panel review | |
| SESSION 39 14:15 – 15:00 | The Panel to interview the people responsible for counselling services (e.g HIV, psychological services) | |
| 15:00 – 15:15 | Panel review | |
| SESSION 40 15:15 – 16:00 | The Panel to interview those responsible for residences | |
| 16:00 – 16:15 | Panel Review | |
| SESSION 41 16:15 – 17:00 | The Panel to interview students in residences | |
| 17:00 – 17:30 | Panel Review and reading of on-site documentation | |
| 17:30 – 17:45 | Chairperson, ED and audit officer to have a debriefing meeting with the VC and contact person | |
| 17:45 – 18:30 | Sub-group panel review of afternoon sessions | |
| 18:30 – 19:30 | Full panel review | |
| 20:00 – 21:30 | Dinner | |
| | Panel members continue to update their notes and prepare comments on the criteria | |

| DAY FOUR (Thursday, 19 April) | | |
|--|--|--|
| GROUP ONE (TEACHING AND LEARNING - Continued) | | |
| SESSION 42 08:00 – 08:45 | The Panel to interview individuals and structures involved in the academic development of students | |
| 08:45 – 09:00 | Panel review | |
| SESSION 43 09:00 - 09:45 | The Panel to interview members involved in staff development and support | |
| 09:45 – 10:00 | Panel review | |
| SESSION 44 10:00 – 10:45 | Panel to interview those responsible for Co-operative Education | |
| 10:45 – 11:00 | Panel review | |
| SESSION 45 11:00 – 11:45 | The Panel to interview external examiners and moderators | |
| 11:45 – 12:00 | Panel review | |
| SESSION 46 12:00 – 12.45 | The Panel to interview alumni; advisory bodies; employers | |
| 12:45 – 13:30 | Panel review | |
| 13:30 – 14:00 | Lunch | |

| DAY FOUR (Thursday, 19 April) | | |
|--|---|--|
| GROUP THREE (INFRASTRUCTURE AND SUPPORT- Continued) | | |
| (Panel members from Group Two (Research) to join Group Three) | | |
| SESSION 47 08:00– 08:45 | Panel to visit the Library | |
| SESSION 48 09:00 - 09:45 | Panel to visit the IT facilities | |
| SESSION 49 10:00 – 10:45 | Panel look at certification | |
| 10:45 – 11:00 | Panel review | |
| SESSION 50 11:00 – 11:45 | The Panel to interview staff from designated groups | |
| 11:45 – 13:30 | Panel review and reading of on-site documentation Panel members to update their notes and prepare comments on the criteria | |
| 13:30 – 14:00 | Lunch | |

| DAY FOUR (Thursday, 19 April) – Afternoon FULL PANEL | | |
|---|---|---|
| 14:00 – 15:30 | Panel review | |
| SESSION 51 15:30 – 17:00 | Panel review/ Recall session(s), if necessary | The Panel may ask to meet again to clarify issues with the head of institution, deans, etc. |
| 17:00 – 17:15 | Chairperson, ED and audit officer to have a debriefing meeting with the VC or Institution Contact person | |
| 17:15 – 18:30 | Panel reviews and consolidates its findings –begin to review possible commendations and recommendation and indicate possible content of the oral feedback | |
| 18:30 – 19:30 | Panel members to work on recommendations and commendations | |
| 20:00 – 21:30 | Dinner | |
| | Panel members continue to produce summary notes on the criteria based on the commendations and recommendations | |

| DAY FIVE (Friday, 20 April) FULL PANEL | | |
|---|-----------------|---|
| | | |
| SESSION 52 08:00 – 09:00 | Open session | Any member of the institution (including former students and partners) may approach the Panel to address them on quality issues. Organised through the institution. |
| SESSION 53 09:00 – 10:00 | Recall session | The Panel may ask to meet again to clarify issues with the head of institution, deans, permanent staff members, etc. |
| 10:00 – 12:00 | Panel review | Finalisation of the spoken feedback. |
| SESSION 54 12.00 – 13:00 | Spoken feedback | With the VC and whomever he wishes to have present. The feedback is read by the chairperson of the Panel. There is no discussion of the feedback. The VC concludes the audit site visit with a few words. |
| 13:00 | Panel Departs | The Panel greets the VC and senior staff who are present and departs. |