



**COUNCIL ON HIGHER EDUCATION
HIGHER EDUCATION QUALITY COMMITTEE**

EXECUTIVE SUMMARY

**Audit Report
on
Vaal University of Technology**

Report of the HEQC to Vaal University of Technology

September 2007

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HEQC Audit Report Number 11

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Acronyms

AP	Audit Portfolio
BCM	Business, Commerce and Management
B Tech	Bachelor of Technology
CCSLL	Centre for Community Service and Life-long Learning
CE	Community Engagement
CHE	Council on Higher Education
CRC	Central Research Committee
CS	Community Service
CTP	Committee of Technikon Principals
DAD	Department of Academic Development
DID	Directorate for Institutional Development
DLS	Department of Learner Support
DoE	Department of Education
EEP	Employment Equity Plan
ETQA	Education and Training Quality Authority
EXCO	Executive Committee
FRC	Faculty Research Committee
HEMIS	Higher Education Management Information System
HOD	Head of Department
HEQC	Higher Education Quality Committee
ICT	Information and Communication Technology
IP	Institutional Profile
IT	Information Technology
MIS	Management Information System
MTech	Master of Technology
NSFAS	National Student Financial Aid Scheme
NIHE	National Institute for Higher Education
NRF	National Research Foundation
NSFAS	National Students' Financial Assistance Scheme
PMS	Performance Management System
RATE	Rector's Award for Teaching Excellence
RPL	Recognition of Prior Learning
SAPSE	South African Post Secondary Education
SAQA	South African Qualifications Authority
SC	Satellite Campus
SENEX	Senate Executive Committee
SET	Science, Engineering and Technology
SRC	Students' Representative Council
TQM	Total Quality Management
T&L	Teaching and Learning
UoT	University of Technology
VUT	Vaal University of Technology
WIL	Work-Integrated Learning

Introduction

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

The Audit of the Vaal University of Technology (hereinafter referred to as VUT) 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 VUT, supplementary documentation requested from the institution, and interviews and observations made during the audit visit which took place from 15 to 19 May 2006.

This report¹ 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.

Overview of the Audit

The Audit Process

In August 2005, the Executive Director of the HEQC secured the consent of the Acting Vice-Chancellor and the senior academic management team of the Vaal University of Technology (VUT) to the University's participation in an institutional audit to take place from 15 to 19 May 2006.

Against the background of an internal governance and leadership crisis in the institution, VUT conducted its institutional self-evaluation and produced an Audit Portfolio (AP) for review by the Audit Panel. Despite the crisis, senior managers at VUT continued with preparations for the HEQC audit on the scheduled dates. The AP was developed through a process of institutional self-evaluation coordinated by a steering committee headed by the Directorate for Institutional Development (AP: 1). The institution formed an audit team which consisted of staff from VUT's various functional areas. Each team member was assigned responsibility for input on specific HEQC audit criteria (AP: 35-36). The audit team collated the information and evidence from the self-evaluations conducted by Faculties and administrative departments, as well as from interviews with senior management. The Director of the Total Quality Management Office took responsibility for the compilation of the Audit Portfolio which, together with three volumes of appendices, was submitted to the HEQC in March 2006. Each satellite campus developed

¹ The report includes four appendices: Appendix A lists the objectives of HEQC audits; Appendix B provides the names of the members of the Audit Panel; Appendix C lists the documents submitted by VUT; and Appendix D contains the audit visit schedule.

its own self-evaluation report, which was made available to a sub-panel of the HEQC Audit Panel during site visits to these campuses. The satellite campus reports were not incorporated into the Audit Portfolio.

The HEQC set up an Audit Panel consisting of senior academics and academic administrators from higher education institutions, all of whom had taken part in auditor preparation workshops run by the HEQC. An Audit Portfolio meeting was convened in Pretoria on 20 and 21 April 2006 at which the Audit Panel met to consider the Portfolio and to prepare for the audit visit. During this meeting, the Panel identified additional documents to be requested from VUT prior to the audit visit.

A senior member of the HEQC staff undertook a preparatory visit to VUT in April 2006. During that visit, the format and programme for the site visit, and other details of the audit, were discussed and agreed with the senior management of VUT.

The audit visit took place between 14 and 19 May 2006. The Panel was taken on a tour of the campus on 14 May, and conducted interviews with senior management and members of different governance structures on 15 and 16 May. On 17 and 18 May, the Panel split into three groups and interviewed a wide range of VUT staff and students. Open sessions were also available for staff and students of the institution, as well as members from the community, to meet the Panel and make submissions. Some staff members and union representatives made use of the opportunity to address the Panel. Interviews were concluded on 19 May, and verbal feedback was given to the Acting Vice-Chancellor and the senior management team.

In all, the Panel interviewed about 360 persons in 45 sessions during the audit visit, including:

- Council members
- the Acting Vice-Chancellor and members of his senior management team
- academic and academic support staff
- administrative staff
- full-time and part-time undergraduate and postgraduate students
- civic and community representatives, and
- alumni.

The thoroughness of the self-evaluation was affected by the prolonged governance and leadership crisis experienced by the institution. As a consequence, the Portfolio did not offer sufficient information to provide the Panel with a comprehensive overview of the status of quality management in the institution. It also did not present an integrated set of reflections on practices in the core functions of teaching and learning, research, and community engagement. The Panel viewed this as a missed opportunity for VUT to take stock of its academic performance, including reflection on good practices and progress

with improvement initiatives, which could have served as the basis for future improvements.

Given the fact that the institution was not able to produce all the information requested by the Panel in the desired format, the Panel relied on the audited institutional SAPSE and Higher Education Management Information System (HEMIS) data of the Department of Education (DoE) to support aspects of its analysis of VUT. At the time of the audit, the most recent data available at the national level were for 2004.

This report reflects the audit findings based on the Audit Portfolio provided by VUT, the supplementary documentation requested from the institution, and observations made during the audit visit, as well as additional information revealed by the interviews. 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 evidence from the documentation submitted, the interviews held and the observations made.

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

The HEQC would like to thank VUT for the co-operative manner in which it participated in the audit process. The HEQC also wishes to express appreciation for the openness and confidence shown by VUT management in allowing the Audit Panel to conduct its interview sessions during the five-day visit and to have access to key documents. Efficient preparation by VUT ensured a well-managed and trouble-free audit visit. The hospitality and assistance of VUT's personnel are appreciated. Mr Gerrit du Plooy and Dr Hans Brits and their team are thanked for the provision of the documentation, as well as for their co-operation and helpfulness throughout the process.

Executive Summary

Institutional Mission

1. VUT is a medium-sized contact and residential University of Technology (UoT) with its main residential campus being situated in Vanderbijlpark in southern Gauteng in an industrialised area. The institution has four satellite campuses: Secunda in Mpumalanga, Klerksdorp in North-West, Kempton Park in Gauteng, and Upington in the Northern Cape. VUT was not greatly affected by the restructuring of the higher education sector since it was not part of a merger. However, the institution was required to incorporate the Sebokeng campus of the former Vista University. VUT has evolved from an Afrikaans-medium technical college with 189 white students in

1966, to an English-medium UoT comprising close to 17 000 predominantly African students in 2005. About a third of VUT's students are distributed across the satellite campuses, which are not residential.

2. The University offers about 130 programmes in four Faculties: Applied and Computer Sciences; Engineering and Technology; Human Sciences; Management Sciences. All Faculties offer a range of programmes from diploma to doctoral studies, but not all programmes offer full progression to postgraduate level. VUT is predominantly an undergraduate institution with 99 percent of its enrolments at this level.
3. The mission of the institution was developed prior to VUT becoming a UoT and has not been reviewed since the change in designation. Despite the lack of a new mission, the institution is involved in the process of becoming a university of technology, a process which constitutes the focus of what VUT calls 'transformation II'. The Panel did not find a strategic document to map how VUT plans to achieve this transformation and how it will position itself as a UoT within the South African and international higher education context. The Panel noted that the institution does not seem to be exploring the implications of becoming a university of technology for its arrangements for quality assurance and quality development in the three core functions. The Panel was of the view that as a precondition of achieving the goal of becoming a university of technology, VUT needs to consider these issues, which would enable VUT to develop an integrated strategy in support of the implementation of this institutional goal.

Recommendation 1

The HEQC recommends that VUT enters into a broad institutional debate about the status of VUT - as a university and as a university of technology, what kind of institution it can and wants to become - as a precursor to developing a comprehensive strategy which signals changes in the focus of the three core functions and the nature and scope of its relationship with industry. This strategy should indicate a timeframe and the level of resource allocation necessary to support the institution's transition from technikon to university of technology.

4. VUT has an International Relations Department that is engaged in developing links, networks and agreements with UoTs internationally, including links and agreements with African universities. Such links are viewed as a means of ensuring the relevance and quality of VUT's higher education provision (AP: 11, 12). VUT has 1 200 international students of whom the majority come from the African continent and are enrolled at diploma level. The Panel would like to encourage the institution to give systematic attention to the role that internationalisation of the student body plays in VUT's understanding of its mission of responding to regional skills and technology needs.
5. Between 1996 and 2004 VUT's total enrolments grew by approximately 54 percent to reach 16 848 student by headcount. This expansion was due to the enrolment of African students which increased approximately 135 percent in eight years – from 6 548 students in 1996 to 15 371 in 2004. This change in the student profile was accompanied by a change in the distribution of enrolments across

disciplinary fields. In 1996 almost 44 percent of enrolments were in SET disciplines - with Business, Commerce and Management receiving nearly 39 percent of the students and Humanities and Social Sciences approximately 10 percent. By 2004, the distribution of enrolments across disciplines had moved towards Business and Commerce with above half of the headcount enrolments, SET had less than 40 percent, and the Humanities and Social Sciences had 8 percent. This distribution is unusual for a UoT with a strong focus on technology. The institution is aware of this, and the Panel heard during interviews that VUT is looking into a strategy to limit enrolments in Business and Commerce in favour of a larger number of enrolments in SET.

6. The Panel was informed that VUT has developed a Transformation Charter which 'sets the parameters for its transformational goals'. The Charter includes a list of actions to which the institution commits itself. During interviews with staff it emerged that, although the Charter defines transformation in a comprehensive way, the general interpretation is limited to changes in the staff and student demographic profiles, together with the transformation of VUT from a technikon to a UoT. The Panel urges the institution to enter into a wider debate about the conceptualisation of transformation proposed in the Charter for staff and students and in so doing to consider the relationship between academic excellence and transformation and its implications for the three core functions. The Panel is of the view that the dramatic changes in the demographic profile of the student body obscure the fact that issues of equity and redress remain unresolved in the area of success and graduation rates. While VUT as a whole has a low success rate, there are marked differences between the success rates of African and white students. This might be an indication of unresolved issues in terms of academic support, curriculum renewal and improvement of the quality of teaching.
7. VUT academic staff are still predominantly white and, presumably, Afrikaans-speaking. In the context of the change of the medium of instruction, this raises a number of issues about pedagogical effectiveness and the quality of teaching and learning at the institution. VUT recognises that language proficiency in the medium of instruction impacts on the quality of teaching and learning. Given the fact that for most VUT's students, English is at best a second language, language proficiency is an issue that the institution must address in order to assure the quality of provision and of graduates in all programmes. While the Panel acknowledges the steps taken by VUT to develop the language competence of students, it urges the institution to prioritise the development of language proficiency of both staff and students in order to improve teaching and learning.

Recommendation 2

The HEQC recommends that VUT uses its own broad definition of transformation to introduce issues of academic quality and excellence in order to move from a view of transformation as change in the student demographic profile to one that includes equity of opportunity and success. This should include the introduction of approaches to teaching and learning that take diversity into account, especially with regard to the English-language proficiency of students and staff.

8. While the Portfolio claims that significant progress has been made in changing the staff diversity profile, the Panel is of the opinion that change in the profile of the academic staff has been slow. Academic staff are still overwhelmingly white, and the majority of African staff are employed at the lower levels of the academic hierarchy. Although male and female employees are nearly equally represented in the VUT workforce, men predominate over women at the most senior levels of management and at higher levels of the academic hierarchy. The Panel heard that the institution is planning to address this matter by creating career paths for African staff already employed in the institution. The Panel supports this strategy, and wishes to encourage VUT to continue with its programme of addressing staff equity and redress particularly at senior level within the context of the university's equity plans.
9. The Audit Portfolio indicates that improving staff qualifications is a priority area identified by management as it steers the institution towards becoming a UoT. In 2005, VUT approved a policy which sets the minimum qualification for appointment to a lecturer post at master's degree level (AP: 90). The Panel acknowledges the purposefulness with which VUT is pursuing this strategy, and encourages the institution to continue improving the staff qualification profile. The Panel is, however, concerned about the impact that this drive to improve qualifications (which implies releasing teaching staff in order to permit them to pursue further studies) is having on the quality of tuition received by students as experienced lecturers may be replaced by younger and less experienced temporary staff. Moreover, the Panel had the impression that staff members often enrol for postgraduate studies at VUT, which, due to its history, lacks a strong postgraduate and research tradition. The Panel would like to encourage the institution to put in place the necessary monitoring mechanisms to ensure that the different strategies adopted to achieve the goal of becoming a university of technology do not have unforeseen negative effects on the quality of the core function of teaching.

Institutional Planning, Resource Allocation and Quality Management

10. VUT carried out preparations for the audit in an institutional context impacted by a governance and leadership crisis which affected institutional planning, resource allocation and quality management. The Panel learned that the management style predominant at VUT until 2004 was one of top-down decision-making in which the academic governance structures of the institution, such as Senate, played a minimal role. The Panel understood from interviews with senior management that VUT is trying to change the previous system of academic governance and planning to a more participative one. Deans are now included in the senior management team, and there has been an attempt to revitalise Senate. The Panel congratulates the institution on this initiative, and acknowledges the actions taken

by senior management to introduce a more open and systematic approach to participation in decision-making at VUT. However, the Panel would like to point out that the institution still has some way to go before former patterns of decision-making by the Rectorate are changed, key decisions suitably documented and communicated to all relevant role-players within the institution, and implementation monitored and acted upon. In this regard, the Panel views the re-establishment of the Institutional Forum as an important and positive development.

11. The Panel noted with concern that the Students' Representative Council's (SRC) role in the governance of the institution was also impacted by the institutional crisis, thus rendering an important constituency in democratic governance into an ineffective structure in terms of academic matters and, particularly, in relation to its responsibility for the quality of the academic experience of students. The Panel is of the opinion that the restoration of student discipline and the development of student capacity to participate effectively in appropriate governance structures is a precondition for realising the mission of the institution and for success in the refocusing of VUT as a UoT.

Recommendation 3

The HEQC recommends that VUT develop a systematic process for SRC officials to be inducted and trained in the principles and structures that inform academic governance so that student representatives can become important agents of change at the institution, as well as active drivers in achieving institutional-level goals which particularly affect their constituency.

12. Interviews with various levels of management responsible for academic functions and support services suggested that, although the institution is aware of the importance of planning for academic change and redirection, VUT has not yet developed a systematic planning framework. The Panel found no evidence that the institution has a planning framework which focuses on VUT's need to develop capacity to achieve goals through sustainable strategies; the documentation and communication of decisions; or the systematic collection of information for decision-making and monitoring supported by a working MIS.
13. In 2005, the institution assessed the viability of each satellite campus and its strategic focus, taking into account its particular location and community. The Refocus Document states that satellite campuses were developed in an unplanned and uneven manner, and that communication between the main campus and its satellites was unsatisfactory. This was accentuated by the institutional crisis which simultaneously undermined communication, the allocation of resources and the operationalisation of decisions in relation to satellite campuses. The institution

is aware of these problems, and the Panel was told that the recent process of refocusing the academic project had already led to improved communication between campuses. The Panel noted that VUT has provisionally allowed for a further three years of higher education provision at these campuses. In making decisions about the future of the satellite campuses, VUT will consider national decisions on the inclusion of the Upington and Secunda campuses in their respective National Institute of Higher Education, as well as information on the level of support that the surrounding community of each satellite campus is willing to contribute.

14. Given the nature of VUT and its aspirations as a UoT, an essential part of its planning needs to be focused on its interaction with industry. In relation to curriculum development, planning for systematic interactions with industry creates the space for curriculum renewal to take place, which in turn could have an important impact on graduate employment. From a pedagogical point of view, interactions with industry ensure that sufficient and adequate arrangements are made in relation to student placement. The Panel noted that VUT is aware that, given its focus, an important area for institutional planning and monitoring is that of partnerships with industry. However, the Panel was extremely concerned that interviews with industry stakeholders indicated that the relationship between the institution and industry is not sufficiently formalised and that interaction is intermittent.

Recommendation 4

The HEQC recommends that VUT looks at partnerships with industry as a necessary condition for the institution to claim a strategic role in relation to technology and the world of work. This focus could include strengthening existing partnerships and the development of new ones, as these are a necessary condition for the successful implementation of work-integrated learning and responsiveness to the world of work, both of which constitute fundamental elements of a UoT.

15. The planning process is not adequately described in the audit portfolio. While the Audit Portfolio provides a list of challenges to be addressed over the next seven years, as well as the strategic priorities for 2006 to 2010, and states that 'From 2006 until 2010 the VUT will develop along the pillars of a University of Technology' (AP: 6-7), none of these statements are supported by information on the process to be followed to address these priorities. The Portfolio does not indicate lines of responsibility for the achievement of the various strategic objectives, nor does it indicate when and how progress and achievement will be measured and reviewed, or the indicators that will inform such measurement and review. The Panel sees in VUT's acknowledgement that the institution needs to

develop staff capacity in relation to planning (AP: 7) an understanding of planning as a systematic process which requires human resources. The Panel learned that budgeting and financial allocation was previously vested in a select group of top management with little input from other staff, but that it is envisaged that the establishment of a planning office and greater participation in the planning and resource allocation process would improve current practices.

Recommendation 5

The HEQC recommends that VUT develop a planning framework which includes the capacity to translate goals into sustainable strategies, the documentation and communication of decisions, and a systematic collection of information for decision-making and monitoring - supported by an integrated and working MIS which includes resource allocation for the main campus and satellites. Such a planning framework should also identify performance indicators, as well as responsibility for implementation and lines of reporting.

16. The Portfolio provided no detail on the budgeting process that informs resource allocation, nor did it provide any detail on how the distribution of resources would be changed as VUT develops into a UoT. The overview of income and expenditure included in the Audit Portfolio (AP: 30-31) suggests that VUT is financially healthy, but it was unclear to the Panel how resource allocation enables Faculties to achieve the VUT vision of becoming a leader in technology.
17. The VUT Quality Assurance policy indicates that the institution follows a Total Quality Management (TQM) approach which focuses on customer satisfaction and continuous improvement. The QA system provides for a continuing cycle of internal self-evaluation and external peer validation delivered mainly through programme self-evaluation at three-yearly intervals and institutional self-evaluation at intervals determined by the HEQC. The framework requires staff to describe the performance of different aspects of programme delivery, and to make a judgement of success on a five-point rating scale. The Panel is of the opinion that staff self-evaluation based on a five-point scale might not require enough reflection on teaching practices to help academics identify areas in which they need to improve their teaching.
18. The Panel was of the view that while the TQM office emphasises the developmental and enhancement aspects of TQM, most faculties and departments approach quality assurance from the perspective of compliance. The TQM model of quality assurance based on review cycles does not seem to provide sustainable structures and information that can be aggregated in order to develop systematic quality improvement plans and monitor their implementation. Furthermore, the TQM office has not been able to resolve what they perceive as an irreconcilable

tension between the developmental and evaluative roles of quality assurance. A consequence of this is that the system of programme reviews seems to be inconsistently applied across Faculties and appears to have had little impact on actual improvement. The Panel is of the view that the model of quality assurance, including its location in the management structures and its resourcing needs to be reconceptualised to take account of all the steps of evaluation, including quality improvement and monitoring.

Recommendation 6

The HEQC recommends that VUT review its conceptualisation and implementation of quality assurance, including the location of the quality assurance function within management structures and its resourcing. This review should take stock of all the steps of evaluation, including quality improvement and monitoring and their potential role in supporting the achievement of institutional-level objectives at departmental and faculty levels. The result of this review should be that quality objectives, measures, implementation timelines and management accountabilities are clearly understood at the different levels of the institution.

19. The Portfolio does not address benchmarking specifically but, from the information provided, the Panel concluded that informal benchmarking does take place at the institution. International benchmarking takes place through specific cooperation agreements. No information or evidence is provided on internal benchmarking against, for instance, planned enrolment targets, or targets for success, pass or throughput rates. From the additional information provided during the audit visit, the Panel found that the DoE benchmarks were used to judge the staff qualifications' profile but not student outputs.

Recommendation 7

The HEQC recommends that VUT develop a system of benchmarking with relevant local and international universities of technology, one which could help the institution to measure its progress in becoming a university and a university of technology. Part of this system of benchmarking should include the systematic assessment of employer and client satisfaction.

General Arrangements for Teaching and Learning Quality

20. According to the Audit Portfolio, the quality of teaching and learning is a 'top priority' of the institution (AP: 41), and a number of initiatives support this core function. In this regard, the Panel noted the dedication and commitment of many lecturers at both the main campus and the satellites. However, annual graduation

rates at VUT have during the last decade fluctuated between 10% and 14%, which is well below the set national benchmark of 25%. The Panel learned from academic staff that Faculties were engaging in a number of initiatives to support student learning as part of the drive to improve throughput rates. It was less clear to the Panel how this preoccupation was integrated into annual reviews of student performance and reviews of learning improvement initiatives and, eventually, finds its way into the academic quality management cycle. The Panel would like to urge the institution to develop a more systematic way of dealing with student performance so that it has a clearer sense of how the institution is progressing in its goal of improving student throughput.

21. The Audit Portfolio indicates that among VUT's recent initiatives in the area of teaching and learning is the 'restricting of contact time per subject and the implementation of tutor programmes and consultation hours' (AP: 41). The institution argues that this is justified by a general conception of university education which is reliant on self-initiated learners and is also a necessity in terms of developing the research ethos necessary for a university of technology. However, the reality of South African schooling and VUT's actual pass rates suggest that the institution might want to be cautious in the transition from the present model to the new model ensuring that provides adequate support for students who come from disadvantaged educational background is provided.
22. The Panel heard that engineering programmes were generally aligned with industry needs, but that other programmes were not sufficiently attuned to the technological and knowledge requirements of industry. Members from industry commented on a perceived decline in the quality of graduates, particularly in relation to written and oral communication. The Panel is especially concerned about the strong perception among employers of the declining quality of VUT graduates.

Recommendation 8

The HEQC recommends that VUT take urgent steps to restore external stakeholder and partner confidence which has been partially affected by the impact of the institutional crisis in the abilities of its graduates, but that further this lack of confidence also seems to be related to the actual quality of VUT graduates.

23. In relation to those aspects of student life which are not within the compass of academic programmes, the Panel focused on the residences and the range of support services available at the institution, including funding, in order to ascertain to what extent academic programmes and campus life combine to help students develop 'into balanced citizens' (AP: 40). A site visit to VUT main campus indicated that students are provided with facilities where they can meet

socially and spend time between classes. In addition, there is a range of sports facilities. At the satellite campuses, by contrast, there are no facilities for sport or social interaction, not even cafeterias for snacks. The libraries at these campuses generally have very few places for studying. The Panel concluded that the area of social and sports infrastructure constitutes an example of unequal provision between the main campus and its satellites, inequality which also includes staff workloads, infrastructure and resourcing for academic support and development.

Recommendation 9

The HEQC recommends that VUT develop a plan to ensure that students and staff at satellite campuses are supported by an acceptable level of quality, while considering the future of these campuses.

24. The Panel's visit to student residences at the main campus showed alarming evidence of the deterioration of the quality of residence life and student support services in general, to the extent that student well-being and the quality of the learning environment are threatened by safety, security, and health issues. Off-campus accommodation is characterised by severe over-crowding. Security on campus and in residences is a major issue for the students, with women indicating that they felt particularly vulnerable. Satellite campuses have no residences, and students have to organise their own accommodation if their homes are not close to the campus at which they are studying. The Panel observed and heard that the high demands placed on the health and counselling services on campus made their current resourcing insufficient to meeting student needs in particular. The Panel would like to encourage the institution to reconsider how it addresses the wider student experience, including issues such as HIV/AIDS.

Recommendation 10

The HEQC recommends that VUT reconsider the 'total' student experience at the main and satellite campuses, giving special consideration to the most effective and efficient support it can provide in furthering the health and well-being of its students.

25. The Panel is aware that the prolonged institutional crisis has compromised aspects of the relationship between university management and the Student Representative Council. The Panel encourages VUT to consider reviewing policies related to student life in consultation with the relevant student bodies in order to improve the current situation. The Panel is of the opinion that actively restoring a safe, well-managed and resourced environment for both staff and students is imperative if VUT is to fulfil its mission in relation to teaching and learning. However, for this to be achieved, it is essential that all mechanisms,

processes and structures which characterise good governance in higher education institutions be restored and made effective.

26. The Portfolio provides a general account of the quality management of teaching and learning, but with little assessment of its effectiveness (AP: 74). The Portfolio cites the way in which the Faculty of Engineering manages its programmes as an example of good practice (AP: 56). The Faculty has a defined management structure with assigned responsibilities; there is review of operational activities by means of regular meetings; staff members are managed through their work-packages; and regular reviews of teaching and learning inform continuous improvement. All of this is supported by information and data from a MIS which is Faculty specific. The Portfolio makes no comment on how teaching and learning is managed in other Faculties, nor whether identified good practices in this area are shared with other Faculties. The Panel would like to suggest that the institution finds ways to identify and disseminate good practices in teaching and learning within and across Faculties.

Commendation 1

The HEQC commends the Engineering Faculty at VUT for establishing a systematic quality management system for teaching and learning.

27. The Panel observed that in the process of refocusing VUT's academic direction the responsibilities of HoDs have changed to reflect a greater emphasis on administrative responsibilities. HoDs at satellite campuses are particularly challenged, as many carry full teaching workloads. The Panel was concerned that the increased administrative workload could detract from the pivotal role that HoDs play in providing academic leadership. The Panel urges VUT to consider carefully the responsibilities of line managers so that the academic enterprise is not compromised.
28. The institution has a range of policies on teaching and learning which focus on specific areas such as tutoring, work-integrated learning, assessment, teaching development and RPL. However, the application of these policies seems to be inconsistent across the institution. The Audit Portfolio mentions the use of self-evaluation questionnaires for programmes as a way of setting minimum standards, and considers that the mechanisms in place for applying to start new programmes or to phase out programmes are ways of monitoring the quality of teaching and learning (AP: 75-76). It was not clear to the Panel how programme evaluations, which do not stipulate standards of performance, could serve to ensure minimum standards. Neither was the Panel sure what is monitored during the processes of applying to start new programmes or to discontinue them.

29. The Panel noted that VUT has a teaching development policy which aims at improving the quality of teaching through staff, materials and curriculum development. The focus areas for teaching development include developing the use of technology, as well as general teaching and research skills. Besides the institution-level initiative to reduce contact time, the Portfolio refers to Faculties engaging in a process of becoming more efficient and effective and exploring innovative teaching strategies (AP: 44). One such strategy relates to assessment methodology. On-line assessment for large classes was introduced in 2005 in the Faculty of Management Sciences. The Portfolio refers to some of the technical and logistical problems experienced with this approach, but provides no analysis as to whether this approach is an improvement on previous assessment practice or how it relates to VUT's goals of academic excellence.
30. Initiatives were undertaken in 2005 by the Faculty of Engineering to improve the professional skills of engineering students, as well as to pioneer alternative teaching approaches (AP: 45). During the audit visit, the Panel observed that the Faculty of Engineering had appointed a staff member to engage specifically in developing teaching and learning strategies to ensure the successful development of the required competences in engineering students. This Faculty also decided to use their most experienced academic staff to teach first-year students as, in their view, this is where guidance and support are most needed. The HEQC acknowledges the steps taken by the Engineering Faculty to improve the quality of teaching and learning in Engineering and, in particular, their efforts to improve the success of first-year students.
31. The Portfolio indicates that teaching and learning reviews prepared by the Faculties annually are considered by the Rectorate, but the Panel saw no evidence of subsequent feedback to Deans and HoDs for follow-up actions or a system of regular reporting on improvement actions. The Portfolio states that the Department of Teaching Development conducts annual audits on the workload of academic staff, which reflect staff-student ratios as well as the contact time of individual lecturers (AP: section 3.1.7). However, no evaluation is provided that indicates whether the ratios for different programmes and allocated contact time support quality teaching and learning, or what improvements may be required. A summary of student performance serves at the Academic Board as a basis for identifying areas for improvement. The Portfolio states that this relates specifically to improvement of assessment practices and academic development, but fails to demonstrate the link between student performance and improved teaching practice.
32. Regarding the system for storing and updating student records, the Portfolio indicates that VUT does not have a good system for information integration amongst the elements of its Management Information System (MIS), although the

individual components of a MIS exist (AP: 53-55). While student data are stored and updated on the ITS, the Panel found that data generated through monitoring and evaluation activities of both the TQM Office and the academic departments are not integrated into a management information system. This means that academic staff members generally do not have ready access to such data, nor does the institution have the benefit of a comprehensive overview of student and staff performance.

33. Overall, it seems to the Panel that the organisation of teaching and learning at VUT has a number of disjunctures; (i) between planning and resource allocation, (ii) between faculties and central management, and (iii) across Faculties, which do not consistently apply existing policies. In the Panel's view, these disjunctures are compounded by the lack of an MIS capable of providing an institution-level perspective on teaching and learning at VUT.

Recommendation 11

The HEQC recommends that VUT give urgent attention to the development and implementation of an effective management information system, a system which will serve as a platform for informing and integrating planning, resource allocation and quality improvement in core functions.

34. The Portfolio does not address curriculum development in any detail. During interviews, the Panel found that academic staff members have generally not reflected on curriculum reform within the context of transformation. The Panel is of the impression that the implications for teaching and learning of VUT becoming a UoT have been focused on teaching methodology rather than on curriculum design, content and assessment. The Panel was of the opinion that VUT has yet to reflect comprehensively on how the curriculum of a UoT would differ from that of a technikon, or on how this should be translated into adequate performance indicators for the different faculties.
- 35. Academic Support Services.** The Department of Learner Support (DLS) addresses student access, as well as student success (AP: 46). Tutoring at VUT is regarded as a vital element in the strategy to reduce contact time between students and lecturers. A guideline states that tutorials apply to all first-year students, cover at least two hours per week, and are conducted by trained tutors. Since the tutorial system has been operational for only a short time and not in all subjects, review of the effectiveness of the system has been limited to feedback from students. The Panel urges VUT to monitor the implementation of new practices such as this to ensure that reporting on the effectiveness of such practices informs academic planning.

36. The Portfolio identifies Learner/Study Guides as major tools in developing self-directed students and considers these important guiding and supporting mechanisms for student success (AP: 58). In view of the importance attached to study guides as a tool for effective teaching and learning, the Panel encourages VUT to put in place necessary mechanisms to assure effectively the quality of study guides appropriate to every subject at every level. The Panel is also concerned that these guides are part of a pedagogical approach which regards higher education students as having cognitive skills, including language skills, and intellectual resources that are actually lacking in many school leavers. The Panel would like to urge VUT to consider carefully the extent to which the level of preparedness of their students would make the introduction of new teaching practices, based on student self-reliance and high language proficiency, a successful exercise for both lecturers and students.
37. The Panel noted that work-integrated learning (WIL) varies across programmes in the different Faculties, and that the size of the WIL component affects the way in which it is managed. The Panel was impressed by the system in place for the management of WIL in the Engineering Faculty, where a minimum of one year of WIL is a programme requirement for graduation. In other programmes, where WIL is not part of the requirement to register as a professional technician, or where WIL is a voluntary component, the Panel noted that the arrangements for managing the quality of this area of work are less rigorous. Since UoTs are characterised by career-oriented education, and WIL is considered one of the pillars of a UoT, the Panel would like to urge VUT to take greater responsibility for assuring the quality of WIL, as well as for the placement of students.

Recommendation 12

The HEQC recommends that VUT urgently put necessary mechanisms and resources in place to strengthen the management of WIL. This should include paying particular attention to the place of WIL in curriculum design, and to ensuring that the placement of students is efficiently accomplished and adequately monitored in order to achieve the relevant teaching and learning objectives of this activity in the different programmes.

38. **Library.** The Panel noted that the main library at Vanderbijlpark has established a functioning quality management system. It has a clear mission statement and goals, and the system provides for planning, linkages with Faculties, improvement of access to information, capturing of data on library utilisation, and the collection of student feedback on the quality of service. The Panel noted that recommendations for the improvement of problem areas made in the self-evaluation report were followed up. Additional funds for satellite campuses were allocated to all the satellite campus libraries in 2006.

Commendation 2

The HEQC commends VUT for the progress made in the main library in establishing a quality management system, and encourages the extension of good practice to all VUT libraries.

39. Information and Communication Technology. The Panel found that there was a lack of clarity about whether the IT Directorate should be responsible for the management of the actual information, and not only for the management of technology. This lack of clarity is a source of concern in relation not only to the organisation of ICT systems but also in terms of VUT's capacity for institutional planning and monitoring of the core functions. The lack of clarity on the roles and responsibilities for IT in its broader sense could explain why the Panel heard that management information was not readily available or accessible as a platform for academic planning, decision-making, resource allocation and improvement actions. The Panel is of the opinion that at VUT, information has yet to be managed as a strategic resource.

40. Planning in the IT Directorate includes an ambitious list of systems to be developed, but the Panel is not clear about how these are aligned to the strategic priorities of VUT. The Panel is of the view that the elements in this list need to be seen within the context of a comprehensive IT plan. This plan's point of departure should be the strategic value of information for decision-making and for the operationalisation of institution-level goals in the core functions.

Recommendation 13

The HEQC recommends that VUT give attention to the development of a comprehensive IT plan in order to facilitate the development of a platform for strategic planning and decision-making in the core functions. The plan should include: the configuration of IT support; assignment of responsibilities for information management; the adequate resourcing of IT; and the communication of IT functions, roles and allocation of responsibilities within the institution.

41. At the level of provision, the Panel observed that sufficient computers were available for students in the ICT programmes across the sites, although the latest software was not provided at all satellite campuses. While the number of stations in the main library of VUT has increased and students were able to organise themselves to make use of the internet facilities, the Panel observed that making technology sufficiently accessible for all students is a major challenge. In this regard, the Panel was concerned about the decision of the Academic Planning Committee that 2006 would be the last year that learner guides would be printed,

and that in future students would be issued with flash drives to access guides from 'docking stations'. While congratulating VUT in its initiative in furthering student movement into the digital age, the Panel is of the view that the institution may need to monitor the impact of this decision, given the limited IT access at VUT and the student learning needs.

42. **Certification.** The Panel found a number of gaps in the process which have the potential to compromise the integrity VUT's certification processes. The Panel found that because verification of the correctness of data and the certificates is accomplished manually, there are many opportunities for human error. Regarding the preparation of certificates, the Panel noted that they are not embossed as part of a process to counter fraudulent copying, no provision is made for student numbers to appear on the certificate, and Deans are not signatories on the certificate. This latter omission signalled that an important mechanism in validating the correctness of qualifications awarded was not utilised.

Recommendation 14

The HEQC recommends that as a matter of urgency VUT review its certification process, and put in place necessary procedures and mechanisms to ensure integrity in the certification of its qualifications.

43. **Short Courses.** The Panel urges VUT to formulate a clear policy on income-sharing and on the workload of lecturers offering short courses in order to protect the quality of teaching and learning in the institution's main programmes. Noting that under-prepared students are often enrolled in short courses as a way of facilitating access to degree programmes, the Panel would like urge VUT to revisit the extent and viability of this practice, particularly in terms of the articulation between short courses and the admission requirements for degree programmes.
44. VUT does not offer courses in partnership with other institutions, but it has links with many international higher education institutions (AP: 11). The Panel noted that many of the agreements with these partners were relatively new and that data on the progress and status of agreements were not available. Most of these arrangements are not yet included in the institutional quality management system.

Recommendation 15

The HEQC recommends that VUT develop a database and central process for approving and keeping records of institutional agreements with other entities.

45. **Programme Development and Review.** The Panel noted that members from industry who served on advisory committees were not always those who were engaged at the operational level and therefore in the best position to provide input in relation to skills needs and changing work processes. The Panel learned that academic staff members strive to ensure that programmes are at least of a standard comparable to other higher education institutions. The Panel acknowledges the steps taken by academic staff to maintain programme standards, and encourages VUT to ensure that mechanisms such as advisory committees are used to their full advantage in all programmes to strengthen the collaboration between the institution and industry and commerce. This is particularly important in the light of employer perceptions about the declining quality of current VUT graduates.
46. Given that there is a moratorium on the development of new programmes at UoTs, it was not possible for the Panel to evaluate the effectiveness of the programme development procedure. In terms of the process of programme development, the Panel found that there are no particular rules or requirements that ensure rigour in the way the needs analysis for a new programme is conducted. The Panel is of the impression that the institution's capacity and skills for programme development is very uneven among staff. The Panel noted that although training in curriculum development is available to academic staff, not many staff make use of the opportunity.

Recommendation 16

The HEQC recommends that as a matter of urgency, VUT take such steps as are necessary to ensure that appropriate academic staff acquire knowledge and skills in designing and developing pedagogically sound academic programmes which are both embedded in the institution's strategic direction and responsive to the needs of relevant industries.

47. The Panel noted that academic staff generally considered regular reviews helpful in programme improvement. The Panel was not clear, however, about the rigour and degree of reflection that went into these reviews, given that a large part of a programme review is expected to be based on information on performance, progression and attrition, and so on, which are not easily accessible at VUT. In this regard, the Panel was of the impression that VUT has developed a number of policies which deal with the quality of teaching and learning but that no monitoring of their implementation actually takes place. The Panel was of the impression that there was no coordination in the implementation of different forms of teaching review and evaluation, and that this, together with the voluntary nature of teaching evaluation, undermines the effectiveness of monitoring and improving the quality of teaching and learning.

Recommendation 17

The HEQC recommends that VUT institute a comprehensive and systematic approach to monitoring the performance of subjects, including gathering data on grade distributions, progression, attrition and student evaluation of the subject - as a way of improving the quality of teaching and learning at the institution.

48. **Staffing and Staff Development.** VUT, like most other higher education institutions in South Africa, is finding it difficult to fill academic posts taking due cognisance of employment equity. The Panel learned in interviews that mechanisms such as talent management of existing staff and adjusted remuneration for scarce skills were being implemented to ensure that transformation in the staff profile progresses.
49. VUT has a performance management system (PMS) which applies to academic staff (AP: 34). However, this is not being applied, given its complexity. Pay by claim staff - who are mainly responsible for teaching activities in satellite campuses - are not subject to performance management. As the conditions of service of these staff are different from those of permanent staff working in the main campus, management of performance in the satellite campuses constitutes a challenge for the institution.
50. The Portfolio indicates that VUT has introduced a system to give formal recognition to academic staff who excel in teaching, as well as to raise awareness of the importance of teaching as a core function of higher education institutions and, therefore, the lines of accountability which apply to teaching and learning (AP: 41). The Rector's Award for Teaching Excellence (RATE) encourages, promotes and recognises good teaching practices. The Panel heard with appreciation that RATE has been well-received and was perceived as achieving its aim of promoting good teaching practice.
51. The departments of Teaching Development, Academic Development, Curriculum Development, Quality Assurance, and CCSLL all contribute to staff development. The Teaching Development Policy identifies the use of technology in teaching and research as focus areas, as well as general teaching and research skills. In terms of technology, VUT has a minimum standard for IT literacy, and all staff members are expected to comply. However, while there is a standard for IT literacy, the Panel noted that there is not a similar standard and strategy with regard to English-language proficiency, despite evidence that this is of considerable importance to teaching and learning.

52. Staff development programmes are available on-line to encourage and enable staff for whom work schedules or distance from the main campus prohibit attendance. The Portfolio indicates that a tool has yet to be developed to track the use and effectiveness of on-line development initiatives (AP: 42). The Panel urges VUT to develop this system so that it can not only monitor compliance with standards but also for individuals in verifying staff development activities undertaken. The Panel observed that VUT offers a range of staff development opportunities, but is of the view that more staff could utilise these opportunities, particularly at the satellite campuses. This again points to the differences in the provision between the main campus and its satellites, a recurrent theme in the audit.
53. **Assessment.** VUT has a number of assessment policies but given that they were only adopted in 2005, the Panel was unable to comment on their effectiveness. However, the problems identified in relation to the MIS might preclude appropriate monitoring of the implementation of this policy and of its impact in improving the quality of teaching and learning. The Panel is not clear about the mechanisms that VUT employs to monitor and moderate continuous assessment. The lack of clarity in this regard might eventually compromise the quality assurance and rigour of assessment. The Panel urges VUT to investigate this issue to ensure the integrity of its assessment system and the quality of its graduates.
54. The Panel learned that the appointment of examiners and moderators can be renewed indefinitely. Moderators who were interviewed indicated that in their prolonged involvement with the institution they have received no response to their suggestions for the improvement of modules. It might be due to this that the Panel saw little evidence of remarks or comments by moderators on the improvement of examination papers, whether this related to the type and scope of questions, cognitive levels of questions, or relevance of curriculum content.
55. Regarding the administration of examinations, the Panel found a number of areas of concern. VUT should pay more attention to identifying potential security risks, since much of the system is paper-based and there are insufficient measures in place to ensure that student records are not compromised. The Panel could not find mechanisms to monitor errors in examination papers or examination marks and ensure the timely submission of examination papers.

Recommendation 18

The HEQC recommends that VUT take steps to evaluate and monitor the application of the new assessment policy, particularly with regard to continuous assessment, the moderation system, and the integrity and security of records.

Management of Research Quality

56. Over the last ten years, VUT has considered the development of a research culture at the institution. Policies and procedures have been developed to guide different stages of the research process, the setting up of governance structures, and the development of staff capability to undertake research and postgraduate supervision. The Panel heard that the designation of VUT as a UoT has meant that there is now greater focus on scholarly output, and that this has stimulated enthusiasm for research among staff. Although the Panel appreciates the effort and investment made by the institution in developing a research profile better in line with its status as university, the Panel is seriously concerned about the quality of the postgraduate degrees obtained by the staff, as some staff are enrolled for postgraduate degrees at VUT itself, and the impact that these could have on the institutions ability to be recognised as a university.
57. One aspect of the development of the research function at VUT has been the establishment of governance and management structures to implement the Research Policy. The Central Research Committee is the highest body in the management of research at VUT. The Panel noted that the functions of this committee are conceptualised more in relation to the promotion and support of research than in relation to the development, implementation and monitoring of a research strategy.

Recommendation 19

The HEQC recommends that VUT consider reviewing the assigned roles, status and resourcing of the Research Committee to include responsibility for the development, implementation and monitoring of the research strategy of VUT.

58. The institution has a range of databases for the administration of research. The Panel is of the view that the expansion of research from the perspective of a UoT will require greater sophistication in the areas of management information systems, commercialisation of research, and management of staff consultancy work. In the area of commercialisation, particularly, the Panel is of the view that the institution might consider training staff in the costing and pricing of contract work in order to develop a strong system for managing income-generating research.
59. The institution has a Code of Ethics in relation to the conduct of research. The fact that the code of ethics does not stipulate what type of research should be submitted for ethical clearance means that in practice it is left to the researcher's judgement whether a research project requires clearance.

Recommendation 20

The HEQC recommends that VUT develop a more explicit and comprehensive policy on ethical clearance in order to protect the institution, the researcher and the external partners and communities involved in research projects.

60. VUT is aware of the need to increase substantially its research output in order to satisfy the profile of a university of technology. Although in ten years there has been an improvement in the number of accredited publications produced at VUT, the proportion of academic staff publishing is still very low.

Recommendation 21

The HEQC recommends that VUT consider the development of a realistic strategy to encourage the development of research outputs, including publications, in the SET disciplines, in order to support the institution's objective of becoming a UoT. This strategy needs to take as its point of departure the very low research base from which the institution needs to grow.

61. Overall the Panel acknowledges the progress made by VUT in the area of research. However, the Panel would like to urge the institution to reconsider the manner in which planning and support in research takes place in view of the new role that this core function is to play in the development of VUT as a university of technology.

Recommendation 22

The HEQC recommends that VUT considers the most effective manner of formalising and more fully developing organisation-wide planning, monitoring and review, and improvement systems in the area of research in order to be able to assess the strategic advantage of the developments in this area. Such systems need to be supported by an integrated information management system and clearly defined roles for the various sources of support services for research, together with appropriate communication of their respective roles and activities.

Management of the Quality of Community Engagement

62. VUT refers to community engagement (CE) as community service (CS). VUT's conception of the management of quality in CS consists of reporting on projects and programmes to Senate. (AP: 83). The fact that these changes have been recently introduced does not allow the Panel to assess their effectiveness. The weaknesses that are identified by the institution - such as the lack of assessment of

projects, inexperienced personnel, uncoordinated CS projects, and limited Faculty involvement - were acknowledged by the Panel.

63. The Panel noted that there are many admirable community engagement initiatives currently in place. However, the Panel's observations concur with the institution's analysis that community engagement is mostly an *ad hoc* activity of a voluntary and philanthropic nature. In this sense, the Panel suggests the development of a clearer conceptualisation of community engagement and more systematic integration into programme development. The full quality cycle should also be embedded in CS activity from institutional to project level.

Summary of Findings

Commendations

1. The HEQC commends VUT on the commitment and energy of senior management, the executive deans and staff in focusing on academic tasks in the face of a prolonged period of crisis that has been divisive for staff and students and has exacerbated academic planning problems.
2. The HEQC commends the Engineering Faculty at VUT for establishing a systematic quality management system for teaching and learning.
3. The HEQC commends VUT for the progress made in the main library in establishing a quality management system, and encourages the extension of good practice to all VUT libraries.
4. The HEQC commends VUT on the implementation of initiatives such as the Rector's Award for Teaching Excellence (RATE) which emphasise the importance of teaching and learning.
5. The HEQC commends VUT for the successful implementation of its strategy of improving staff qualifications in line with the increased importance of the research function at the institution.

Recommendations

1. The HEQC recommends that VUT enters into a broad institutional debate about the type of university of technology it wants to become—as a precursor to developing a comprehensive strategy which signals changes in the focus of the three core functions and the nature and scope of its relationship with industry. This strategy

should indicate a timeframe and the level of resource allocation necessary to support the institution's transition from technikon to university of technology.

2. The HEQC recommends that VUT uses its own broad definition of transformation to introduce issues of academic quality and excellence in order to move from a view of transformation as change in the student demographic profile to one that includes equity of opportunity and success. This should include the introduction of approaches to teaching and learning that take diversity into account, especially with regard to the English-language proficiency of students and staff.
3. The HEQC recommends that VUT develops a systematic process for SRC officials to be inducted and trained in the principles and structures that inform academic governance so that student representatives can become important agents of change at the institution, as well as active drivers in achieving institutional-level goals which particularly affect their constituency.
4. The HEQC recommends that VUT considers partnerships with industry as a strategic focus in its development as a UoT. This focus could include strengthening existing partnerships and the development of new ones, as these are a necessary condition for the successful implementation of work-integrated learning and responsiveness to the world of work, both of which constitute fundamental elements of a UoT.
5. The HEQC recommends that VUT develops a planning framework that includes the capacity to translate goals into sustainable strategies, the documentation and communication of decisions, and a systematic collection of information for decision-making and monitoring—supported by an integrated and working MIS which includes resource allocation for the main campus and satellites. Such a planning framework should also identify performance indicators, as well as responsibility for implementation, and reporting lines.
6. The HEQC recommends that VUT reviews its conceptualisation and implementation of quality assurance, including the location of the quality assurance function within management structures and its resourcing. This review should take stock of all the steps of evaluation, including quality improvement and monitoring and their potential role in supporting the achievement of institutional-level objectives at departmental and faculty levels. The result of this review should be that quality objectives, measures, implementation timelines and management accountabilities are clearly understood at the different levels of the institution.
7. The HEQC recommends that VUT develops a system of benchmarking with relevant local and international universities of technology, one which could help the institution to measure its progress in becoming a university of technology. Part of

this system of benchmarking should include the systematic assessment of employer and client satisfaction.

8. The HEQC recommends that VUT takes steps to restore external stakeholder and partner confidence in the abilities of its graduates, confidence which has been partially affected by the impact of the institutional crisis.
9. The HEQC recommends that VUT develops a plan to ensure that students and staff at satellite campuses are supported at an acceptable level of quality, while simultaneously considering the future of these campuses.
10. The HEQC recommends that VUT reconsiders the 'total' student experience at the main and satellite campuses, giving special consideration to the most effective and efficient support it can provide in furthering the health and well-being of its students.
11. The HEQC recommends that VUT gives urgent attention to the development and implementation of an effective management information system, a system which will serve as a platform for informing and integrating planning, resource allocation and quality improvement in core functions.
12. The HEQC recommends that VUT puts necessary mechanisms and resources in place to strengthen the management of WIL. This should include paying particular attention to the place of WIL in curriculum design, and to ensuring that the placement of students is efficiently accomplished and adequately monitored—in order to achieve the relevant teaching and learning objectives of this activity in the different programmes.
13. The HEQC recommends that VUT gives attention to the development of a comprehensive IT plan in order to facilitate the development of a platform for strategic planning and decision-making in its core functions. The plan should include: the configuration of IT support; assignment of responsibilities for information management; the adequate resourcing of IT; and the communication of IT functions, roles and responsibilities within the institution.
14. The HEQC recommends that as a matter of urgency VUT reviews its certification process, and puts in place necessary procedures and mechanisms to ensure integrity in the certification of its qualifications.
15. The HEQC recommends that VUT develops a database and a central process for approving and keeping records of institutional agreements with other entities.

16. The HEQC recommends that VUT takes such steps as are necessary to ensure that appropriate academic staff acquire knowledge and skills in designing and developing pedagogically sound academic programmes which are both embedded in the institution's strategic direction and responsive to the needs of relevant industries.
17. The HEQC recommends that VUT institutes a comprehensive and systematic approach to monitoring the performance of subjects, including gathering data on grade distributions, progression, attrition and student evaluation of the subject—as a way of improving the quality of teaching and learning at the institution.
18. The HEQC recommends that VUT takes steps to evaluate and monitor the application of the new assessment policy, particularly with regard to continuous assessment, the moderation system, and the integrity and security of records.
19. The HEQC recommends that VUT considers reviewing the assigned roles, status and resourcing of the Research Committee to include responsibility for the development, implementation and monitoring of the research strategy of VUT.
20. The HEQC recommends that VUT develops a more explicit and comprehensive policy on ethical clearance in order to protect the institution, the researcher and the external partners and communities involved in research projects.
21. The HEQC recommends that VUT considers the development of a strategy to encourage the development of research outputs, including publications, in the SET disciplines, in order to support the institution's objective of becoming a UoT.
22. The HEQC recommends that VUT considers the most effective manner of formalising and more fully developing organisation-wide planning, monitoring, review and improvement systems in the area of research. Such systems need to be supported by an integrated information management system and clearly defined roles for the various sources of support services for research, together with appropriate communication of their respective roles and activities.