



INSTITUTIONAL AUDIT REPORT

ON THE

TSHWANE UNIVERSITY OF TECHNOLOGY

3 NOVEMBER 2023

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Abbreviations and Acronyms

ADRI	Approach–Deploy–Review–Improve (approach)
APP	Annual Performance Plan
CDP	Curriculum Development Practitioner
CDS	Curriculum Development and Support
CE	Community Engagement
CFO	Chief Financial Officer
CHE	Council on Higher Education
CIO	Chief Information Officer
CoP	Community of Practice
CPD	Continuous Professional Development
D2L	BrightSpace Learning Management System
DCE	Directorate of Co-operative Education
DHET	Department of Higher Education and Training
DQP	Directorate of Quality Promotion
DRI	Directorate of Research and Innovation
DTS	Digital Transformation Strategy
DVC	Deputy Vice-Chancellor
ED	Executive Director
EMC	Executive Management Committee
EXCO	Executive Committee
FB	Faculty Board
HE	Higher Education
HEDA	Higher Education Data Architecture
HEDS	Higher Education Development and Support
HEI	Higher Education Institution
HEMIS	Higher Education Management Information System

HEQC	Higher Education Qualifications Committee
HEQSF	Higher Education Qualifications Sub-Framework
HoD	Head of Department
ICT	Information and Communication Technology
ICTServ	Information and Communications Technology Services
IF	Institutional Forum
IQA	Institutional Quality Assurance
ISP	Institutional Strategic Plan
ITS	Integrated Tertiary Software
KPA	Key Performance Area
KPI	Key Performance Indicators
LIS	Library and Information Services
LMS	Learning Management System
M&E	Monitoring and Evaluation
MERS	Monitoring, Evaluation and Reporting System
MERSETA	Manufacturing, Engineering and Related Services Education & Training Authority
MIS	Management Information System
NDP	National Development Plan
HRD	Human Resources Development
NRF	National Research Foundation
NSFAS	National Student Financial Aid Scheme
OSO	Office of the Student Ombudsman
PDCA	Plan–Deploy–Check–Act (approach)
PMDS	Performance Management Development System
PoE	Portfolio of Evidence
POPIA	Protection of Personal Information Act
PQM	Programme Qualification Mix

QA	Quality Assurance
QAF	Quality Assurance Framework
QEP	Quality Enhancement Project
QIP	Quality Improvement Plan
QM	Quality Management
QMS	Quality Management System
RAM	Resource Allocation Model
RIE	Research, Innovation and Engagement
RIMS	Research Information Management System
RMTLA	Remote Multi-Modal Teaching, Learning and Assessment
SA	South Africa
SABS	South African Bureau of Standards
SAED	Student Affairs and Extra-Curricular Development
SAPS	South African Police Service
SAQA	South African Qualifications Authority
SCTL	Senate Committee for Teaching and Learning
SDG	Sustainable Development Goal
SDS	Student Development and Support
SER	Self-Evaluation Report
SMS	Strategic Management Support
SoP	Standard Operating Procedure
SRC	Student Representative Council
STEM	Science, Technology, Engineering & Mathematics
TLT	Teaching, Learning and Technology
TLwT	Teaching and Learning with Technology
ToR	Terms of Reference
TUT	Tshwane University of Technology

UCDG	University Capacity Development Grant
UCDP	University Capacity Development Programme
UoT	University of Technology
VC	Vice-Chancellor
WIL	Work-Integrated Learning

Executive Summary

Introduction

The Council on Higher Education (CHE) was established through the Higher Education Act (No. 101 of 1997, as amended) primarily to assure quality in the South African (SA) higher education (HE) sector and to advise the Minister on aspects of higher education. The National Qualifications Framework Act (No. 67 of 2008, as amended) conferred additional responsibilities on the CHE as the Quality Council for higher education, with overall responsibility for the Higher Education Qualifications Sub-Framework (HEQSF). The CHE executes its quality assurance (QA) responsibilities through its permanent committee, the Higher Education Quality Committee (HEQC). The CHE, through the HEQC, exercises its QA function using a variety of mechanisms, one of which is institutional audits that are mandated by the Higher Education Act.

The *Framework for Institutional Audits* (2021)¹ and its attendant *Manual for Institutional Audits* (2021)² are key instruments to regulate the implementation of institutional audits. These documents are also aligned in important respects to the new Quality Assurance Framework (QAF)³ that was approved by the HEQC and Council in September 2020 and which will be implemented in the medium term by the CHE. Institutional audits are strongly influenced by both the specific context within which each higher education institution (HEI) works, and by the national transformational agenda within which higher education functions. The HEQC has identified a need to do full audits of all HEIs in South Africa. A full audit of an institution determines whether or not, and to what extent, an institution's internal quality assurance (IQA) systems, policies and procedures ensure the effective provisioning of good quality higher education that enhances the likelihood of student success through quality learning and teaching, research opportunities and integrated community engagement. The emphasis is less on ensuring that required standards are met at a particular threshold than on the deliberate, continuous, systematic and measurable improvement of the student experience, as well as on building reflexive praxis to develop quality cultures in institutions.

The following principles guided the institutional audit of the Tshwane University of Technology

¹ <https://www.che.ac.za/publications/frameworks/framework-institutional-audits-2021>

² <https://www.che.ac.za/publications/frameworks/manual-institutional-audits-2021>

³ <https://www.che.ac.za/publications/frameworks/quality-assurance-framework-qaf-higher-education-south-africa>

(TUT):

1. The primary responsibility for internal quality assurance rests with individual HEIs. Each institution is responsible for the establishment, implementation, maintenance, improvement and enhancement of its quality management (QM) and assurance systems.
2. The uniqueness of each institution's size, shape, location, context and mission is recognised.
3. The value of institutional audits rests on the compilation of credible, contextually relevant and reliable information that is required for internal quality-related planning and self-evaluation, peer review and public reporting (for example, by publishing executive summaries).
4. Student experience, student engagement and participation and the student voice are central to an evaluation of an institution's quality management system.
5. The institutional audit is a peer-driven and evidence-based process to ensure that the HEQC and its audit panel reports are transparent, informed and consistent.
6. Institutional audits are developmental and intent on supporting continuous quality improvement and enhancement.
7. Institutional audits are required to balance their developmental character with the regulatory requirement that the CHE and the HEQC act on poor provisioning where institutions have no clear commitments, processes, practices or plans to improve.
8. Institutional audits are a key component of the HEQC's broad-based quality assurance mandate.

Aligned to international practice, the HEQC uses a review methodology consisting of an institutional self-evaluation report (SER), and an external peer review, which verifies, triangulates and validates the institution's self-evaluation. The external peer review consists of a document analysis of the SER and institutional portfolio of evidence (PoE), as well as a site visit at which interviews are conducted with constituencies, and physical infrastructure is visited. This audit report forms the outcome of the institutional audit of TUT.

A Brief Overview of the Institution

The Tshwane University of Technology (TUT), which was established in 2004, following the merger among Technikon Pretoria, Technikon Northern Gauteng and Technikon North-West, is the largest SA university that graduates technologists, technicians and professionals in various

industries. In 2020, it enrolled 62 000 students, drawn from neighbouring Southern African countries, as well as from across South Africa, and is the largest residential university in South Africa. It has campuses in Gauteng, Limpopo and Mpumalanga. Six are located in the City of Tshwane (Pretoria, Soshanguve North and South, Pretoria Arts, Pretoria Arcadia and Ga-Rankuwa), two in Mpumalanga (Mbombela and eMalahleni), and one in Limpopo (Polokwane). The smaller campuses are eMalahleni, Ga-Rankuwa, Mbombela, Pretoria Arts, Pretoria Arcadia and Polokwane, which have student enrolments of under 5 000 each (SER, pp. 4; 14–17). TUT also has service points in Cape Town and Durban for students registered in distance-education programmes (SER, p. 11).

TUT has seven faculties: Arts and Design, Economics and Finance, Engineering and the Built Environment, Humanities, Information and Communication Technology, Management Sciences, and Science (SER, pp. 12–13). The University also has three schools:

- the Tshwane School for Business and Society in the Faculty of Management Sciences;
- the School of Education in the Faculty of Humanities; and
- the Adelaide Tambo School of Nursing Science in the Faculty of Science (SER, p. 11).

The University has a 25-person Council, and Executive Management is composed of the Vice-Chancellor (VC) and Principal, four Deputy Vice-Chancellors (DVCs), the Registrar and Chief Financial Officer (CFO), as well as three Executive Directors (EDs), a Senior Director and two Directors. There are seven Executive Deans and six Campus Rectors (SER, pp. 8–10).

TUT's Institutional Strategic Plan (ISP) 2020–2025, including its vision, mission, values and four pillars; the TUT Student Enrolment and Efficiency Plan 2020–2025; and the TUT Transformation Framework 2017 are the internal documents guiding the goals and objectives of the University. Key national policies, including the Higher Education Act and ministerial directives, also inform focus and the Programme Qualification Mix (PQM) in alignment with its differentiated status as a university of technology (UoT) (SER, pp. 5–6).

In 2020, the headcount of undergraduates at TUT reached 59 132, of whom 47 062 received certificates and diplomas. Postgraduate numbers reached 3 312 in the same year, comprising mainly Master's degree students (2 193), but also a growing constituency of 536 doctoral candidates, and more than the 355 Honours enrolments (SER, p. 27). Approximately 97% of TUT students are African, 1.3% are white and less than 1% are Indian and Coloured. In 2020, 32 321 students were women, and 30 186 men. The largest faculties are Humanities (14 538) and Management Sciences (14 294), followed by Science (8 784), Engineering and Built Environment (8 669), Economics and Finance (7 578) and Information and Communication Technology (ICT)

(6 839). The smallest faculty is Arts and Design with 1 805 students in 2020 (SER, p. 30). The vast majority of students are African-language speakers, and the diversity of languages reflects the regional campuses of TUT. The predominant home languages are Northern Sotho (Sepedi), IsiZulu, Setswana, SiSwati and Southern Sotho (Sesotho) (SER, p. 31).

The University employs more temporary than permanent staff (in 2020, 56% were temporary staff [SER, p. 37]). More men (53%) were employed in 2020, but more women than men were permanent members of staff (SER, p. 37). More than 80% of the staff were Africans, and 15% were White, with a very small constituency of Coloured and Indian appointees (Table 14, SER, p. 38).

TUT has a large residential student population on its three Pretoria campuses (22 378), and smaller occupancy in Soshanguve (6 905), Ga-Rankuwa (4 012), Mbombela (3 087), eMalahleni (1 748) and Polokwane (1 429). These 2020 statistics reflect student occupancy in university-owned, leased and accredited residences. The Covid-19 pandemic dramatically affected residential trends, declining from 39 559 to 6 876 students (SER, p. 36).

The TUT success rates have improved from 2016 to 2020 (from 77% to 80%). By 2020, the average graduate success rate across campuses and faculties was 80%, with Soshanguve North Campus achieving a 91% success rate, followed by Pretoria Arts (86%), Polokwane and Pretoria Arcadia (83%), and Mbombela (82%). The other campuses achieved between 71% (eMalahleni) and 80% (Ga-Rankuwa) (SER, pp. 32–33).

The CHE Audit Process

The CHE panel's brief was to carry out a quality audit of the teaching and learning, research and community engagement at undergraduate, Honours and coursework Master's level at TUT. The process began with the distribution of the TUT's SER in May 2022, the CHE *Manual for Institutional Audits* (2021), and the CHE *Framework for Institutional Audits* (2021) to members of the panel. The CHE Director presented an orientation webinar, followed by a discussion by the panel about the audit plan, which was developed during fortnightly virtual meetings scheduled on Fridays until the site visit on 25–29 July 2022. The panel worked well together in the preparatory meetings, with good interaction and mutual support.

The early meetings of the CHE panel focused on a critical reading of the TUT SER, and an intensive discussion of appropriate lines of inquiry to engage the various constituencies at the University during the CHE audit visit. The panel devised a programme of virtual interviews and campus tours. The panel tailored its lines of inquiry in respect of the 16 CHE standards to confirm

the contents of the SER. A set of probing questions was compiled for the interviews to triangulate the evidence contained in the TUT PoE and the SER. The CHE Senior Manager: Institutional Audits liaised with the TUT co-ordinator and her team to finalise the schedule of interviews, which entailed identifying interviewees from the various portfolios across the University and its wider stakeholder community for each of the proposed 34 sessions, which was refined until its final iteration was circulated on 22 July 2022.

The virtual interviews were conducted from 25–28 July 2022. The campus tours of Soshanguve South and North, Ga-Rankuwa, Pretoria Arts, Pretoria Arcadia, eMalahleni and Pretoria West and the face-to-face interviews, as well as the preliminary oral report to the TUT VC and Principal and members of Executive Management (including Executive Deans) concluded the CHE audit site visit on 29 July 2022. The CHE panel tried to be as comprehensive as possible within the confines of five days, and attempted to explore policy and practice in the core functions of teaching, research and community engagement through the lens of ‘the people’s university that makes knowledge work’ and ‘enabling student success’.

The CHE panel and the CHE managers appreciated the co-operation of the VC, Prof Tinyiko Maluleke, the Executive Management as well as the academic, administrative and support staff, across the University, during the institutional audit. The project received wide coverage in its preparation and production. TUT was diligent and thorough, and gave maximum support to the CHE panel. The reception was cordial, and the co-ordination seamless, which speaks to the professionalism of the collaboration between the University and the CHE. The site visit was well managed and mostly well attended, discussions in the panel sessions were engaging, and the tight schedule was largely adhered to.

The physical campus tours included facilities that are appropriate to the TUT vision and purpose as a UoT. There was also high-quality support and guidance from the CHE staff. The engagement with students, staff, professional board members, alumni and employers was extremely helpful in appreciating the strengths of the University and in providing constructive recommendations, which are intended to enhance the quality of TUT programmes, its reputation for quality teaching and research, as well as student employability.

The CHE panel processed the extensive material derived from the interviews and campus tours in the compilation of the audit report, and began writing the draft report in mid-August 2022. Some challenges were experienced, which delayed submission to the Institutional Audit Committee of the CHE. Overall, however, the TUT audit was positive, and it was clear that quality management for student success is taken seriously by the University.

The Tshwane University of Technology Self-Evaluation Report

The TUT SER showed that the University had subjected itself to critical self-reflection in line with the CHE guidelines. The CHE audit panel appreciated the efforts of the working groups on each of the four Focus Areas, which gathered the institutional data and developed a largely evidence-based narrative on many of the 16 standards stipulated in the CHE *Framework for Institutional Audits* (2021). The preparation of the SER was thorough, easy to work through, replete with relevant policies and procedural documents (in many annexures), and is itself a valuable diagnostic and monitoring document, in which TUT has already identified areas for improvement (SER, pp. 135–136).

The *Institutional Profile* in the SER (Section B, pp. 4–49) is generally comprehensive, detailed, and in some ways anticipates the contents of Section C (pp. 50–132) on the TUT's 'Reflection on the 16 Standards', which led to some repetition. The CHE panel noted too, that the narrative was uneven across the standards (see for example, Standards 2, 8, 12 and 16) and is descriptive rather than analytical and self-critical. The CHE panel did, however, find pockets of deep self-reflection in the 149-page SER. Appropriate management and governance organograms are provided, and the annexures, linked to each standard (SER, Table 28, pp. 137–144), are readily accessible.

Moreover, the data in the PoE, provided for the information of the CHE panel, are germane to the CHE Focus Areas. The SER does not rate the performance by TUT in each standard according to the four-point scale provided by the CHE. However, Section D of the SER offers the overall reflection, key findings and conclusion of the University (pp.133–136), and identifies the areas for improvement in twelve TUT recommendations, which are not all directly linked to standards. It was therefore left to the CHE panel to decide whether each standard achieved a 'mature', 'functional' or 'needs substantial improvement' rating.

The following is a summary of the audit panel's commendations and recommendations for TUT.

Focus Area 1: Governance, strategic planning, management and leadership support the core academic functions

The four standards in Focus Area 1 concentrate on the role that an institution's governance, strategic planning (as contained in its vision, mission and strategic goals), management and academic leadership play in its quality management to enhance the likelihood of student success and to improve the quality of learning, teaching and research engagement, as well as

accommodating the results of constructive, integrated community engagement.

Standard 1: *The institution has a clearly stated vision and mission, and strategic goals which have been approved by appropriate governance structures, subject to comprehensive stakeholder engagement.*

The vision of TUT is to be a ‘people’s university that makes knowledge work’ and its mission seeks to advance socio-economic transformation through its curricula, and by conducting impactful research and community engagement, and enabling high-quality learning experiences for its students, the retention of dedicated academic, administrative, support and service staff, and ensuring a positive environment for all its structures to flourish. The ISP 2020–2025 is driven by four key pillars that focus on creating future-ready graduates who will make a profound social contribution; produce useful research and innovation; transfer technology to foster growth, development and sustainability; offer service and operational excellence through resource optimisation; and become a digitally advanced university. The CHE panel concluded that the vision, mission and goals of TUT are appropriate for a UoT, and that they were developed through acceptable processes and approved by the University Council in 2019. The University consulted very widely, especially among external stakeholders, to ensure that its ISP addresses needs relevant to the communities and professions it serves.

Commendation

- a. The CHE panel commends TUT on the extent of consultation among internal and external communities, especially those in Mpumalanga and Limpopo, in the development of the ISP 2020–2025.

Standard 2: *The stated vision, mission and strategic goals align with national priorities and context (e.g. transformation, creating a skilled labour force, developing scarce skills areas and a critical citizenry, and contributing to the fulfilment of national goals as informed by the NDP and related national planning), as well as sectoral, regional, continental and global imperatives (e.g. Africa Vision 2063 or the Sustainable Development Goals).*

The vision, mission and goals of TUT are aligned with several key national policy frameworks, including the Education White Paper 3: A Programme for the Transformation of Higher Education; South Africa Vision 2030; the NDP 2030; the National Human Resource Development Strategy; and the ministerial statement on student funding and enrolments. The University has also aligned its ISP with regional, continental, and global imperatives, including Africa Vision 2063, and the

SDGs of the United Nations (UN). The CHE panel agrees that these alignments are clearly in line with the requirements of institutions of higher learning in South Africa, and encourages TUT to establish more regional and international partnerships to advance teaching and research in technological fields.

Recommendation

1. The CHE panel recommends that TUT strengthen partnerships with regional and international universities to offer greater opportunities for postgraduate studies and research funding to contribute to national, continental, and global sustainability.

Standard 3: *There is demonstrable strategic alignment between the institution's quality management system for core academic activities across all sites and modes of provision and its vision, mission and strategic goals, as well as its governance and management processes.*

Quality management of the core academic activities, including teaching and learning, research, and community engagement at the TUT, are aligned across all sites of provision and modes of provision. Key policies and strategies that relate to digital learning are set out in the Learning and Teaching Strategy 2020–2025, the Digital Transformation Strategy (DTS), and the Policy on Distance Education. Notwithstanding some policy development and various innovations in hybrid teaching, the CHE audit panel advises that more action is required at a policy level and specifically regarding the training of staff and students. TUT also needs to develop institution-wide guidelines and priorities for online learning, and should track these developments as they occur. There is an overlap between the governance of teaching and learning, its pedagogies and practice, discussed under Focus Area 4, Standard 13, in respect of the fluency of blended and online learning in future TUT programmes. For this reason, the CHE panel has linked this standard to Recommendation 15 to ensure implementation of a comprehensive, overarching plan for digital learning.

Standard 4: *There is a clear understanding of and demonstrable adherence to the different roles and responsibilities of the governance structures, management and academic leadership.*

The University has a well-co-ordinated system of committees and sub-committees that ensure adherence to its QA processes. It was further established by the CHE panel that the TUT Council, its sub-committees and the academic governance and management committees have clearly stated terms of reference (ToR). The institutional profile in the TUT SER also provides evidence

of the make-up of the campuses, service points, faculties, programme offerings, staff and student profiles, and the governance and management structures. It also found that some committees did not meet as per the schedule and that, at the time, there were still recurring problems around the registration of first-year students. However, the CHE panel confirmed that TUT was attending to the contentious issues around admissions, which had affected other universities as well, although these plans and strategies have not been articulated clearly. This lack needs to be addressed as the issue of access to the universities in the country is becoming increasingly acrimonious between student bodies and university management and academic structures.

Recommendation

2. The CHE panel recommends that the university improve governance of the plans related to admissions and registration to resolve contentious issues around late applications and walk-ins at the beginning of the academic year, as well as delays in funding from the National Student Financial Aid Scheme (NSFAS) and other sources.

Focus Area 2: The design and implementation of the institutional quality management system supports the core academic functions

The four standards in Focus Area 2 concentrate on how the *design and implementation of an integrated quality management system* in the institution enhances the likelihood of student success and improves the quality of learning, teaching and research engagement, as well as accommodating the results of constructive, integrated community engagement within the context of the institution's mission.

Standard 5: *A quality assurance system is in place, comprising at a minimum, of:*

- (i) *governance arrangements*
- (ii) *policies*
- (iii) *processes, procedures and plans*
- (iv) *instructional products*
- (v) *measurement of impact*
- (vi) *data management and utilisation*

as these give effect to the delivery of the HEI's core functions.

The CHE panel notes that the TUT has a QA system in place, which includes appropriate governance structures with the necessary approvals at Council, Senate, faculty and departmental level. The various plans – from the ISP to risk registers and financial and budgetary plans – are duly approved by the relevant delegated authority, and are implemented, monitored and reported

across campuses and faculties. The policies cover the core activities of teaching and learning, research and innovation, and community engagement. The policy environment is well developed, and the SER and interviews confirmed that the development and revision of these are initiated by direct stakeholders and are finally approved by the TUT Council for council policies, and Senate for academic policies in a bottom-up approach to the curriculum and programme mix.

The environment is geared towards facilitating teaching, research and community engagement. Various gaps in the policy review cycle were identified during the CHE audit, and are being addressed. The University has copious policies, some of which are relatively new, but an overarching institutional quality framework is still a work in progress. The Directorate of Quality Promotion (DQP) oversees internal and external programme reviews, including accreditation of professional qualifications. The CHE panel advises greater consultation with professional bodies to ensure the relevance of TUT degrees in the interests of employability. The instructional products of TUT are evaluated and revised, and modules are monitored to improve student success and maintain relevance. The panel however also advises that TUT undertake systematic training of academic and support staff in digital and online learning, and that more qualified permanent staff be appointed to improve the staff–student ratio in popular disciplines, in line with the University’s policies.

Recommendations

3. The CHE panel recommends that TUT departments provide evidence of consultation with professional bodies in the quality evaluation of their vocational degree programmes, and that these engagements and programme approvals be monitored and reported to the respective faculties and Senate committees.
4. The CHE panel also recommends that TUT improve its staff-to-student ratio by appointing more academics in scarce skills and popular specialisations, to improve the quality of teaching and learning and research supervision.

Standard 6: *Human, infrastructural, knowledge management and financial resources support the delivery of the institution’s core academic functions across all sites of provision, in alignment with the concomitant quality management system, in accordance with the institution’s mission.*

The CHE panel found that TUT has extensive infrastructural commitments across its campuses, including those in Mpumalanga and Limpopo. The University has invested considerable resources in support of its residences, and its hybrid and online teaching, which was triggered

by the Covid-19 pandemic, and is now in need of pedagogical refinement to be fit for purpose in the era of the Fourth Industrial Revolution. Research has attracted more resources too, as the postgraduate constituency, including doctoral candidates, has grown since 2016. More funding, opportunity and incentives are required to assist academic staff to obtain advanced degrees, especially doctorates, and for innovative projects and units that produce class-leading research products, including patents and publications. The academic ecosystem also depends on the and Library and Information Services and its increasing reliance on electronic journals and expensive databases. The CHE notes some worthy community engagement across campuses, but quality assurance was more evident in teaching and research. More resources are also needed to build a credible performance management system and to implement the monitoring capacity of the Performance Management Development System (PMDS) for all TUT staff, including contract academics and support personnel. Workload management also lacks coherence. integration with other electronic platforms is also essential for the efficient and ethical management of human resources at the University.

Recommendations

5. The CHE panel recommends that TUT source the necessary funding and devise a plan to assist contract academics and support staff (who meet the prescribed requirements) in scarce skills and popular specialisations to become permanent employees through a process of interviews, in line with TUT's HR policies and practices.
6. The panel also recommends that TUT improves incentives for staff development programmes in order to increase the number of academics with advanced qualifications, especially PhDs, in order to meet the Department of Higher Education and Training (DHET) targets.

Standard 7: *Credible and reliable data (for example, on throughput and completion rates) are systematically captured, employed and analysed as an integral part of the institutional quality management system to inform consistent and sustainable decision-making.*

The TUT SER provides a comprehensive evaluation of the data management system of the University, the capacity of the University, and its level of integration. The University relies mainly on its Integrated Tertiary Software (ITS) and Management Information System (MIS), which form the central electronic information source, storage and management repository. TUT also uses a third-party service provider (PowerHEDA) platform, which provides statutory reporting services via its online dashboards and pre-set reports that allow filters to control the output. Access rights

are prescribed. The Strategic Management Support (SMS) Directorate is responsible for the MIS at TUT, and provides data analytics for decision-making to executive and senior management across all portfolios. The SER declares that TUT data are accurate and its protection of personal information complies with the Protection of Personal Information Act (POPIA) (Act No. 4 of 2013). The CHE panel heard that Executive Management uses TUT data to inform the ISP 2020–2025, with details, goals and objectives for the various portfolios of the University. The monitoring, evaluation and reporting system (MERS) electronic data platform is being introduced as the means to monitor the targets and performance of the various faculties. The significance of the appointment of the new DVC: Digital Transformation and the location of Library Services in this portfolio, on account of its increasingly important role in electronic delivery, was highlighted during interviews with various layers of management. These developments are inextricably linked to the data-intensive nature of higher education and the capacity of TUT to offer reliable data to assist strategic decision-making. The CHE panel found that the discrete electronic platforms that provide data were not integrated. Access to information systems was user-specific based on the environment in which the function resides.

Recommendations

7. The CHE panel recommends the speedy integration of key quality information systems (ITS, MIS, MERS and PowerHEDA) to ensure parity in reporting, and the easy provision of data for improved decision-making, as well as to increase cybersecurity and adequate back-up capacity.
8. The panel also recommends bespoke staff training in the use of Clarivate Converis (in collaboration with fellow member universities of technology [UoTs] in the consortium) in the research and innovation environment, to ensure that research artefacts are captured and reported accurately to the DHET for funding purposes.
9. The CHE panel recommends that TUT ensure that data analytical expertise be improved in the Directorate of Research and Innovation (DRI) and SMS Directorate to attract well-qualified statisticians to enhance its capacity to provide predictive analytics.

Standard 8: *Systems and processes monitor the institution's capacity for quality management, based on the evidence gathered.*

The systems and processes to monitor the capacity of the University for quality management are governed and supported by the TUT Policy on Quality Assurance. The aim is to ensure:

- effective academic, administrative and support services through appropriate, regulated

structures;

- the allocation of adequate resources;
- approved procedures and control measures; and
- regular monitoring and auditing in the interests of continuous improvement.

Monitoring is conducted through the various strategic governance, academic, administrative and financial layers of TUT, and facilitated by the portfolio-driven committees designed to advise, innovate and execute approved decisions related to teaching and learning, research and innovation, and community engagement. In addition to the committee scaffolding provided by Senate and Council, quality assurance resides in the DQP.

The Enterprise Architecture, which resides in the Information and Communications Technology Services (ICTServ) Directorate, enables teaching and learning by –

- aligning technology initiatives with educational objectives’
- integrating systems and applications;
- optimising technology infrastructure;
- enabling data management and analytics;
- fostering the adoption of emerging technologies;
- enhancing user experience and accessibility; and
- ensuring security and privacy.

By leveraging Enterprise Architecture principles, TUT can create a cohesive and effective technological ecosystem that supports the teaching and learning mission of the University. The various systems support the goals of the technology pillar (4) of the ISP 2020–2025 and comprise a range of software applications, including MERS, Clarivate Converis Research Information Management System (RIMS), and BrightSpace, as well as national platforms, such as the Higher Education Management Information System (HEMIS). These discrete systems each has a distinctive purpose – some to record research, others for monitoring evaluation and reporting, and yet others for tracking student activity and success. TUT interviewees admitted to the CHE panel, however, that ‘integration is difficult’ and that the systems ‘lack uniformity’, which corroborates the SER statement that the various systems need to be electronically more fluent to offer coherent information and sophisticated analytics to end-users across the University.

Recommendation

10. The CHE panel recommends that TUT employ the MERS more widely across TUT to link plans, objectives, performance indicators and risk management to realise the strategic

goals of the University and substantially improve system integration.

Focus Area 3: The coherence and integration of the institutional quality management system support the core academic functions

The four standards in Focus Area 3 concentrate on the coherence and integration of the various components comprising the institutional quality management system and on how these work in concert to support the likelihood of student success and improve the quality of learning, teaching and research engagement, as well as accommodating the results of constructive integrated community engagement in accordance with the institution's mission.

Standard 9: *An evidence-based coherent, reasonable, functional and meaningfully structured relationship exists between all components of the institutional quality management system.*

The TUT SER, its PoE and the virtual interviews during the site visit of 25–29 July 2022, all indicate that resources have been made available to advance the ICT capacity of TUT and to develop a range of platforms to facilitate quality management across the functions and structures of the University. Senior managers pointed out the challenges faced by ICT in articulating these platforms to develop a more coherent, integrated and seamless QMS. The CHE panel also heard evidence from other divisions at the University that operations are still in an early stage and are not accessible to most constituencies. The coherence and integration of components of the QMS will therefore depend on how effectively the various platforms become accessible to staff, and how efficiently the platforms can articulate with one another to provide cross-cutting evidence and analytics for better planning. Performance management at TUT was also in an early phase when the CHE quality audit took place at the end of July 2022. At that stage, the PMDS still needed the approval of the TUT Bargaining Forum. The CHE panel anticipates that the PMDS will be functional in 2023, and that the MERS, which was inaugurated in 2020, will facilitate evidence-based performance management that is integrated into ICT universe at TUT, and that structural synergies will provide greater internal institutional coherence.

Recommendation

11. The CHE panel recommends that TUT ensure that the PMDS be implemented and linked to the MERS to facilitate the achievement of key performance areas (KPAs) assigned to set functions, including those of contract and part-time staff, against key performance indicators (KPIs).

Standard 10: *Evidence-based regular and dedicated governance and management oversight of the quality assurance system exists.*

TUT uses several systems for oversight of its core functions and to monitor institutional quality. These are MERS, the D2L (BrightSpace) LMS (learning management system), the ITS, the Higher Education Data Architecture (HEDA), the ICT platforms, research output tracking, and the training and development initiatives database. In addition, the SER includes risk management, the QMS and executive management accountability. The QMS is underpinned by the Policy on Quality Assurance, and emphasises the effectiveness, efficiency, value-add, accountability and continuous improvement of academic and non-academic services and products. The QMS is implemented on all campuses in the same way that the DQP is represented in all the TUT committees. It was reported that MERS is a versatile (software) system and a reliable tool to assist the University with governance and quality management. The absence of a university-wide performance management system raises a question about how the performance and accountability of the staff are identified and addressed (see Standard 9 and Recommendation 12). The LMS platform (BrightSpace) is user-friendly, and makes provision for tracking and monitoring student performance, as well as identifying any bottleneck modules. The Audit and Risk Committee for monitoring is active and submits its reports to the Council's Audit and Risk committee. The Executive Management Committee (EMC) provides direction in terms of governance, and is accountable to the TUT Council regarding the strategic direction of the University, as well as in respect of overall quality management.

Recommendation

See Recommendation 11 (under Standard 9) above.

Standard 11: *Planning and processes exist for the reasonable and functional allocation of resources to all components of the institutional quality management system.*

TUT has various systems in place to ensure the quality of its core academic activities. Financial resources are allocated by the Budget Task Team, led by the Chief Financial Officer (CFO), as per the Policy on Budgeting. TUT has a decentralised budget model, and its campuses are expected to be self-sufficient. How they sustain themselves is however not explicitly evident in the SER, nor was it elaborated on during the interviews, despite claims by TUT to have addressed the CHE 2008 recommendations and 2017 report on the Quality Enhancement Project (QEP) to the effect that the University should have equitable resource provision across all campuses. It was evident to the CHE panel that the University relies financially on block grant income, NSFAS funding and University Capacity Development Grant (UCDG), with no mention of the third-stream

income. In the interviews with TUT managers, it transpired that budgeting is a challenge because there is never enough funding from government or industry, although they argued that nothing crucial to the academic project is left without resources. Generally, there is no overall institutional programme on resource allocation. In terms of the annual planning of workload, TUT has specified 40 working hours per week (including marking scripts, preparing lectures, conducting research, student consultations, etc.) for lecturing staff. Some flexibility in the workload model means that resource allocations for teaching and research are sometimes uneven.

Recommendation

12. The CHE panel recommends that TUT ensure greater parity in the resource allocation, the provision of qualified staff, workload allocation, sophisticated technology, and additional buildings on its distant campuses.

Standard 12: *The quality assurance system achieves its purpose efficiently and effectively.*

The SER states that similar QA processes are used on all the TUT campuses. Although the Policy on Quality Assurance guides these processes, the CHE panel established that not all divisions implemented similar processes to ensure that the QMS is effective. Approved structures are in place to inform budget control and monitoring systems and processes, and to make sure that the human, financial and infrastructural resources allocated to the QMS are used for their intended purpose. During the CHE site visit at the end of July 2022, it was evident that infrastructure is optimally used, although it was reported that there are incomplete building projects on some of the distant campuses. The interviews confirmed that some of these infrastructural challenges were inherited, and will take time to address. TUT has an annual performance plan (APP) to drive and capture the KPAs relevant to each section or unit. MERS assists with the monitoring of the objectives outlined in the APP. The approved promotion policy does not, however, address promotion possibilities for support staff members. To support student academic success, student representatives from programme level provide feedback, and represent the 'student voice'. Faculties also use academic excellence officers and work-integrated learning (WIL) co-ordinators.

Recommendation

13. The CHE panel recommends that the University support the plans and initiatives of the Directorate of Quality Promotion (DQP) to fulfil its varied and expanding tasks.

Focus Area 4: Curriculum development, learning and teaching support the likelihood of student success

The four standards in Focus Area 4 concentrate on how effectively the institutional quality management system enhances the likelihood of student success, improves learning and teaching and supports the scholarship of learning and teaching. These standards drill down in greater detail in Focus Area 2.

Standard 13: *An effective institutional system for programme design, approval, delivery, management and review is in place.*

The process of programme design, development, and approval at TUT encompasses three phases and a range of procedures that reside with the DQP and the Directorate of Curriculum Development and Support (CDS). The DQP ensures that all new and existing academic programmes meet the regulatory quality requirements. The CDS advises faculties on and supports curriculum design and the development of programmes. Regular academic reviews at module level and student surveys are the main QA mechanisms used to assure the quality of the programmes that are offered remotely, either digitally or through a blended approach. Remote digital delivery was supported during the Covid-19 pandemic by safe and secure assessment systems that enabled the grading of students remotely yet securely with plagiarism and proctoring tools in place. In addition, electronic internal and external moderation of assessments ensured that the integrity was not compromised.

Commendation

- b. The CHE panel commends TUT for its effective and strategic response to the Covid-19 emergency by adopting a multi-pronged approach to student learning and support by providing virtual and hard copy study materials, extending electronic network access, subsidising data bundles, and using the crisis to pioneer the D2L (BrightSpace) digital learning platform.

Recommendation

- 14. The CHE panel recommends that TUT, in consultation with relevant stakeholders, develop a strategic plan and comprehensive development programme in each faculty for digital and online learning that sets guidelines, criteria, quality standards, policies, resource allocations and targets, and ensure that implementation is monitored by the Senate Teaching and Learning Committee (TLC).

Standard 14: *There is evidence-based engagement at various institutional levels, among staff, and among staff and students, with:*

- a. curriculum transformation, curriculum reform and renewal;*
- b. learning and teaching innovation; and*
- c. the role of technology (1) in the curriculum, (2) in the world of work, and (3) in society in general.*

The HEQSF-aligned PQM at TUT prioritises vocational, occupational or industry-specific programmes that focus on applied knowledge and skills. Most of the programmes on the PQM are undergraduate, vocational and industry-specific diploma or degree courses. Due to the many programmes that needed to be conceptualised between 2016 and 2020, the innovative and transformative nature of teaching and learning was not always foregrounded. In other cases, it was simply a compliance process to meet the submission deadlines under considerable pressure. Programme teams used the TUT Policy on Curriculum Development. Only after the programmes had been approved, did the focus shift to innovative teaching and learning practices. Senate approved some fundamental modules to provide undergraduates with relevant skills in computer literacy, communication, information literacy and life skills, which address contemporary needs in the curriculum. Many new programmes have been introduced at TUT, which directly address the issue of an outdated curriculum and ensure relevant courses in the interests of employability and which facilitate articulation between diploma and degree studies. Curriculum transformation at TUT has to be construed in the context of vocational and technical education, which means that technology is crucial, and digital applications – in learning and practice – are axiomatic. The CHE panel was therefore keen to explore the strides made by TUT in online learning occasioned by Covid-19 and its aftermath in the firm belief that a classroom learning practice can be enhanced substantially by digital innovation.

Recommendation

15. The CHE panel recommends that TUT explore various incentives for innovation in teaching to develop technology-based learning modules and explore new developments, such as simulation, gaming and virtual or augmented reality, and receive appropriate technical support (students should also be involved in such experimentation).

Standard 15: *The students' exposure to learning and teaching at the institution, across all sites and modes of provision, is experienced as positive and enabling of their success.*

Standard 15 seeks to establish whether students' exposure to learning and teaching is

experienced as positive and enabling of their success. The CHE panel, through triangulation of the data from the SER, interviews with the stakeholders, and consultation of the PoE, established that the University has policies, processes, systems and resources in place that facilitate student success. Some of the mechanisms that enable the 'student voice' to be heard are surveys and the Office of the Student Ombudsman (OSO). The CHE panel found that the monitoring, evaluation and reporting processes to evaluate the effectiveness of QA processes and the concomitant improvements, can be enhanced. Staff commented positively about the continuous professional development (CPD) programme and the opportunities offered by TUT to pursue higher qualifications. However, the CHE panel identified some areas for development in respect of the monitoring and evaluation (M&E) of improvements emanating from QA processes. While the University has an OSO that is effective, it is confined to a single campus, thus affecting the aim of the University to provide equitable access to crucial student support agencies.

Recommendation

16. The CHE panel recommends that TUT provide student ombudsman services on its distant campuses, and automate the complaints and appeals process to streamline administration and expedite arbitration in the OSO.

Standard 16: *Institutions engage with and reflect on the employability of their graduates in a changing world.*

In Standard 16, the CHE panel reflected on engagement by TUT with feedback from QA processes regarding the employability of its graduates in a changing world. The alumni survey conducted by Universum provides the University with data from responses to understand, identify, attract, and manage graduate employability. The alumni reports (2016 and 2021) provided evidence of this, but interview data suggested that more can be done by the University to engage actively with and act on the results of the Universum Survey to enhance graduate employability. Even though the University has various structures and offices in place, such as Convocation, the Advancement and Partnerships Office, and the Directorate of Co-operative Education (DCE), the interviews with TUT alumni and external stakeholders indicated a lack of co-ordination among these units. If the collaboration of these units could be managed better, TUT has the potential to improve the employability of graduates dramatically and to facilitate the allocation of resources.

Commendation

- c. The CHE panel commends TUT for intensifying its focus on entrepreneurship by including

it as part of the curriculum in its programmes. This is an innovation that enhances employability and promotes job creation.

Recommendation

17. The CHE panel recommends that the Office of the Registrar improves virtual communication with TUT alumni and organises meetings of the Convocation that facilitate greater participation, and that the relationship among the Convocation, the Advancement and Partnerships Office and the Directorate of Co-operative Education be strengthened to promote graduate employability.

Conclusion to the Executive Summary

The CHE panel is in broad agreement with the findings in the TUT SER. It acknowledges the openness of the University to the institutional audit process in virtual and face-to-face interviews conducted across all faculties, directorates and departments. TUT is candid about its strengths and weaknesses, and identifies seven areas needing quality improvement (SER, p. 135) and five others that are directly linked to Standards 2, 6, 8 and 14 (SER, p. 136). This self-evaluation is a firm foundation for current and future planning. In response to the SER, the CHE panel has sometimes ranged its critical analysis beyond the prescriptions of some standards to engage with the TUT interpretation and narrative. In a few cases, this has led to an unavoidable repetition of themes across the CHE Focus Areas.

The SER, PoE, interviews with CHE panel members and the site visit (25–29 July 2022) provided supporting information that the QA system at TUT has been implemented at all levels and in all structures of the University, and is guided by relevant policies and procedures. The panel noted that TUT should, however, address some areas to ensure that the QA system achieves its purpose efficiently and effectively, and that quality is monitored extensively and consistently. These areas relate to better communication with internal and external stakeholders; more resources in key portfolios and offices, such as the DQP; updating the promotion policy to include support staff; and aligning the policy on budgeting within the current HE context.

The CHE panel advises that many of the emergency measures that were taken to ensure quality teaching and learning during the Covid-19 pandemic be extended and perfected in future blended, hybrid and online learning programmes, and that the gains made in digital transformation should not recede now that contact tuition has returned to TUT campuses. The panel notes the ambitious goals in the TUT Strategic Plan 2020–2025 and in the instructional design and student support departments, which should all be implemented.

The CHE panel triangulated information from the SER, the PoE, the physical tour of campus facilities, and stakeholder interviews to establish whether students' exposure to teaching and learning was positive; thus, enabling their success. The panel found that students are supported from their first entry into the University. Baseline testing is conducted, and the results are used to implement student academic development and support interventions. TUT also offers HEQSF-aligned programmes; thus, ensuring the credibility of its qualifications and by extension, the quality of its graduates. The DCE and the Advancement and Partnership Offices work together to enhance graduate employability through the WIL Management System and the Graduate Recruitment and Employability Plan. These are all strengths that attest to a commitment to enhancing the student experience at TUT.

The CHE panel recognises that TUT has introduced policies, processes, systems and resources to facilitate student success through several mechanisms, such as student surveys and the OSO, representation of faculty committees, and wider Wi-Fi connectivity; thus, amplifying the 'student voice' in a more inclusive academic environment. Staff were also positive about development programmes, including CPD, and opportunities to pursue higher qualifications. The panel recommends plans to monitor and evaluate improvements emanating from QA processes and extending the services of the University Ombud to all campuses.

The Institutional Audit Report on the Tshwane University of Technology

1. Introduction

The Council on Higher Education (CHE) was established through the Higher Education Act (No. 101 of 1997, as amended) primarily to assure quality in the South African higher education sector and to advise the Minister on aspects of higher education. The National Qualifications Framework Act (No. 67 of 2008, as amended) conferred additional responsibilities on the CHE as the Quality Council for higher education, with overall responsibility for the Higher Education Qualifications Sub-Framework (HEQSF). The CHE executes its quality assurance responsibilities through its permanent committee, the Higher Education Quality Committee (HEQC). The CHE, through the HEQC, exercises its quality assurance function using a variety of mechanisms, one of which is institutional audits that are mandated by the Higher Education Act.

The *Framework for Institutional Audits* (2021)⁴ and its attendant *Manual for Institutional Audits* (2021)⁵ are key instruments to regulate the implementation of institutional audits. These documents are also aligned in important respects to the new Quality Assurance Framework (QAF)⁶ that was approved by the HEQC and Council in September 2020, and which will be implemented in the medium term by the CHE. Institutional audits are strongly influenced by both the specific context within which each HEI works, and by the national transformational agenda within which higher education functions. The HEQC has identified a need to do full audits of all HEIs in South Africa. A full audit of an institution determines whether or not, and to what extent, an institution's IQA systems, policies and procedures ensure the effective provisioning of good quality higher education that enhances the likelihood of student success through quality learning and teaching, research opportunities and integrated community engagement. The emphasis is less on ensuring that required standards are met at a particular threshold than on the deliberate, continuous, systematic and measurable improvement of the student experience, as well as on building reflexive praxis to develop quality cultures in institutions.

⁴ <https://www.che.ac.za/publications/frameworks/framework-institutional-audits-2021>

⁵ <https://www.che.ac.za/publications/frameworks/manual-institutional-audits-2021>

⁶ <https://www.che.ac.za/publications/frameworks/quality-assurance-framework-qaf-higher-education-south-africa>

The following principles guided the institutional audit of the Tshwane University of Technology (TUT):

1. The primary responsibility for internal quality assurance rests with individual HEIs. Each institution is responsible for the establishment, implementation, maintenance, improvement and enhancement of its quality management and assurance systems.
2. The uniqueness of each institution's size, shape, location, context and mission is recognised.
3. The value of institutional audits rests on the compilation of credible, contextually relevant and reliable information that is required for internal quality-related planning and self-evaluation, peer review and public reporting (for example, by publishing executive summaries).
4. Student experience, student engagement and participation and the student voice are central to an evaluation of an institution's quality management system.
5. The institutional audit is a peer-driven and evidence-based process to ensure that the HEQC and its audit panel reports are transparent, informed and consistent.
6. Institutional audits are developmental and intent on supporting continuous quality improvement and enhancement.
7. Institutional audits are required to balance their developmental character with the regulatory requirement that the CHE and the HEQC act on poor provisioning where institutions have no clear commitments, processes, practices or plans to improve.
8. Institutional audits are a key component of the HEQC's broad-based quality assurance mandate.

Aligned to international practice, the HEQC uses a review methodology consisting of an institutional self-evaluation report (SER), and an external peer review which verifies, triangulates and validates the institution's self-evaluation. The external peer review consists of a document analysis of the SER and institutional portfolio of evidence, as well as a site visit at which interviews are conducted with constituencies, and physical infrastructure is visited. This audit report forms the outcome of the institutional audit of the Tshwane University of Technology.

2. Brief Overview of the Institution

The Tshwane University of Technology (TUT), which was established in 2004, following the merger among Technikon Pretoria, Technikon Northern Gauteng and Technikon North-West, is

the largest SA university that graduates technologists, technicians and professionals in various industries. In 2020, it enrolled 62 000 students, drawn from across South Africa as well as from neighbouring Southern African countries. It is the largest residential university in South Africa. It has campuses in Gauteng, Limpopo and Mpumalanga, while six are located in the City of Tshwane (Pretoria, Soshanguve North and South, Pretoria Arts, Pretoria Arcadia and Ga-Rankuwa), two in Mpumalanga (Mbombela and eMalahleni), and one in Limpopo (Polokwane). The smaller campuses are eMalahleni, Ga-Rankuwa, Mbombela, Pretoria Arts, Pretoria Arcadia and Polokwane, which have student enrolments under 5 000 each (SER, pp. 4; 14–17). TUT also has service points in Cape Town and Durban, for students registered in distance-education programmes (SER, p. 11).

TUT has seven faculties: Arts and Design, Economics and Finance, Engineering and the Built Environment, Humanities, Information and Communication Technology, Management Sciences, and Science (SER, pp. 12–13). The University also has three schools: the Tshwane School for Business and Society in the Faculty of Management Sciences, the School of Education in the Faculty of Humanities, and the Adelaide Tambo School of Nursing Science in the Faculty of Science (SER, p. 11).

The University has a 25-person Council, and Executive Management is composed of the VC and Principal, four Deputy Vice-Chancellors (DVCs), the Registrar and Chief Financial Officer (CFO), as well as three Executive Rectors, a Senior Director and two Directors. There are seven Executive Deans and six Campus Directors (SER, pp. 8–10).

The TUT Institutional Strategic Plan (ISP) 2020–2025, including its vision, mission, values and four pillars; the TUT Student Enrolment and Efficiency Plan 2020–2025; and the TUT Transformation Framework 2017, are the internal documents guiding the goals and objectives of the University. Key national policies, including the Higher Education Act and ministerial directives, also inform the TUT focus and Programme Qualification Mix (PQM), in alignment with its differentiated status as a university of technology (UoT) (SER, pp. 5–6).

In 2020, the headcount of undergraduates at the TUT reached 59 132, of whom 47 062 received certificates and diplomas. Postgraduate numbers reached 3 312 in the same year, comprising mainly master's degree students (2 193), but also a growing constituency of 536 doctoral candidates, and more than the 355 honours enrolments (SER, p. 27). Approximately 97% of TUT students are African, 1.3% are white, and less than 1% are Indian and Coloured. In 2020, 32 321 students were women and 30 186 men. The largest faculties are Humanities (14 538) and Management Sciences (14 294), followed by Science (8 784), Engineering and Built Environment

(8 669), Economics and Finance (7 578) and Information and Communication Technology (6 839). The smallest faculty is Arts and Design with 1 805 students in 2020 (SER, p. 30). The vast majority of students are African-language speakers and the diversity of languages reflects the TUT regional campuses. The predominant home languages are Northern Sotho (Sepedi), IsiZulu, Setswana, SiSwati and Southern Sotho (Sesotho) (SER, p. 31).

The University employs more temporary than permanent staff (56% were temporary in 2020) (SER, p. 37). More men (53%) were employed in 2020, but more women are permanent members of staff (SER, p. 37). More than 80% of the staff were Africans, and 15% were white, with a very small constituency of Coloured and Indian appointees (Table 14, SER, p. 38).

TUT has a large residential student population on its three Pretoria campuses (22 378), and smaller occupancy in Soshanguve (6 905), Ga-Rankuwa (4 012), Mbombela (3 087), eMalahleni (1 748) and Polokwane (1 429). These 2020 statistics reflect student occupancy in university-owned, leased and accredited residences. The Covid-19 pandemic dramatically affected residential trends, declining from 39 559 to 6 876 students (SER, p. 36).

The success rates at the University have improved from 2016 to 2020 (77–80%). By 2020, the average graduate success rate across campuses and faculties was 80%, with the Soshanguve North Campus achieving a 91% success rate, followed by Pretoria Arts (86%), Polokwane and Pretoria Arcadia (83%), Mbombela (82%). The other campuses achieved between 71% (eMalahleni) and 80% (Ga-Rankuwa) (SER, pp. 32–33).

The CHE Audit Process

The CHE panel's brief was to carry out a quality audit of the Tshwane University of Technology's (TUT) teaching and learning, research and community engagement at undergraduate, Honours and coursework Master's level. The process began with the distribution of the TUT SER in May 2022 and the CHE *Manual for Institutional Audits* (2021) and the CHE *Framework for Institutional Audits* (2021) to members of the panel. The CHE Director, Dr Britta Zawada, presented an orientation webinar, followed by a discussion by the panel about the audit plan, which developed during fortnightly virtual meetings scheduled on Fridays until the site visit of 25–29 July 2022. The panel worked well together in the preparatory meetings, with good interaction and mutual support.

The early meetings of the CHE panel focused on a critical reading of the TUT SER and an intensive discussion of appropriate lines of inquiry to engage the various constituencies at the University during the CHE audit site visit. The panel devised a programme of virtual interviews

and campus tours, and tailored its lines of inquiry in respect of the 16 CHE standards to confirm the contents of the SER. A set of probing questions was compiled for the interviews to triangulate the evidence contained in the TUT PoE and the SER. The CHE Manager: Institutional Audits, Dr Sanele Nene, liaised with the TUT co-ordinator and her team to finalise the schedule of interviews, which entailed identifying interviewees from the various portfolios across the University and its wider stakeholder community for each of the proposed 34 sessions. This was refined until its final iteration was circulated on 22 July 2022.

The virtual interviews were conducted from 25–28 July 2022, and on 29 July 2022, the CHE audit site visit was concluded with the campus tours of Soshanguve North and South, Ga-Rankuwa, Pretoria Arts, Pretoria Arcadia, eMalahleni and Pretoria West, some face-to-face interviews and the preliminary oral report to the TUT Vice-Chancellor and Principal and members of Executive Management (including Executive Deans). The CHE panel interviews were based on a careful reading of the SER, its annexures and the PoE, which were provided electronically. The CHE panel tried to be as comprehensive as possible within the confines of five days, and we attempted to explore policy and practice in the core functions of teaching, research and community engagement through the lens of ‘the people’s university that makes knowledge work’ and ‘enabling student success,’ as well as measuring these in terms of the CHE prescriptions.

The CHE panel and the CHE managers appreciate the co-operation of the TUT VC, Prof Tinyiko Maluleke, the Executive Management and the academic, administrative and support staff, across the University, during the institutional audit. The project received wide coverage in its preparation and production. TUT was diligent and thorough, and gave maximum support to the CHE panel. The reception was cordial and the co-ordination seamless, which provided evidence of the professionalism of our collaboration. The site visit was well managed and mostly well attended, discussions in the panel sessions were engaging, and the tight schedule was largely adhered to. The physical campus tours included facilities that are appropriate to the TUT vision and purpose as a UoT. There were also high-quality support and guidance from the CHE staff. The engagement with students, staff, professional board members, alumni and employers was extremely helpful in appreciating the strengths of the University and in developing constructive recommendations, which are intended to enhance the quality of TUT programmes, the reputation of TUT for quality teaching and research, as well as student employability.

The CHE panel processed the extensive material derived from the interviews and campus tours in the compilation of the audit report, and began writing the draft report in mid-August 2022. Some challenges delayed submission to the Institutional Audit Committee of the CHE. Overall, however, the TUT audit was positive, and quality management for student success is taken

seriously by the University.

Focus Area 1: Governance, strategic planning, management and leadership support the core academic functions

The four standards in Focus Area 1 concentrate on the role that an institution's *governance, strategic planning* (as contained in its *vision, mission and strategic goals*), *management and academic leadership* play in its quality management in order to enhance the likelihood of student success and to improve the quality of learning, teaching and research engagement, as well as accommodating the results of constructive, integrated community engagement.

Standard 1: *The institution has a clearly stated vision and mission, and strategic goals which have been approved by appropriate governance structures, subject to comprehensive stakeholder engagement.*

Tshwane University of Technology (TUT) has developed a clear Institutional Strategic Plan (ISP 2020–2025) with the vision of being ‘a people’s university that makes knowledge work’. The development of the ISP 2020–2025 was guided by the previous ISP (2014–2019) (Annexure 11.1), which envisioned TUT as pioneering an enterprising and transformative brand of the twenty-first-century UoT. The ISP roadmap (2017–2018) also provided a foundation for the development of the current ISP, which was approved by the University Council on 23 August 2019 (SER, p. 50). The CHE panel noted that the current ISP 2020–2025 also drew on the strategies of the ISP 2004–2008 and ISP 2009–2013. These two earlier plans cover important periods that saw the birth of the University through the merger of several institutions, and secondly, witnessed the University functioning as a unitary institution that took into consideration the diversity and historical differences that the democratic government sought to address across the HE sector in South Africa after 1994.

The CHE panel established that TUT engaged in various activities to ensure that the University community was aware of the new ISP and its value to the future of the University. The panel also noted the extent of external stakeholder engagement in the process of the ISP development, which is in line with the requirements of CHE Standard 1 (SER, p. 55).

The TUT mission statement seeks to ‘advance socio-economic transformation through its curricula and conducting impactful research and community engagement (CE) programmes and enabling high-quality learning experiences for its students, the retention of dedicated personnel

and ensuring an enabling environment for all its structures to flourish' (SER, p. xxi).

The TUT ISP is anchored by four key pillars that underpin its implementation of realising its vision by 2025:

- creating future-ready graduates who make a positive societal impact;
- producing impactful research, innovations, engagements and technology transfer to foster growth, development and sustainability;
- service and operational excellence through resource optimisation; and
- by becoming a digitally advanced university (SER, p. 6).

The SER outlines that the process of developing the ISP followed rigorous stakeholder engagement as well as approvals by the governance and management structures at the University. The key stakeholder engagements in developing the ISP – outlined in the SER – include consultative workshops with business units across all campuses, and with organised labour and student representative bodies. In developing the ISP 2020–2025, TUT took the notable step of including all internal stakeholders through the integration of governance, strategic pillars, and risks, to monitor, evaluate and report on the progress of the implementation of ISP. This process is underpinned by the newly introduced cloud-based Monitoring, Evaluation, and Reporting Systems (MERS) (SER, p. 2; also see Standard 3).

In the panel's engagement with the VC, the Executive Management Committee (EMC), Deans, Heads of Schools and Campus Rectors, Directors, the DQP, and many other institutional stakeholders, it was clear that the University had followed a co-ordinated process of engagement in developing the ISP. It was also clear from these engagements that there was institutional consensus to achieve the desired goals by 2025. The VC expressed a sense of urgency about the implementation of the strategic plan as well as the need to focus on qualitative improvement of the core activities of TUT. The TUT Council as the highest governance structure demonstrated to the panel its commitment to ensuring the alignment of the ISP with the successful implementation of the TUT Digital Transformation Strategy (DTS). The DTS seeks to transform the learning and teaching environment, and to enable systems development and integration across all functional areas within the University. Interviews with Council also demonstrated its commitment to supporting management to implement and operationalise the key strategic goals of the institution.

The current ISP 2020–2025, as outlined in the SER, is built on the foundations of the first and second ISPs (2004–2008 and 2009–2013). These two plans cover important periods that firstly saw the birth of TUT through the merger of several institutions; and secondly, witnessed the

University functioning as a unitary institution that took into consideration the diversity and historical differences that the national government sought to address across the HE sector in South Africa after 1994.

TUT owns its position as a leading UoT in keeping with its mandate to focus on skills development, as well as to develop and grow a research infrastructure and systems that focus on applied research and produce outputs that have an influence on societal challenges. The VC articulated the intersection between Science, Technology, Engineering and Mathematics (STEM) and humanities and social sciences within the TUT programme mix as an important approach that strengthens science and technology offerings. TUT acknowledges that technology must meet people and, in this case, humanities and social sciences play an important role in UoTs in South Africa, especially in the digital humanities. The growth of STEM offerings at TUT is firmly supported by the humanities and social sciences.

The CHE panel also noted that the extensive consultative processes to develop and refine the ISP 2020–2025 resulted in several milestones, which include the Planning and Resources Committee (approved by the TUT Council as the ISP roadmap 2017–2018), workshops with staff, focus group interviews and expert consultations, and EMC workshops to prepare and refine the final draft self-evaluation report (SER, p. 55). In the CHE panel's engagement with staff and students, it was clear that most levels of academic, administrative and support staff were familiar with the ISP, as well as with their individual roles in support of the goals of the University. The extensive M&E system provides the basis on which most academic and support staff align their work with the institutional goals.

The introduction of the MERS is a demonstration that the University management is committed to the effective implementation of the new ISP 2020–2025. Moreover, the CHE panel noted that the EMC had identified various apex priorities (Annexure 13: Apex Priorities) and strategic risks associated with implementing the Strategic Plan (Annexure 14: Strategic Risk Report). This again provides evidence of the EMC commitment to ensure the effective implementation of the Strategic Plan (SER, p. 54).

Commendation

- a. The CHE panel commends TUT on the extent of consultation among internal and external communities, especially those in Mpumalanga and Limpopo, in the development of the ISP 2020–2025.

Conclusion for Standard 1:

The CHE panel found the TUT to be *functional* in the area covered by this standard.

Standard 2: *The stated vision, mission and strategic goals align with national priorities and context (e.g. transformation, creating a skilled labour force, developing scarce skills areas and a critical citizenry, and contributing to the fulfilment of national goals as informed by the NDP and related national planning), as well as sectoral, regional, continental and global imperatives (e.g. Africa Vision 2063 or the Sustainable Development Goals).*

The focus of the review for Standard 2 was on the alignment of the TUT ISP with national, regional, continental and global imperatives. The panel sought information on this standard from the VC, the EMC, EDs, Deans, and members of the University Council, and considered evidence provided in the SER. The goal was to evaluate how the ISP vision, mission, and strategic goals are aligned with the South African national development goals, regional, continental, and global imperatives in skills development, research, and innovation, for them to realise their goal of being ‘a people’s university that makes knowledge work’.

The SER indicates that an analysis of the ISPs 2014–2019 and 2020–2025 was undertaken to determine their alignment with the NDP 2030, Africa Vision 2063, the UN SGDs, and national priorities. The SER states that the analysis was an alignment check of the already finalised ISP with the various imperatives, rather than the reverse. In Standard 1, the SER, however, states that, in stakeholder engagements, approval of the ISP sought to infuse and confirm the various transformation imperatives within the NDP 2030. (SER, p. 56, section 3.1.2)

National alignment

The stated vision, mission and strategic goals of TUT are supported by a range of policies and guidelines, including the Transformation Framework, and the TUT Student Enrolment and Efficiency Plan 2022–2025. The development of the ISP, as outlined by the VC’s presentation to the panel, also considered the developments and challenges within the HE environment in South Africa and around the world, and the position of the national government on funding and student enrolments. The key national policy frameworks that informed the strategic planning process at TUT include the following:

- the Education White Paper 3: A Programme for the Transformation of Higher Education South Africa Vision 2030;
- the National Development Plan (NDP) 2030;
- National Human Resource Development Strategy; and

- the Ministerial statement on student funding and enrolments.

Continental and Global Alignment

In his oral presentation, the VC reiterated the alignment process by emphasising that the ISP 2020–2025 was aligned with the NDP 2030, and was built around the production of future-ready graduates. He also emphasised that, in aligning with the African Union (AU) 2063 Agenda (access to education, skills development, technology, and innovation), TUT had developed its ISP 2020–2025 around the goal of developing graduates who are focused on problem-solving and ready for work. The panel also heard from interviews with the EMC how a series of workshops during approval of the ISP sought to align the ISP Transformation Framework with global HE trends.

The regional, continental and global imperatives that are aligned to the TUT ISP 2020–2025 and its four key pillars include:

- the African Union (AU) Vision 2063 Agenda – Goal 2: well-educated and skilled citizens, underpinned by science, technology and innovation;
- the United Nations (UN) Sustainable Development Goals (SDGs) seek to develop educated citizens who are ready to support national development initiatives.

Institutional Alignments

The SER states that, besides the alignment with national, regional, and international imperatives, TUT alignment at institutional level also ensures that the visions, missions and strategic goals of its seven faculties align with the institutional goals (SER, p. 56).

The CHE panel's engagement with the Alumni and Convocation members revealed these stakeholders also play an important role in ensuring the alignment of the ISP with various national and global imperatives to promote and improve the overall image of the University.

The campus tours included discussions with teaching and research staff in state-of-the-art laboratories in various bio-medical and engineering fields. The CHE panel saw the extent of international partnerships in these flagship projects, and heard how access to these postgraduate programmes is very limited. The panel therefore advises that more international partnerships be forged to expand the niche research institutes and projects and contribute to national and international sustainability goals. Competitive research among universities often limits local partnerships, but TUT is urged to pursue collaboration on a wider front with other universities in Gauteng and other provinces in South Africa.

Recommendation

1. The CHE panel recommends that TUT strengthen partnerships with regional and international universities to offer greater opportunities for postgraduate studies and research funding to contribute to national, continental, and global sustainability.

Conclusion for Standard 2

The CHE panel found the TUT to be *functional* in the area covered by this standard.

Standard 3: *There is demonstrable strategic alignment between the institution's quality management system for core academic activities across all sites and modes of provision and its vision, mission and strategic goals, as well as its governance and management processes.*

The SER states that the QMS is aligned with the mission, vision, and goals of the University, and that it plays an important role in synchronising and informing the core academic activities of the University. The SER further notes that the responsibility for quality management is spread across all University stakeholders (SER, p. 58).

During the panel's engagement with the DQP, it was demonstrated how the directorate plays an important role in ensuring that various university activities remain aligned with the institutional goals through an elaborate system of internal reviews and quality audits. Although this is linked to Standard 3 (see SER, p. 60), it is also important to note here that issues of alignment should be continuously monitored in a vast and complex environment, such as TUT. The SER states that the DQP performs QA functions through programme accreditation and approvals, programme reviews, quality audits, surveys, and institutional research; runs the Office of the Student Ombudsman; and undertakes quality promotion and capacity building to ensure compliance and institutional alignment.

The Plan–Deploy–Check–Act (PDCA) cycle underpins the core business processes at TUT for academic and support services. The PDCA approach was incorporated into the TUT Approach–Deploy–Review–Improve (ADRI) cycle in 2017, to improve its QM processes (SER, p. 58). The interview sessions with the VC as well as with members of Executive Management confirmed that the ADRI approach improves the monitoring of core academic activities across all sites and modes of delivery of academic activities.

The VC informed the CHE panel that, to ensure adherence to the Policy on Quality Assurance (Annexure 18) and to keep in line with the institutional QMS Strategy (Annexure 19), the EMC

meets twice a month. Its role is to ensure that there is equity, progress, and monitoring of academic performance across all faculties and sites of delivery.

The CHE panel was also informed that the role of the EMC is to advise the VC on strategic and operational matters. In these sessions, all EMC members present on quality matters within their directorates, and identify areas that require further attention. Their presentations are backed up by data, and disclose failing processes or structures. The monitoring of improvements is carried out through monthly one-on-one meetings between the VC and executive members, and focuses on actions to address gaps in the academic performance system. The VC and executive members also visit faculties and engage with the Executive Deans.

In the CHE panel's engagement with members of the Executive Committee (EXCO), it was further ascertained that the QMS at TUT is a robust QMS that ensures the execution of mandates across the institution. Through the Senate and Senate Sub-Committees, policies, structures and clearly defined reporting lines, there is a sound system of strategic alignment across the University. The EXCO members also informed the panel members that the QMS was designed in line with the CHE prescriptions. It was noted that the QMS was designed to achieve transformation and respond to the NDP, the UN SDGs and the AU Agenda 2063 (also see Standard 2).

Another important area of quality management in place at TUT is the continuous monitoring of student success via the Student Success Sub-Committee of Senate, the Assessment Review panels, and the Faculty Sub-Committees for Success Rates. The Faculty Success Rate Committees monitor activities at the faculty level, by identifying modules and subjects at risk, as well as designing strategic interventions. They also ensure that programmes delivered by each faculty are in line with graduate attributes, and that they follow a rigorous process of programme approval. The Curriculum Development Directorate and the Strategic Management Support (SMS) Directorate ensure the viability of proposed programmes. The monitoring mechanisms of student success include the use of data from the Management Information System (MIS with dashboards dedicated to student success, and the use and integration of PowerHEDA, which is freely accessible to all staff. The Directorate of Student Development and Support (SDS) and staff development activities are well in place to improve student success.

In the CHE panel's engagement with heads of schools and departments, it was noted that the Learning Management System (LMS), BrightSpace, had been fully adopted and that its uptake among academics is high. The adoption of BrightSpace had also been accelerated during the Covid-19 pandemic lockdown. BrightSpace has a feature to track students, monitoring their academic progress and their engagement with the content on the platform, the amount of reading

time they spend, and many other learning activities. Tutors and mentors can identify students at risk and assist them to implement appropriate interventions. The CHE panel also noted in its engagement with the DVC: Teaching, Learning and Technology (TLT) and the DVC: Research, Innovation and Engagement (RIE) that the schools and departments have access to data analytics for decision-making regarding students' performance. The DVC: TLT and the DVC: RIE, however, pointed out that the integration of systems had not been achieved yet, and that work was still in progress to achieve a fully integrated students' monitoring system. There is an overlap between the governance of teaching and learning and its pedagogies and practice, discussed under Focus Area 4, Standard 13, in respect of the fluency of blended and online learning in future TUT programmes. For this reason, the CHE panel linked this standard to Recommendation 15 to ensure implementation of a comprehensive, overarching plan for digital learning.

The SER (p. 59) states that the Chief Information Officer (CIO) and the Executive Director (ED): Institutional, Effectiveness and Technology have the overall responsibility to ensure that the QMS is 'implemented, maintained and continually improved across the university and reports to Executive Management Committee' on the efficiency and performance of the system. The evidence of this reporting is provided in the QMS Progress Reports, 2016, 2017 and 2018 (Annexure 20.1). There was, however, no evidence of more recent reports, as the CHE audit was carried out in July 2022.

The CHE panel noted that the QMS (SER, p. 59) is governed by the Policy on Quality Assurance (SER, p. 59, Annexure 18), and that this policy provides for the establishment and maintenance of appropriate structures and resource provision, and ensures that controls, audits and continuous improvement of academic and non-academic activities at TUT are a sustained process. The overall responsibility of oversight and implementation of the Policy on Quality Assurance resides with the highest management body at the University, the EMC. It was also noted during engagement with EMC members that a range of policies, processes, procedures and guidelines have been developed and are regularly reviewed to ensure that they are in line with the implementation of the TUT goals (also see Standard 9).

The DQP undertakes reviews and quality audits of all entities within the University and advises through quality improvement plans on ways to address areas that are not meeting the goals. The DQP is guided by a mandate (Annexure 25), and produces annual reports (Annexure 26.1). It operates at two levels: first, governance, through policy monitoring; and second, at operational level by conducting quality reviews of academic programmes. The CHE panel further noted in the engagement with the department that quality management of core academic activities, which includes teaching, learning, research, and community engagement, was aligned across all

campuses. Moreover, the DQP has ensured that QA and promotion issues are standing agenda items on several university committees. It regularly promotes its work across the university to ensure adherence to policies and guidelines. The DQP conducts student surveys to determine their experiences of academic delivery and the provision of other services. Some of the surveys include first-year experiences. It was also noted that an elaborate Complaints Management System under the Student Ombudsman has been developed to assist students facing challenges with teaching, learning and other university services.

The CHE panel was informed of the need to improve quality enhancement processes, especially the shortfall in policy quality assurance, which had led to revisions in the Quality Management Policy. The DQP also pointed out concerns around some departments lacking documented QA procedures, and that there was a need to ensure parity among faculties. Moreover, some interviewees proposed increased centralisation to promote transparency and to demarcate roles and responsibilities, and expressed the hope that this would be addressed in the revised QMS. The panel also noted that there were different systems managing the same issues in different environments, and that there was a need for harmonisation. A Community of Practice (CoP) has been started to ensure that the integration of systems will aid the implementation of institutional strategies to support core academic activities across all sites of delivery (also see Standard 7).

The CHE panel was also informed of the Student Services Council which provides feedback on student experiences (also see Standard 15). The existence of these platforms was proof of QMS alignment with the strategic goals of the University, and of implementation by various arms of the University community. The non-academic services are equally monitored, and there are policies in place that provide feedback from users of university services. The CHE panel noted in the interviews that the Combined Quality Assurance approach also works through the established TUT risk management processes.

The QMS of TUT, together with its supporting policies, guidelines, procedures and processes, as well as the demarcation of roles and responsibilities in governance, management and academic leadership, demonstrates the commitment by the University to a functional institution. The SER (p. 62) also notes that, to ensure strategic alignment, TUT has established governance structures with clear regulatory and hierarchical procedures that allocate institutional powers and the delegation of authority to ensure stability in institutional operations.

Conclusion for Standard 3

The CHE panel found the TUT to be *functional* in the area covered by this standard.

Standard 4: *There is a clear understanding of and demonstrable adherence to the different roles and responsibilities of the governance structures, management, and academic leadership.*

The SER (p. xxi) states that TUT has a well-co-ordinated system of committees and sub-committees that ensures adherence to the QA processes. The SER further states that Council, its sub-committees, and the academic governance and management committees at TUT have clearly stated ToR. During the CHE panel interviews with various key stakeholders, including the VC, EMC members, Executive Deans, and Campus Rectors, it was confirmed that the University has well-developed systems and structures, which ensure the coherent functioning of TUT and the delivery of its strategic goals.

The institutional profile in the SER also provides evidence on the make-up of the campuses, service points, faculties, programme offerings, staff and student profiles, as well as governance and management structures. Further evidence on how management and governance structures adhere to the University Statute 2017 is provided in Tables 1–4 in the SER (p. 7) and in Annexure 7.

The evidence provided demarcates lines of responsibilities and the various structures within governance, management, and academic leadership that ensure the functioning of TUT. The TUT management is responsible for the day-to-day running of the institution, and is accountable to the University Council. Furthermore, the SER states that there is a clear understanding of and demonstrable adherence to the different roles and responsibilities of the various governance, management, and academic leadership structures. The SER (pp. 62–63) and the VC's 2020 report (Annexure 28) states that TUT is currently going through a process of organisational re-design, and the drafting of a new organisational structure is in process.

In line with the provisions of the Higher Education Act 1997, the SER (p. 63) states that TUT has established a council in compliance with the legislation that complies with the composition requirements in section 27(4) of the Higher Education Act. Council has established committees of Council as allowed in section 29(1) of the Act. In the panel's engagement with Council members, it was established that the University Council plays an important role in providing fiduciary oversight over the financial resources of TUT, ensuring adequate resourcing and the necessary management structures for the delivery of the programmes of the University.

The Council members stated that Council sub-committees complement the functioning of the University (see Annexures 30.1 [Executive], 30.2 [Audit and Risk], 30.3 [Employment Conditions], 30.4 [Finance], 30.5 [Governance and Membership], 30.6 [Honorary Awards], 30.7 [ICT

Governance], 30.8 [Planning and Resources], 30.9 [Remuneration] and 30.10 [Tenders]). It was also stated that the delegation of powers from the Council to the VC, the VC's EXCO and to DVCs is clearly outlined. The SER (p. 63) further states that the University Council issues a statement of governance compliance in terms of the principles of the King IV Report on Corporate Governance in the annual report to this end.

As a further measure to ensure adherence to responsibilities at the Council level, a template (Annexure 31.1 [Council Self-Assessment Template]) was availed to members of the committees of Council in 2021 to conduct self-assessments for the year 2020. Furthermore, various training programmes ensure that the Council members play their oversight role effectively and efficiently.

The SER (p. 65) outlines the composition and role of the highest academic body at TUT, the Senate, which is chaired by the VC and consists of all DVCs, the Registrar (secretary of Senate), all seven Faculty Executive Deans, all TUT full professors, the Research and Innovation Director, representation from the Student Representative Council (SRC), and one Council member.

The Senate is accountable to Council for all teaching, learning, research and community engagement. It is also made up of additional members, such as Directors from the Higher Education Development and Support (HEDS) Unit, Strategic Support, the DQP and other key divisions who attend by invitation (Annexure 4). The Senate has overall responsibility for rules and regulations relating to all degree, diploma, certificate and other qualifications, and can amend these rules and regulations accordingly. To carry out its mandate effectively, the Senate has a system of sub-committees that deliberate on various issues and report back at its quarterly meetings. The Senate Sub-Committees are those for Postgraduate Studies, Library and Information Services (LIS), Teaching and Learning, Research and Innovation, Success Rates, Research Ethics, Recognition of Prior Learning and Work-Integrated Learning (WIL).

In addition to the Senate and its sub-committees, the Institutional Forum (IF) guides the University. The panel's engagement with members of the IF made it clear that IF members are well acquainted with their role of advising Council on various matters and that they monitor activities within the institution. The IF plays a key role in the recruitment-, transformation- and gender-related matters, in gender-based violence issues, as well as in curriculum transformation. The IF is also at the forefront of driving the review of the TUT language policy. The panel further established that the IF has a good working relationship with Executive Management, ensuring transparency and driving the transformative agenda forward. IF members however pointed out that the Transformation Framework of the University is not transformative enough, especially in terms of Broad-Based Black Economic Empowerment (B-BBEE) issues and that further work is

required to include previously disadvantaged communities in procurement processes.

The CHE panel also noted the IF members' satisfaction with the management of the University campuses and their presence in key committees, which allows for synergies and collaboration in advancing the IF agenda. The IF members informed the panel of their view of the University management composition, believing that it is too thin, and that there is need to expand it and provide more resources to enable major structural changes to drive the new TUT ISP. The IF members also felt that there was a need to review the current faculty management models for more effective management and delivery of core academic activities. The members further expressed their wish to play a more supportive role in the transformation and diversity of students, as their focus is mainly on staff. Going into the future, the IF outlined its vision of playing a key role in facilitating the strategic relationships between management, Council, unions, and students.

The CHE panel interview process with the EXCO members established how they participate in various supportive activities, such as workshops to align the ISP Transformation Framework with the HE sector nationally and globally. The EMC also works closely with the well-established QMS to execute mandates across the institution. They operate through the Senate Sub-Committees and are guided by policies, structures and the established reporting lines. It was also confirmed in interviews that the QMS and the faculty sub-committees on student's success rates all work in tandem to identify gaps in modules and in subjects, and to design interventions.

The CHE panel's engagement with the unions highlighted some of the challenges between them and the TUT management, especially in terms of adherence to roles, responsibilities and governance. While the unions described their relationship with management as cordial, they felt that the high turnover in senior management meant there was little consistency and continuity in top management, which compromised governance, management processes and adherence to policy frameworks. The unions raised concerns about the approach that the University has taken towards structural re-organisation. It was further highlighted during the interviews that, at times, the University has used its financial muscle to conclude cases that actually require further stakeholder engagement, speedily. The unions recommended that the University should always be seen to be advancing its policies and ensuring the wellness of staff.

While the processes and structures are clearly outlined as per the governance guidelines, the University points out in the SER (p. xxi) that some management committee meetings, such as those of the Admissions and Registration Committee, did not occur as scheduled for various reasons. During the interviews, the CHE panel confirmed that TUT was attending to the issues

around admissions, which also affect student and management relations at other universities. The enrolment issues identified were late applications for admission and registration; missing deadlines for online registrations; walk-ins at the beginning of each academic year; delays in funding, especially from NSFAS; as well as contestation around academic exclusion on the grounds of poor grades. The plans and strategies were however not presented or communicated (also see Standard 10).

Recommendation

2. The CHE panel recommends that the University improve governance of the plans related to admissions and registration to resolve contentious issues around late applications and walk-ins at the beginning of the academic year, as well as delays in funding from NSFAS and other sources.

Conclusion for Standard 4

The CHE panel found the TUT to be *functional* in the area covered by this standard.

Focus Area 2: The design and implementation of the institutional quality management system supports the core academic functions

The four standards in Focus Area 2 concentrate on how the design and implementation of an integrated QM system at the institution enhance the likelihood of student success and improve the quality of teaching, learning and research engagement, as well as how it accommodates the results of constructive, integrated community engagement within the context of the mission of the institution.

Standard 5: *A quality assurance system is in place, comprising at a minimum, of:*

- *governance arrangements;*
- *policies;*
- *processes, procedures and plans;*
- *instructional products;*
- *measurement of impact*
- *data management and utilisation*

as these give effect to the delivery of the HEI's core functions.

Governance arrangements

The Higher Education Act of 1997 requires HEIs to establish strong governance and management structures that enable institutions to deliver on their core business. The SER shows that TUT has largely fulfilled the requirements of the Act. The SER outlines that TUT has governance and management systems in place that include Council and its sub-committees, the Senate and its sub-committees, faculty board (FB) EXCOs, academic sub-committees, and departmental heads and their sub-committees (SER sections 3.1.4.1, 3.2.1.1 and VC interview). The University Council is responsible for governance, while management and administration of the institution are delegated to the VC.

As part of the QA process, the SER states that the VC makes informed decisions in the day-to-day running of the institution with advice from Council EXCO which, in turn, takes advice from the different Council Sub-Committees (Council interview). While Council looks at the overarching activities of the University, the Senate and its sub-committees concentrate on the core business of the University as submitted by the different Faculty Boards (FBs). All submissions from FBs are from the different departments and campuses. These governance and management structures all work together to promote quality assurance as outlined in the SER (section 2.3).

The governance structures work together as a system, which includes Council, Senate and FBs and Departments to run the core functions at TUT, and is quality assured by the DQP through internal reviews to ensure functionality. There are policies and ToR that guide how members in the governance structures carry out their responsibilities. Members attend induction programmes to ensure that they perform at optimum levels, and more recently, a self-assessment tool has been introduced for members of the Council. During the Covid-19 pandemic, TUT adapted its teaching and learning through rapid guidelines that were approved by different structures to facilitate the introduction of a hybrid model for teaching and learning. At the same time, the portfolio of the DVC: Digital Transformation was created, in addition to the DVC: TLT, in an overlapping governance structure. The move to digital and online education is essential, but the mandate of each portfolio needs to be demarcated to ensure appropriate resource allocation, limiting overlapping governance and reducing bureaucratic lag.

Policies informing processes, procedures, and plans

The SER reported that TUT has policies and procedures that support and guide human, infrastructural, and financial resources to deliver its core academic functions across all campuses. This was confirmed during the CHE panel's interview with the VC, Council and the DQP. It was noted that TUT has three categories of policy, namely academic, council, and

operational, which are aligned with the TUT mission, values, and strategic objectives. These policies are approved by Senate, and are endorsed by the EMC and an institutional Policy Development Committee, which is a sub-committee of Council (Annexure 22: Policy on Policies) with specific ToR to make sure that policy development is quality assured. For example, the SER describes the following for developing a policy:

- an initiator (policy owner and policy practitioner);
- development and reviewer of the draft policy via the policy website of the University and webmail (respective stakeholders and academic committees);
- approval of the policy;
- implementation (EMC as per the compliance policy) (Annexure 24);
- the reason why M&E are supervised by the DQP in the interests of academic and non-academic improvement.

The DQP mandate (Annexure 25) and some of the DQP annual reports emphasise its role in the reviews of different activities.

TUT has numerous policies that prescribe specific processes and procedures for their development, and sometimes guidelines to add more value. The Policy on Policies (Annexure 22) is the key policy that guides the policy development processes through various prior approval committee stages, before ratification by Senate and the EMC. During the interviews, the CHE panel heard that many committee members ignore policy reviews when presented at the FB meetings. The policy owner is often the main reviewer, so there is a need to encourage more participation in policy reviews at TUT.

Quality assurance for instructional products

Instructional products reported in the SER include curricular documentation, module templates, study guides, courses in the LMS, assessment procedures (Annexure 46) and examples of moderation (SER, section 3.2.1.4, pp. 72–73). During the site visit at the eMalahleni Campus, other instructional products observed were the use of smart screens and charts for teaching and learning. The QA systems of these products start at the level of the departments (academic managers and HoDs) and move through to the faculties (Executive Deans and Assistant Deans: Teaching and Learning). At TUT, the three directorates in the HEDS environment are Curriculum Development and Support (CDS) (support curriculum), Cooperative Education (working with industries), and Student Development and Support (SDS) (make learning student-centred).

The SER (Annexure 49, p. 72) shows the four phases in the development of a curriculum:

- conceptualisation (conduct situation analysis, consultation, meetings, conceptualising the

programme);

- being sent for DHET approval;
- application, and accreditation and registration with the CHE and the South African Qualifications Authority (SAQA); and
- implementation.

A functional system is therefore in place to quality assure curriculum development.

Lecturers are also evaluated because they are participants in the QMS; hence, they play a key role in executing, supporting, improving, enhancing, and monitoring quality. Feedback from student evaluations of lecturers in the context of teaching and learning are monitored by the CDS, and are used by managers to identify gaps and plan capacitation programmes to improve various product developments. The Success Rate Sub-Committee (Annexure 50.1) also identifies concerns about interventions to improve the quality of delivery.

TUT had been using face-to-face tuition but adopted online teaching and learning fully during Covid-19, before resorting to blended learning after the pandemic. Programme reviews, study guides, and LMSs are all being reviewed with the help of the DQP. Gaps are therefore being identified and programmes introduced to capacitate teaching staff.

Measurement of impact

The SER confirmed that impact measurement is quality assured through reviews, which could be institutional or external, from bodies such as the CHE. TUT considers the CHE framework and criteria, and other standards such as the South African Bureau of Standards (SABS) guidelines on the design and implementation of QMS for educational organisations as key for the review of institutional policies or strategies (SER, section 3.2.1.6). Evidence of reviews included SERs, students' evaluation of teaching (institutional), and external reviews (CHE institutional audits of 2008) (SER, Annexure 102) and the QEP (Annexure 103). The SER stated that the DQP is currently compiling a QMS core elements guide to review and evaluate the design and development of QMS across the University. This implies that all internal reviews will be centrally managed by the DQP, which the CHE panel saw as an advantage in providing consistent quality assurance. It was also reported that reviews allowed design systems that serve the needs of the immediate environment of the University, the nation, and – potentially –the world.

The Quality Assurance System for Data Management and Utilisation

The SER confirms that the ITS and Management Information systems (MIS) are the two most

important servers for data input, analysis, and management. These servers were said to be accessible across all campuses. The presence of the PowerHEDA system is key, as it gives managers access to data stored and analysed through a dashboard or pre-set reports, which could be filtered based on the performance parameter required. The CHE panel heard during an interview with staff from the library that access to the system is password protected, and access to certain information is not open to all users, being dependent on the management level (SER section 3.2.1.7, ICT). Although the SMS Directorate is not the primary custodian of PowerHEDA for reporting, it can import data, filter it, and report critical matters to senior management for strategic planning and decision-making. During the interviews, the CHE panel heard that data are captured at departmental and faculty level into the ITS as well as the LMS. Data access by the HoDs, Assistant Deans and Executive Deans varied.

Teaching and Learning at Undergraduate and Postgraduate Levels

TUT is using the Approach-Deploy-Review-Improve (ADRI) cycle, adopted from the Plan-Deploy-Check-Act (PDCA) cycle in 2017, to monitor all its core business processes in academic activities and support environments (SER, Figure 8). It is a powerful tool that is used to plan, evaluate, improve, and adopt institutional activities to ensure effectiveness and efficiency. It is overseen by the policy on quality assurance (Annexure 18) and supported by the QMS (SER, Annexure 19), the QMS report 2017 (Annexure 20.2) and the QMS plan (Annexure 42). The SER reports that QA processes begin at departmental level and escalate to the various faculty sub-committees led by the Executive Dean, with support from DQP. All proposals then go through relevant Senate sub-committees and Senate for approval, which is reported to Council. All approved decisions are then sent to the relevant internal stakeholders for execution (informed by policies and guiding documents), followed by evaluation and reflection, as seen in many annual reports and review documents (also see Standards 3 and 9).

TUT student enrolment was about 62 000 in 2022, and is quality assured by the Admissions and Registration Committee systems in place (SER, Table 24), based on national labour and skills requirements and government directives related to national priorities (adopted from NDP 2030), which also influence the development of the TUT Student Enrolment and Efficiency plan 2020–2025. Each faculty operates on a campus-based faculty model (SER, section 2.4), which influences the courses offered, the students enrolled, and infrastructure regulation. Despite this model, the CHE panel is concerned that the staff-student ratio is high in many programmes and courses and that this needs urgent attention to improve the quality of teaching and research supervision.

The programme design and development are said to be effective because programmes undergo different processes for approval (monitored by an assigned curriculum development practitioner for each faculty) and review (SER, Section 3.2.1.3), as well as a set of policy-determined procedures (Annexure 44) supervised by the DQP Office.

Delivery of learning, teaching, and assessment especially during Covid-19 was facilitated by support and capacity development rendered to staff and students to assist with the transition to Remote, Multi-modal Teaching and Learning. The CHE panel learnt during the interviews that the digital transformation strategy encourages innovative online classrooms and pedagogical methodologies to promote student learning, especially during the Covid-19 pandemic, and staff declared their intention to take this approach forward even after the pandemic. The Policy on Student Evaluation of Teaching Practice (SER, Annexure 48) guides evaluation of feedback using a standardised questionnaire (Annexure 47) to evaluate teaching and learning twice a year. Analysis generates data that identify gaps, used by academic managers to plan interventions, such as peer-review teacher evaluation, or plan purposeful professional development by referring the lecturer to support structures and opportunities, such as teaching for learning, academic orientation programme, LIS training, and the Assessment and Moderation Short Learning Programme, and Curriculum Development. TUT also makes use of the established university structures, such as the Success Rate Sub-Committee (SER, Annexure 50.1) to identify concerns and to design interventions within faculties and departments, which are often communicated and managed through the TLC at faculty level. Faculties with professional programmes submit curriculum documents to professional bodies, incorporate feedback in the curriculum design, and report on this quality process.

The TUT management is committed to ensuring that the academics at TUT receive the necessary level of training and development. The CDS directorate provides support and training on many aspects of teaching, learning, and assessment to staff. All TUT academic staff members attend short learning programmes, a Licence to Teach programme, and the Haaga-Helia course (University Teachers' Training Course). These programmes are all offered through CDS (SER, section 3.2.2.2).

As in most universities, the number of academics receiving such training each year is however a small proportion of the overall teaching force. Annexure 13 (Goal 3) shows the need to increase the number of instructors receiving such training between 2020 and 2025 to about 25 000 over five years. Demand from teaching staff for help and support in digital learning will grow over the coming years. The CDS already has instructional designers, but the Senior Director of HEDS indicated that their services are already over-subscribed.

Digital learning is likely to increase rapidly over the next five years, affecting large numbers of lecturers. Although the training of staff and students in the use of the new LMS, BrightSpace D2L, has reportedly been very effective, the CHE panel nevertheless encouraged TUT to intensify this training as part of continuous professional development among academic staff and for student support. Lecturers also need to be trained in best practices in teaching digitally, following quality guidelines for digital learning. Although the minimum amount of training needed is not long, the problem is the scale. The goal should be to make training available to all lecturers so that it may be used to integrate digital learning into teaching. This entails updating teaching and learning policies to promote and manage such transitions.

Research and Community Engagement

The CHE panel was encouraged to see that the 2008 institutional audit had played a major role in shaping and making TUT what it is today, and that most of the quality improvements were recommendations from that audit. Before the CHE institutional audit in 2022, TUT had developed four strategic plans (SER, p. 6), each of which was an improvement on the previous one. The SER also stated that each strategic plan was developed following a thorough investigation of institutional, national, continental, and global political, economic, social, technological, legal, and environmental factors. Since its creation, each has built on the previous one to improve and establish a professional culture with values so that TUT stands out among other universities (also see Standard 2).

In terms of research, the TUT mission and pillars promote impactful research as a core activity in the University that has societal benefits, and is managed by DVC: RIE. The CHE panel acknowledges that the RIE strategy contributes to the knowledge-based economy, especially through innovative technologies, which are likely to make the TUT footprint visible in Africa. The panel also approves the 15 Research Niche Areas and the regulatory management of research chairs. It was also noted that TUT has a growing number of National Research Foundation- (NRF-) rated researchers whose activities are monitored via the Clarivate Converis RIMS, which reports research outputs to the DHET (SER, section 2.8). With these strategies and policies in place, TUT is poised to improve its research productivity and increase the number of staff with doctoral qualifications through its staff capacity development programme.

The Directorate of Student Affairs and Extra-curricular Development (SAED) and the Directorate of SDS are key in students' holistic development and engagement, as well as in ensuring an understanding of the importance of ethical values. SAED is composed of five directorates: Health and Wellness; Sport and Recreation; Extra-curricular Development; Student Governance and

Leadership Development; and Accommodation, Residence Life and Catering (SER, section 2.6.3). In the CHE interviews, various constituencies at TUT confirmed that these directorates co-ordinate their work to support students fully.

As far as Community Engagement (CE) is concerned, the CHE panel advises that a dedicated central division should be set up to manage and co-ordinate TUT's community engagement projects and research, especially since so much CE was reported in the SER and confirmed during the interviews. The panel also noted that there were systems in place that regulate TUT interaction with community partners, some specifically aimed at achieving the SDGs. TUT is able to serve its community diligently through various projects, e.g.

- providing healthcare for taxi drivers (Adelaide Tambo School of Nursing Sciences Report);
- providing primary healthcare to communities in Soshanguve;
- fighting cybercrime with the South African Police Service (SAPS) (Computer Sciences); and
- the shoes project.

The SER acknowledges some weakness in this area, but the CHE panel believes that, in the absence of a centralised unit at TUT, the many activities have not been adequately captured and profiled. During the CHE site visit to eMalahleni (29 July 2022), the panel learned of TUT collaboration with both local and international communities, such as ESKOM and Namibia, respectively.

Recommendations

3. The CHE panel recommends that TUT departments provide evidence of consultation with professional bodies in the quality evaluation of their vocational degree programmes, and that these engagements and programme approvals be monitored and reported to the respective faculties and Senate committees.
4. The panel also recommends that TUT improve its staff-to-student ratio by appointing more academics in scarce skills and popular specialisations, to improve the quality of teaching and learning and research supervision.

Conclusion for Standard 5

The CHE panel found the TUT to be *functional* in the area covered by this standard.

Standard 6: *Human, infrastructural, knowledge management and financial resources support the delivery of the institution's core academic functions across all sites of provision, in alignment with the concomitant quality management system, in accordance with the institution's mission.*

Human resources

Qualifications of TUT staff are prescribed by the University in line with its various ranks, but also in terms of standards set by the DHET. In 2018, about 650 (43%) of the academic staff had master's degrees, and 469 (31%) had doctoral qualifications (SER, p. 76). This meant that the University did not meet the DHET target, despite efforts to canvass senior academics. However, since 2017, the number of staff who have improved their advanced qualifications has risen. During the interviews, the CHE panel learned that this issue has remained a challenge, especially on the smaller, distant campuses at eMalahleni and Polokwane, where it has been difficult to attract highly qualified academics and researchers, as well as support personnel. Some interviewees stated that this was a major reason for the large proportion of contract staff, especially in specialised fields, and also explained why there were vacancies at the time, which were difficult to fill. The University is therefore under-staffed in some scientific areas and therefore has put in place various capacity development programmes to address this lack.

The CDS directorate is responsible for staff support with a CDP assigned to them from the departmental level (to support the HoD) through Faculty Executive Deans and then to HR and research and innovation offices. The SER reported that all staff members (both new and old) attend professional workshops (teaching, learning and assessment) organised by CDS (SER, section 3.2.2.2, Annexure 49). In addition, the academic unit responsible for staff development (following the Policy for Staff Development, Annexure 52) offers a short course called a Licence to Teach Programme to all staff members (Annexures 53.2, 53.3, 53.4 and 54.1) to prepare them for optimum performance. The Individual Development Plan K2 System, posted on myPortal, is a very good system put in place by the Human Resources Department (HRD) as training for academic and non-academic core functions respectively. The SER reported the Haaga-Helia staff training initiative (Annexure 55.1) is one of the sampled programmes chosen, based on a needs analysis and collaboration between the faculty and HRD for staff development.

Financial resources

In terms of finances, TUT is a non-profit organisation with three major sources of income: government subsidy (block grants, University Capacity Development Programme [UCDP], research grants), tuition fees (as well as NSFAS bursaries, NRF grants and Gibela funding) and

third-stream income (e.g. sponsors, investments, conferences, venue rental, student residences), but this seems to be a relatively small funding stream, according to interviewees during the CHE site visit. TUT uses a 'resourced-based model' to assign annual budgets across its faculties, managed by the Finance committee of the EMC (SER, section 3.2.2.10). The budget of each department is managed by an assigned EMC member who provides a quarterly report for quality checks to enable quality assurance. Budgets not used are said to be transferred to buffer funds, which is a good practice because it has the potential to help other departments that have shortfalls or unbudgeted projects (SER, Annexures 67, 68 and 70, corporate budget, DQP buffer funds, and policy on budgeting and control). In terms of procurement, using the buffer funds, a whole system checks and monitors the process, including signatories.

Information and Communication Technology (ICT)

ICT systems at TUT can be seen through numerous systems, such as LMSs, ITS, MERS and internet connectivity. It is said to be one of the most important infrastructures at TUT, informed by digital transformation technology (SER, Annexure 57). During the interviews, it was confirmed that Wi-Fi was available for hot spotting at key areas where students relax and at on-campus accommodation. This was however not true for outsourced accommodation.

In the TUT Transformation Framework (2017) and the Teaching and Learning Strategy 2020–2025, it is evident that the University has embraced technologies that are relevant to its current environment. It was also interesting to find out that TUT is continuously discussing or reflecting on its LMS, and engaging both students and staff members to share their challenges and successes, which are pivotal in developing innovative online classrooms and pedagogical methodologies. Because of the massive need for digital transformation, especially during Covid-19, TUT deployed broad strategies for all instructional designers in all faculties to facilitate both staff and student training (SER, section 3.2.2.5).

According to the SER, all academic staff are issued with computers and given the required electronic support, in terms of various policies (SER, 7.1 to 7.5). During the interviews, however, the CHE panel noted that not all staff members owned computers, especially the support staff. In terms of student computers and tablets, interviewees indicated that not everyone was supplied with a laptop or PC. The management at TUT explained that, since TUT is a contact university and because computer laboratories at different campuses were designed to accommodate its student population, the supply of off-campus electronic hardware was not deemed a necessity.

Physical infrastructure

In terms of the available infrastructure to support both staff and student academic activities, the SER (section 2.4) mentions that faculties apply a campus-based faculty model where the student enrolment is directly proportional to the infrastructure. Lecture theatres, studios, computer laboratories, film gear and workshops (section 2.4.6) and specialised laboratories, which were designed to accommodate specific programmes and a specific number of students, were visited at eMalahleni. The site visit confirmed that the eMalahleni Campus had well-equipped, specialised laboratories for teaching, e.g. electrical engineering, but only a few had smart boards, which may reduce student participation.

For accommodation, TUT has residences on some campuses and other in the community (e.g. Arcadia), while yet other have accredited residences that have been outsourced. Parity across campuses in terms of resources and facilities remains a challenge, but TUT is focused on this gap.

The SRC was also interviewed and confirmed that accommodation, both on and off campus, was provided, but that it was inadequate to cope with the growing student numbers; hence, the need for additional accredited, private student accommodation. The interviewees also confirmed the presence of computer laboratories and lecture theatres designed to accommodate the number of students on each campus. They confirmed however also that the SRC office was centralised, which meant that grievances were not easily communicated through the TUT ICT systems.

Work-integrated Learning (WIL) is one of the key functions for final-year students to prepare them for the co-operative environment as seen in the SER. WIL is offered internally by TUT, and externally by key industry participants. In the SER, WIL is managed by the DCE, which liaises with industry and deals with the placement of students. Internally, two-hour employability workshops are offered to students which prepare students for the workplace. The SER also reported policies and guides for WIL registration and reporting procedures (Annexure 73.1, 73.2 and 73.3). WIL continued online during Covid-19 to keep students abreast with the latest learning experiences relative to their environment and changing times.

Libraries

All nine campuses and the service points hosting the seven different faculties (and 15 departments) were reported to have libraries, and the size of each library depended on the number of the student population serviced. The branch libraries are well resourced with print and electronic resources. It was established during the interviews that the library offers information

literacy training to students across all campuses. The information literacy training programmes impart skills so that students can use the range of electronic databases to retrieve information required for assignments and other research projects. It was also established during the interviews that interlibrary loans were a common way to share information resources across the various campuses. During the site visits to several campuses, it was established that library services were adequate, and through the provision of electronic databases and online chat services, patrons and users were able to access the required sources and librarians' advice.

Interviews with the library staff indicated that they have a well-developed system of communicating with students, establishing their information needs, sharing information through social media platforms, and providing mechanisms to receive feedback from them.

Engagement with the library staff also confirmed that many strategies are being planned for the future, such as –

- enhancing the role of technologies in the delivery of library services;
- integrating the online reference question system with the existing Library Management System;
- becoming part of the broader institutional DTS to improve automation and business processes;
- system integration;
- having Wi-Fi in all campus libraries; and
- moving systems to the cloud.

The library was also said to be planning the development of Research Data Management services in line with national and international movements on Open Science that encourage the sharing of data and research outputs. It was further indicated that the library is in the process of aligning its organisational structure with the institutional goals.

Human, infrastructural, and knowledge management as well as financial resources support the delivery of the core academic functions of the institution across all sites of provision along with the concomitant QMS, following the mission of the institution.

Recommendations

5. The CHE panel recommends that TUT source the necessary funding and devise a plan to assist contract academics and support staff (who meet the prescribed requirements) in scarce skills and popular specialisations to become permanent employees through a process of interviews, in line with HR policies and practices at TUT.

6. The CHE panel also recommends that TUT improve incentives for staff-development programmes to increase the number of academics with advanced qualifications, especially PhDs, in order to meet the DHET targets.

Conclusion for Standard 6

The CHE panel found the TUT *functional* in the area covered by this standard.

Standard 7: *Credible and reliable data (for example, on throughput and completion rates) are systematically captured, employed and analysed as an integral part of the institutional quality management system so as to inform consistent and sustainable decision-making.*

The TUT SER provides an evaluation of its data management system, its capacity and its level of integration on pp. 87–91 (under section 3.2.3, divided into two sections: 3.2.3.1 ‘Data capturing and storage’ and 3.2.3.2 ‘Data utilisation’). The latter section is more comprehensive than the first. Annexures are provided which relate to policies on data back-up and server management; student record management; on surveys and surveys process; and the Clarivate Converis Research Information Management System (RIMS). An annexure on Pillar 4 of the ISP 2020–2025 focuses on digital advancement, and another provides a presentation of TUT research at the South African Technology Network (SATN).

The University relies mainly on its Integrated Tertiary Software (ITS) and Management Information System (MIS) which represent the central electronic information source, storage, and management repositories. TUT uses a third-party service, the PowerHEDA platform, which provides statutory reporting services via its online dashboards and pre-set reports that allow filters to control the output. Access rights are prescribed. The CHE panel noted the overlap in information about the QA system at TUT for data management and utilisation provided under Standard 5 of the SER (p. 74), which anticipates the narrative in Standard 7.

The SMS Directorate is responsible for the overall MIS at TUT and the provision of data analytics for decision-making to executive and senior management, across all portfolios. The SER declares the accuracy of TUT data, and points out that the protection of personal information complies with the law. This was confirmed during the interviews with a range of TUT constituencies.

The CHE panel heard that Executive Management uses TUT data to inform the ISP 2020–2025, with detailed goals and objectives for the various university portfolios. The MERS electronic data platform, as the means to monitor the targets and performance of the various faculties, is being

introduced. The significance of the appointment of the new DVC: Digital Transformation and the location of library services in this portfolio, on account of its increasingly electronic delivery, was highlighted during interviews with various layers of management. These developments are inextricably linked to the data-intensive nature of higher education and the capacity of TUT to offer reliable data to assist strategic decision-making.

According to the SER, the ITS is used extensively by the Registrar's portfolio. Various sources and types of data are used by the Registrar's portfolio, related mainly to admissions, registrations and assessments, and include the iEnabler and Japer software. To 'prevent overloading', the ITS (p. 87), the MIS and the LMS are used during operational hours to provide data analytics.

The SER admits that there is a 24-hour discrepancy between MIS data for reporting and the real-time operational data housed in the ITS (section 3.2.3.1, p. 87), on account of the operating system. Teaching and Learning have used the Blackboard and BrightSpace platforms during the period under review. Verification data are imported from the ITS to support the academic programmes and their record management.

The SMS also ensures that statutory data (HEMIS) are captured and submitted for funding purposes. The SDS Directorate uses a tracking system to improve student success through learning analytics. Surveys and qualitative data are intrinsic to data management at TUT.

TUT Library Services use various electronic suites to manage collections, online research resources, and administration. The SER records that the Sierra software used by the Library Services does not flag outstanding books on the system before graduation, which is a weakness (SER p. 89). Currently, TUT libraries have acquired Figshare, a platform to manage research data, although the uptake from the research community has been slow, and its promotion by Library Services has also been minimal.

The Research and Innovation Directorate employs the Clarivate Converis RIMS to capture its research outputs for submission to the DHET. The SER describes the introduction of this platform and the various challenges, including unfamiliarity, which had to be overcome through extensive training. It also points out that the Clarivate Converis system 'does not have direct access to the [TUT] data to draw its own analyses', but depends on interpretations provided by the external software (p. 90). The Internal Review Committee is therefore an important safeguard of quality (Annexure 79).

The SER recognises that its systems are mainly discrete, and require better integration to improve quality management (section 3.2.3.2, p. 91).

The interviews with heads of school and departments were instructive in gathering evidence of cloud-based solutions that facilitate more interactive learning. Students in ICT modules and courses can access various practical 'experiences' to enhance their online learning. Assistant Deans remarked that the various data systems operate in trenches, each with its own constraints and protocols. Tracking student performance, assessment and success therefore requires mastery of the ITS and the LMS. The SDS performs an essential role in analytical reporting. Comments recorded in MS Teams chat during the virtual interviews informed the CHE panel that LMS D2L (BrightSpace) has a tracking tool called 'Intelligent Agent', which monitors student participation.

The CHE panel heard that Executive Management and Directorates, as well as academics, see the digital divide, limited access to mobile technology, developing online learning pedagogies, and planning hybrid models of teaching as major challenges. There is a resolve to address these inhibitors to student success. The Teaching and Learning with Technology (TLwT) Unit was optimistic that the new LMS is cloud-based and offers secure access through Access Point Name (APN) online security and data provision through the major mobile networks to ensure connectivity on and off the TUT campuses.

According to interviewees, the PMDS, which is the HR platform, is still in the early stages of implementation. The recognised staff unions at TUT also commented on the dramatic changes in technology during the Covid-19 pandemic.

The concerns regarding cybersecurity are not explicitly addressed in the SER, neither is the extent of cloud-based solutions, which facilitate interactive online learning and potential analytics that are inimical to hybrid and distance-education models, disclosed. The CHE panel did, however, learn that TUT is adopting cloud infrastructure and that its Enterprise Architecture Plan is being implemented over five years, and that considerable resources have been allocated to ensure implementation.

TUT predominantly offers contact programmes, with only seven being offered in the distance mode during the audit review period, 2016–2020. With the advent of Covid-19, the University had to fast-track and scale up its implementation of blended and multi-modal delivery. Following Covid-19, most teaching reverted to on-campus presentation, but evidence from the interviews suggested there may be as many as 20 fully online programmes currently under development as well as several multi-modal courses.

It is important for the University to develop strategies to track the mode in which each course or programme is offered so that students can be informed about the requirements for attendance,

the need for internet access, and equipment. Multi-modal or hybrid courses will be particularly difficult to track, as these decisions will vary from instructor to instructor. Students will need to know how often and when they need to come to campus.

Recommendations

7. The CHE panel recommends the speedy integration of its key quality information systems (ITS, MIS, MERS and PowerHEDA) to ensure parity in reporting and the easy provision of data for improved decision-making, as well as to increase cybersecurity and adequate back-up capacity.
8. The panel also recommends that TUT extends bespoke staff training in the use of Clarivate Converis (in collaboration with fellow member UoTs in the consortium) in the research and innovation environment, to ensure that research artefacts are captured and reported accurately to the DHET for funding purposes.
9. The CHE panel recommends that TUT ensure that data analytical expertise be improved in the DRI and SMS Directorate to attract well-qualified statisticians to enhance its capacity to provide predictive analytics.

Conclusion for Standard 7

The CHE panel found that the TUT *needs substantial improvement* in the area covered by this standard.

Standard 8: *Systems and processes monitor the institution's capacity for quality management, based on the evidence gathered.*

The systems and processes to monitor the capacity of the University for quality management are governed and supported by the Policy on Quality Assurance (SER, p. 91). The aim is to ensure effective academic, administrative and support services through appropriate, regulated structures, the allocation of adequate resources, approved procedures and control measures, as well as regular monitoring and auditing in the interests of continuous improvement.

Monitoring is conducted through the various strategic governance, academic, administrative and financial layers of TUT, and facilitated by the portfolio-driven committees designed to advise, innovate and execute approved decisions related to teaching and learning, research and innovation, and community engagement. In addition to the committee scaffolding provided by Senate and Council, quality assurance resides in the DQP. The CHE panel noted the overlap

with narratives under CHE Standards 4, 6 and 9.

The Enterprise Architecture, which is located within the ICTServ Directorate, enables teaching and learning by –

- aligning technology initiatives with educational objectives;
- integrating systems and applications;
- optimising technology infrastructure;
- enabling data management and analytics;
- fostering the adoption of emerging technologies;
- enhancing user experience and accessibility; and
- ensuring security and privacy.

By implementing Enterprise Architecture principles, TUT can create a cohesive and effective technological ecosystem that supports the teaching and learning mission. Its function is to map and automate the business processes of the University to achieve the integration of systems for efficiency and efficacy.

The SER lists nine quality monitoring processes that are designed to track stakeholder satisfaction, including –

- student satisfaction surveys;
- lecturer evaluation questionnaires;
- programme reviews;
- module evaluations;
- staff training initiatives; and
- performance management development (SER, p. 92).

The CHE panel noted the intention to implement a ‘regular monitoring and evaluation system to measure stakeholder satisfaction, particularly in support environments’. Real-time performance dashboards are planned as part of the MERS strategic management platform to monitor and improve core academic functions for student success. The SER declares that the ambition of TUT is to ‘roll out QMS [Quality Management System] training’ and ‘build a QMS Community of Practice’ (SER, p. 92).

The Executive Leadership of Teaching and Learning and Research and Innovation provided evidence of the data systems, which assist Executive Management to plan strategically. They outlined the various electronic platforms that form the bedrock of the TUT management systems. They explained that the range of systems supports the goals of the technology pillar (Pillar 4) of

the ISP, and comprises a wide range of software applications, including MERS, Clarivate Converis RIMS and BrightSpace, as well as national platforms, such as HEMIS. They argued that these discrete systems each has distinctive purposes, some to record research, others for performance management, and yet others for tracking student activity and success.

They also admitted that 'integration is difficult' and that the systems 'lack uniformity'. These corroborate the SER statement that the various systems need to be electronically more fluent to offer coherent information and sophisticated analytics to end-users across the University. The DVCs were, however, unanimous that, after Covid-19, gradual improvement in the integration of data systems was underway, and TUT was advanced in its aim to innovate 'systems and processes to monitor capacity for quality management'.

The Registrar's portfolio mentioned the difficulty with software programs and electronic systems that do not communicate with one another easily, and which require various data interventions and ICT support. Connectivity remains a challenge across TUT and its campuses, and the CHE panel was informed that TUT spends R7 million per month providing data to staff and students. The ITS platform is dependent on the accurate capture of information and more staff training, as well as increased access.

The CFO told the CHE panel that more funding had been allocated to digital transformation at TUT to:

- provide more data and better connectivity;
- accelerate the pedagogical shift from digitisation to fully interactive online learning and 'personalised experiences for students'; and
- introduce short courses and micro-credentialing for lifelong learning.

He also referred to changes to the ICT firewall protocols to enable seamless electronic access to TUT programmes and resources. The Combined Assurance Forum manages the various risks related to Big Data at TUT, as well as the wide range of other risks in a multi-campus university.

The TUT Student Ombudsman informed the CHE panel that an electronic complaints management platform was in its development phase, but was not yet operational at the time of the visit. He reported many complaints about digital learning during 2020–2021.

The TLwT Unit informed the CHE panel that the LMS and ITS platforms were being aligned to provide more integrated data, but that the dashboards still needed to be activated. Interviewees reported that the BrightSpace learning platform had the potential to provide much more data about student learning via its "Intelligent Agent". They also stated that 'digital learning is the

future' at TUT and that the 'LMS will be in the classroom' as contact tuition integrates multi-modal, hybrid and online models in all programmes of the University.

The CHE panel noted that the Enterprise Architecture Board has a five-year plan to automate all business processes and has developed a series of "roadmaps" to achieve implementation. The adoption of cloud infrastructure is a cornerstone of the ICT agenda, and 'smart campus' ambitions are in the planning phase. Cybersecurity, through a TUT virtual private network, using encryption, has also ensured the integrity of assessment and examinations since 2020.

Recommendation

10. The CHE panel recommends that TUT employ the MERS more widely across TUT to link plans, objectives, performance indicators and risk management to realise the strategic goals of the University and substantially improve system integration.

Conclusion to Standard 8

The CHE panel found that the TUT *needs substantial improvement* in the area covered by this standard.

Focus Area 3: The coherence and integration of the institutional quality management system support the core academic functions

The four standards in Focus Area 3 concentrate on the coherence and integration of the various components comprising the institutional quality management system and on how these work in concert to support the likelihood of student success and improve the quality of learning, teaching and research engagement, as well as accommodating the results of constructive integrated community engagement in accordance with the institution's mission.

Standard 9: *An evidence-based coherent, reasonable, functional and meaningfully structured relationship exists between all components of the institutional quality management system.*

TUT has a QMS designed to support the core academic and administrative functions of the University, based on relevant management structures, which implement and monitor policies. The iterative strategic planning process in the Approach-Deploy-Review-Improve (ADRI) cycle enables continuous quality improvement and integrated functionality among the components of

the QMS (SER, pp. 58–59). Quality reviews are undertaken by the DQP, which oversees programme accreditation, quality audits, surveys, and institutional research, and promotes an institutional culture of quality through improvement plans (SER, p. 60) (also see Standard 10).

The QMS at TUT draws data from various systems, which track teaching, research and administrative environments to build a repository of evidence that informs decision-making at senior management level. The SER provides a comprehensive overview of the electronic platforms with which the QMS connects, including the ITS for resource planning, the cloud-based D2L (BrightSpace) LMS, the Clarivate Converis RIMS and the MERS Software (SER, p. 93).

The MERS, which links plans, performance, and risk to the PMDS, was introduced in 2020. The SER states that MERS enhances the functionality among all the university structures to provide high-end design, modelling, implementation and monitoring of the ISPs. Equally important is the MERS capacity to devise organisational and strategic mapping, download risk reports, and ultimately create bespoke dashboards for evidence-based portfolio management (SER, p. 94; Annexure 80). During the interviews, however, the CHE panel was informed that MERS is currently only used by senior managers. Lecturers and support staff were looking forward to the software being available for evidence-based planning at departmental level to improve the effectiveness of quality management. The absence of an approved performance management system raises the question of how the formal disciplinary code (SER, Annexure 91) and corrective action (with emphasis on sections 8 and 9) are fairly used to address poor performance by staff. These issues were raised with various management constituencies during the CHE interviews. In the responses, it became clear that TUT is currently addressing performance management system at all levels of the University.

Academic quality management at TUT vests in the Senate and faculties and is managed by the Deputy Vice-Chancellors (DVCs) of Teaching, Learning and Technology, of Research, Innovation and Engagement (RIE), and of Digital Transformation. The academic processes of programme accreditation and quality assurance are dealt with under Standards 3, 5, 6 and 13. They show the functionality of structures in relation to one another through policy alignment, committee approvals and reporting to faculty, Senate and management, for efficient governance. In one of the session interviews, the CHE panel was informed that the accreditation process is cumbersome and needs streamlining and standardising across faculties.

The coherence of the QMS for teaching and learning was, however, fast-tracked by the introduction of the D2L (BrightSpace) LMS to replace the Blackboard platform during the Covid-19 pandemic (SER, p. 95). Many interviewees across TUT testified to the improvement, which

this technology has produced, both for learning and teaching, as well as for tracking student progress and performance. The CHE panel was given a demonstration of the D2L software and online learning pedagogy during the campus tour. The HoDs, in conversation with the panel, emphasised the capacity of the “Intelligent Agent” facility of D2L to generate data about student participation, performance and success; thus, building the repository of evidence in the QMS.

TUT’s Directorate of Research and Innovation ensures quality through an embedded policy framework across faculties and campuses and regular reporting to the Senate Committee for Research and Innovation. The Clarivate Converis RIMS captures TUT’s research artifacts for reporting to the Department of Higher Education and Training. This, however, presents the QMS with the challenge of articulating with external systems, which have restricted access and sector protocols. Data-capturing in the research environment is extremely important for funding in higher education, so accuracy and comprehensiveness are essential. The tracking of postgraduate research by master’s and doctoral students at TUT is still conducted through a reporting system to the Senate Committee for Postgraduate Studies, the performance of which has subsidy implications from the national government (SER, p.97) (see standards 7 & 8).

Performance management at TUT was in an embryonic phase when the CHE audit took place at the end of July 2022. At that stage, the Performance Management and Development System (PMDS) still needed the approval of the TUT Bargaining Forum (SER, p. 97; Annexures 88.2 & 89). Implementation via MERS was planned and the SER outlines the project and its aims (SER, p. 98). The CHE panel anticipates that the PMDS will be introduced in 2023 and that the MERS will facilitate monitoring so that performance management becomes integrated into TUT’s ICT universe and that structural synergies will provide more internal institutional coherence.

The SER, PoE and interviews during the site visit indicated that resources have been made available to advance the ICT capacity at TUT and to develop a range of electronic platforms for facilitating quality management across functions and structures at TUT. In the interviews, members of the EMC explained the purpose and value of each of these platforms (listed in the SER, p. 93). It is clear, therefore, that TUT has invested in high-quality software and cloud solutions to provide managers with up-to-date data on all the financial, administrative, policy, human resources, teaching and research activities of the University. Senior managers pointed out the different functions that the various electronic platforms serve, and explained the challenges faced by ICT in articulating them to develop a more coherent, integrated and seamless QMS. The CHE panel, however, heard evidence from other divisions in the University that operations were still at an early stage and therefore not accessible to most constituencies. The coherence and integration of components of the QMS will therefore depend on how

effectively the various platforms become accessible to staff and how efficient they are in gathering data before they can articulate with each other to provide cross-cutting evidence and analytics for better planning.

Recommendation

11. The CHE panel recommends that TUT ensure that the PMDS be implemented to facilitate the achievement of KPAs assigned to set functions, including those of contract and part-time personnel, against KPIs.

Conclusion for Standard 9

The panel found the TUT is *functional* in the area covered by this standard.

Standard 10: *Evidence-based regular and dedicated governance and management oversight of the quality assurance system exists.*

The SER (pp. 92–93) states that TUT has several processes and systems to collect evidence from the respective core functions. The systems enable Executive Management to gain oversight of the core functions at the University. The systems listed in the SER are MERS, D2L (BrightSpace, the LMS), the PMDS, the ITS, the HEDA, ICT, research output tracking, and training and development initiatives (SER, p. 93).

To illustrate the governance and management at TUT, provide evidence of document content analysis, and show the extent of the systems that inform decision-making, the SER referenced the PMDS, risk management, the QM system and executive management accountability (SER, pp. 99–100), but did not state the reasons for selecting these systems.

The interview process confirmed that MERS is a versatile system, specifically of value as a strategic planning tool to link performance and operational risks. It was reported that the system is customisable, and can accommodate more functions when needed. The system can integrate the ISP with the objectives of divisions and directorates, the performance management system, and the ability to generate targeted reports. In the interviews, TUT staff confirmed that MERS assists with the contracting and recording of the evaluation process. The SER (Annexure 94.1) shows an example of a performance contract aligned with the institutional strategic pillars. MERS provides a transparent, effective, and reliable platform to plan and monitor performance, and thus assists in the governance and management of quality assurance at this level. The CHE panel noted the overlap with the discussion of TUT performance management and its monitoring in the narrative under Standard 9 above, and therefore links Recommendation 12 to both standards,

especially since there are synergies under Focus Area 3.

The Institutional Risk Management Policy (Annexure 96) states that it ensures that 'strategies and daily activities are relevant, valid, effective and efficient for its purpose through a transparent institutional risk management system'. The policy further confirms that risk reporting and management are implemented at departmental and unit levels. Risk registers are used to document, track and follow up on risks. The examples attached as evidence show that student academic performance (under-performance) was listed as a risk, and was then managed by the well-resourced SDS Directorate. This is done manually and reported to various structures and committees for on-time intervention. It was confirmed that the new LMS platform (BrightSpace) is user-friendly and that it makes provision for tracking and monitoring student performance as well as identifying bottleneck modules (SER, p. 95, Annexure 83).

The SER states that risks are institutionally reported to the Audit and Risk Committee at the University for monitoring (SER, p. 99). In addition, the TUT Audit and Risk Committee receives reports from external and internal auditors where recurring matters are identified to establish whether and which corrective measures had been implemented. The Audit and Risk Committee also notes recurring matters, whether appropriate action was taken and the measures implemented. The TUT annual report (SER, Annexure 100) includes the external auditors' report that focuses on the financial position of the University and its performance against the set goals as well as the information provided in the report by the Audit and Risk Committee.

The interviewees from the DQP informed the CHE panel that the QMS operates at two levels, namely the strategic level and the operational level. At strategic level, committees, strategies, and policies are involved, while the operational level refers to departmental and faculty-level involvement. These actions, activities, processes and procedures are guided by the Policy on Quality Assurance (SER, Annexure 18).

The CHE panel interviews confirmed that the TUT policies and procedures are aligned in the faculties, and are implemented on a day-to-day basis. In addition, it was reported that feedback from programme SERs, advisory committees, and professional board accreditation reports are used at programme level to guide quality management as well as confirm the relevance of the programmes to the industry. It was also reported that relevant surveys are used to identify gaps and areas of intervention (please note the comment on this matter in Standard 12: stakeholder engagements also). Although this survey practice is noteworthy, it was not confirmed in the interviews that interventions and action plans are implemented and monitored across the University (see Standard 15).

The TLC members approve the assessors and moderators, and specifically look at the suitability of moderators at exit level. The University uses “quality checkers” to audit the marked scripts and the calculation of marks. To illustrate operational integration, quality promotion is a standing item on the agendas of teaching and learning, FB and senate meetings. Policy and procedures are aligned in the faculties to implement day-to-day activities. Moreover, many of the programmes have to adhere to professional body requirements and receive inputs from advisory committees (please note the comment on this issue in Standard 12).

To confirm the integration of quality management and close the quality loop, the Policy on Quality Assurance (SER, Annexure 18) emphasises the effectiveness, efficiency, value-add, accountability, as well as continuous improvement in the provisioning of academic and non-academic services and products. The DQP reports to the EMC, Senate and Council are used to provide oversight of the QM implementation. The reports focus on reviews, audits, procedures and processes, performance trends, outcomes of external academic and non-academic programme accreditations, audits and reviews, or any other quality-related matters. The University uses MERS for this purpose as well. It was reported that it is easy to access and retrieve information from HEDA and MIS.

During the interview process, the CHE panel heard that the QMS is implemented in the same way on all campuses, as the DQP is represented in all the committees across TUT. In addition, the MERS framework assists in tracking the strategies implemented and compliance with regulations and planning. It was reported that digital platforms operate seamlessly across campuses. HEDA dashboards are also used to share data. It was however established that there is currently no integration between the LMS and the ITS to facilitate grade submissions, for example.

The EMC provides oversight and monitoring, and is accountable to the Council regarding the strategic direction of the University and attaining its strategic objectives. The VC is responsible for reporting to the Council, and covers all executive management portfolios. Governance and oversight are also done via reporting from programme level to faculty level, to the EMC and to Senate. On the day of the physical site visit (29 July 2022), one of the departments presented examples of document submissions and tracking of activities and quality assurance, using the MS Teams platform. Although the technology seemed unsupportive during the session, as the lecturer who did the demonstration was unable to show the detail of the departmental system on MS Teams, the CHE panel was able to gain a view of the integration of QMS at department and programme levels.

Recommendation

See Recommendation 11 (under Standard 9) above.

Conclusion for Standard 10

The CHE panel found the TUT to be *functional* in the area covered by this standard.

Standard 11: *Planning and processes exist for the reasonable and functional allocation of resources to all components of the institutional quality management system.*

The TUT SER refers to various systems to ensure the quality of its core academic activities and the way they are resourced in terms of infrastructure, budget, operations, as well as human and ICT needs. In this standard, TUT focuses on financial resources and workload allocation for academics.

Financial resource allocation

TUT allocates financial resources as per its Policy on Budgeting (2013) by considering overall resource availability, as well as internal and external benchmarks. The University has a Budget Task Team under the leadership of the CFO, comprising EDs and Directors, as well as the CIO and all the Campus Rectors (SER, section 3.3.3.1, p. 101), with campuses expected to be self-sufficient. TUT claims to have addressed the CHE 2008 recommendations and the 2017 QEP report to the effect that the University should have equitable resource provision across all campuses; hence, the participation of Campus Rectors. Resource allocation for quality management provision is based on submissions from assistant Registrars which are consolidated and presented to the senior structures of TUT for approval. This implies that there is broad consultation on project budgets in faculties and directorates during the drafting of the overall budget plan.

It was evident to the CHE panel that TUT relies primarily on block grant income, NSFAS and research funding. The budget is worked out internally and the Audit Committee of Council monitors its implementation. In both the SER and the interviews, it transpired that TUT is also dependent on the UCDG, which is used to support campuses, but with less support for student, staff and curriculum development. The University may include activities that focus on students, staff and curriculum development. In the SER (as explained in Standard 6), TUT states that it is committed to increase third-stream income through sponsors, investments, conferences and other strategies, such as increasing short learning programmes (see Standard 12).

In the interviews with TUT managers, the CHE panel was informed that budgeting is a challenge because there is never enough funding from government or industry, although they argued that nothing crucial to the academic project is left without resources (refer to Standard 12 for more information on budgeting). In other interviews with TUT staff, there appeared to be an appreciation of the funding shortfall and a willingness to work around this lack. It was evident that innovation in teaching and research is, however, curtailed by a truncated budget. Generally, from the evidence presented during the interviews, there seems to be no overall institutional programme on resource allocation and that the devolved system sometimes leads to uneven distribution. The City of Tshwane campuses, for instance, are well resourced, whereas the smaller outlying ones need bigger allocations for infrastructure, technology and staff, especially tenured academics.

Workload allocation

The SER refers to a communiqué issued on 31 May 2018 by the Director: Recruitment and Benefits, stating that lecturing staff should work for a maximum of forty hours per week, 25 of which should be spent at the institution, including grading of scripts, preparing lectures, conducting research, holding student consultations, and other activities not indicated in the SER. In another communiqué of 7 June 2018, the TUT Senate Committee for Teaching and Learning (SCTL) resolved that those lecturers, except nGap staff, junior lecturers and lecturers in new disciplines, should have a minimum of 15 contact lecturing hours and five hours of student consultation per week. The allocation is managed by the office of each Executive Dean and ratified by FBs, except in the case of HoDs and Assistant Deans, whose lecturing load is agreed upon with the Executive Dean and ratified at the faculty EXCO.

In the PoE, Academic Workload Annexures 105.1–105.4 are provided as evidence of the workload in some departments. Various planning and workload models have been developed by departments within the university model. As per the workload allocation model, time spent on research, professional development and community engagement is ratified at departmental level, and staff members not participating in these activities are given more teaching hours at the University. Since the workload model is in its first phase of implementation, there are various challenges in different environments that use different teaching approaches.

Recommendation

12. The CHE panel recommends that TUT ensure greater parity in the resource allocation, the provision of qualified staff, workload allocation, sophisticated technology and additional buildings on its distant campuses.

Conclusion for Standard 11

The panel found the TUT to be *functional* in the area covered by this standard.

Standard 12: *The quality assurance system achieves its purpose efficiently and effectively.*

The SER describes several examples of making sure that the human, financial and infrastructural resources allocated to the QMS each year are used for their intended purpose, such as academic programme reviews, the QMS, budget control and monitoring, infrastructure management, and the PMDS (SER, p. 104).

Human, financial and infrastructural resources

The finance directorate oversees the budget control and monitoring system, guided by the Policy on Budgeting (2013) (Annexure 69). It was confirmed that TUT uses the Resource Allocation Model (RAM) (SER, p. 104), and allocations are informed by the DHET funding model. The model is an income-driven budget. Cross-utilising takes place between faculties and departments.

Budgeting is consulted via a transparent and collaborative process with the DVCs and Campus Rectors. HoDs can participate and submit capital budget requests. Each member of the EMC exercises budget control. The finance committee advises the EMC and proposes the budget to the Council. Efforts are made to ensure equal provision for all students on all campuses. To monitor this aspect, the infrastructure services (via the Campus Rectors) meet once a month.

The University uses ring-fenced grants, such as the UCDG and Clinical Training grants, according to the relevant guidelines and Standard Operating Procedures (SOPs), and uses the Manufacturing, Engineering and Related Services Education and Training Authority (MERSETA) to fund specific projects. On the day of the CHE site visit (29 July 2022), the DHET was on campus for the clinical training grant site inspection. The University also plans to increase the number of short learning programmes to supplement its third-stream income.

The TUT budget allocates 70% to personnel costs and 30% to university operations. Of the personnel costs, 60% are allocated to full-time academics, and 40% to support staff. It was noted that the University employs several contract personnel for teaching and learning. Upon investigation, the CHE panel was informed during the interviews that a relatively high number of part-time staff members are appointed. It was mentioned that these appointments are transitional arrangements to enable and facilitate the teach-in and teach-out of the HEQSF-aligned programmes.

The University uses several policy structures to accommodate infrastructure management, decentralise authority, and avoid the misuse of funds and resources. Examples are the Policy for Procurement of Infrastructure (SER, Annexure 71.1), which is used to check that procurement is done in a fair, transparent, cost-effective, and equitable manner, and the Policy on Procurement of Goods and Services (Annexure 71.2) to guide the quality standards and procedures to be followed. During the interview process, the CHE panel heard that some of the stakeholders expressed a wish that the community could become stakeholders in the procurement process so that they can deliver services to TUT.

The University emphasises the importance of ethical behaviour and is guided by the Policy on Staff Ethical Behaviour (SER, Annexure 109). The Policy on Unauthorised Purchases (Annexure 71.3) presents guidelines and actions to deal with members of staff who may have acted outside the purchasing rules of the University. For a fair allocation of movable assets, line managers may present their operational requirements. The Asset Control Division creates and maintains an asset register guided by the Policy on the Management of Movable Assets (Annexure 71.5). The SER states that TUT does not have a policy to guide the allocation of office space (SER, p. 105). While this aspect may have been less important during the last two years, this may emerge as an important matter as members of staff return to their offices after Covid-19.

During the CHE site visit, it was evident that infrastructure is optimally used and taken care of. It was however reported that there are incomplete building projects on the GaRankuwa Campus, and previous damage to buildings has not yet been repaired. Due to logistical issues, the CHE panel was unable to visit the Polokwane Campus to verify some of the information. It was reported that resources on distant campuses are limited. It was also noted that short-term plans to address this limitation are in place, but that long-term planning is still a work in progress. The interviews confirmed that some of these infrastructure challenges were inherited, and may take time to address.

Quality promotion

The DQP informed the CHE panel about the improvements planned and/or already implemented, based on their self-reflection exercise. Examples of initiatives planned to create quality promotion awareness at the University are the QMS “show and tell” days and the QA CoP. During the interviews, the CHE panel was informed that the DQP needed more resources, including smart technologies and decentralising functions, to execute its tasks. It was hoped that this would be attained by applying for a UCDG to support its creative initiatives.

It was reported that the same QA processes are used on all the TUT campuses and are based

on the Policy on Quality Assurance (SER, Addendum 18). It was however established that not all divisions have implemented processes to ensure that the QMS is effective. Electronic information systems are not yet centralised, as different environments own different areas of information. The University has also identified the importance of “synchronised” data systems.

Stakeholder engagements

The University recognises the importance of its relationship with its external stakeholders to enhance student success and to assist in delivering work-ready students, as well as providing input into the curriculum. These aspects will be reported on in Focus Area 4. During the interviews, some of the external stakeholders confirmed that, at the time, they were involved in WIL, in advising and mentoring of students, but that formal agreements were not consistently implemented. It was also established that not all the stakeholders who participated in the interviews were aware of the vital role of the advisory committee in providing input to the curriculum. The successful “show and tell” days perhaps should focus on sharing this information.

During the CHE interviews, some alumni reported that they were not offered the opportunity to provide input into the SER (refer to the comment about the POPIA). This stakeholder group provided mixed feedback in terms of their participation in graduate surveys and in devising the curriculum. The SER also mentioned the difficulty of obtaining feedback from alumni (SER, p. 127), mainly because of the restrictions of the POPIA. Although the SER indicates that it is the prerogative of alumni to update their contact details, during the CHE interviews, they reported on the limited communication they receive from the University. This points to a possible gap in the communication lines that the TUT should investigate to optimise communication, wherever applicable.

Also described in Standards 10 and 15 are the university-wide surveys used to support planning and decision-making. Examples are surveys on the first-year student experience, postgraduate students’ satisfaction, and remote learning (SER, p. 104). The interview process informed the CHE panel that reports on the outcomes of the surveys had been circulated to the faculties and support structures to implement the recommendations.

Another structure in this area designed to assure student success is student representation at all levels at the University, from the programme level upwards, to provide feedback, engage on matters that may require intervention, and to capture the students’ views. During the CHE interviews, the students also reported that these platforms are appreciated and assist in sharing information and proactively addressing areas of possible conflict. In line with this practice, the panel learned about the role of the academic excellence officers and WIL co-ordinators in each

of the faculties. The services that they provide are valuable for supporting student success.

Performance Management

As noted in Standard 9, the SER confirms that TUT has an APP to drive and capture the KPAs relevant to each section or unit (SER, p. 106). As such, it was reported that the MERS assists with the M&E of the achievement of objectives as outlined in the APP and makes sure that the resources allocated to quality management are used to benefit the institution.

The SER states – and the CHE interviews confirmed – that performance management has been implemented at the levels of executive management, Executive Deans, Campus Rectors and directorates (SER, p. 99). As stated in Standard 9, implementation is therefore not yet university-wide. This raises a question about how staff performance and accountability matters are identified, recognised, celebrated and improved. The barriers are a lack of agreement and acceptance by the recognised unions, and job profiles and approvals that are not yet signed off (SER, pp. 97 & 106). Although it was not possible to establish by when the system will be available to all, it was mentioned that the intention is to make the system available to a larger TUT community as soon as possible. In the meantime, it was reported that the LMS system, especially the BrightSpace function for lecturer evaluation, was useful. Moreover, the University should consider a revision of the promotion policy to include possibilities for advancement for support staff.

During the CHE interviews, reference was made to the absence of a system for tracking and monitoring the performance of part-time staff members. Although pockets of excellence were reported during the interviews, the internal quality control measures may not be consistent for this specific group, as the question in terms of how the part-time staff members are held accountable remained unanswered. One aspect mentioned in monitoring quality and assuring student success is to re-appoint only those part-time staff members who participated in the “Licence to Teach” programme.

Recommendation

13. The CHE panel recommends that the University support the plans and initiatives of the DQP to fulfil its varied and expanding tasks.

Conclusion for Standard 12

The CHE panel found the TUT to be *functional* in the area covered by this standard.

Focus Area 4: Curriculum development, learning and teaching support the likelihood of student success

The four standards in Focus Area 4 concentrate on how effectively the institutional quality management system enhances the likelihood of student success, improves learning and teaching and supports the scholarship of learning and teaching. These standards drill down in greater detail in Focus Area 2.

Standard 13: *An effective institutional system for programme design, approval, delivery, management and review is in place.*

The process of programme design, development, and approval at TUT encompasses three phases and a range of procedures that reside with the DQP and the Directorate of CDS. DQP ensures that all new and existing academic programmes meet the regulatory quality requirements. The CDS advises and supports faculties on curriculum design and the development of programmes (SER, 3.4.41.1).

Emergency Remote Multimodal Teaching, Learning and Assessment (RMTLA)

TUT deployed its emergency RMTLA as a result of the national lockdown. Implementation of the RMTLA was informed by directives from the Ministry of Higher Education and Training, Science and Innovation, the CHE and other relevant stakeholders. The overall goal of the TUT strategy and plan for RMTLA was to enable the successful completion of the academic year.

The CHE released the QA guidelines for the emergency RMTLA to assist HEIs in developing their own guidelines. The TUT QA approach and criteria were therefore aligned with the CHE Quality Assurance Guidelines for Emergency RMTLA (July 2020). To generate M&E data on the quality of provisioning during this remote teaching phase, quality reviews were implemented as guided by the CHE guidelines. The University introduced data provision to students in June 2020, and printed study packs were prepared and dispatched to students (SER, pp. 111–112).

TUT implemented the RMTLA Plan using two approaches: first, digital delivery through the LMS; and second, distribution of printed study material to students who were not able to use the digital mode for various reasons. Students without digital access received study packs that comprised all the information that was disseminated to students using the digital teaching mode. This consisted of instructions, study guides, time allocation, slides, notes, previous question papers, and assignments. The two approaches were used in parallel (SER, p. 113). During the interviews, students spoke of the challenges they faced in accessing online learning because of poor

connectivity in some of the accredited, leased residences, and so relied heavily on the printed study materials. They also informed the CHE panel of the security arrangements related to examinations through the introduction of an invigilation or proctoring app.

According to the SER, lecturing staff were trained in remote teaching and learning methods, and they were provided with mobile devices and data to access the Internet. Training on the use of remote pedagogies was conducted by CDS between April and June 2020. All training was recorded, and remains available to staff. TUT made 30 gigabytes (GB) of data available to all students, and an average of 53 000 students received monthly data allocations. During the 2020–2021 fiscal year, TUT spent a total of R61 455 858.66 on data. TUT spent an additional amount of R15 469 814.57 on data for staff to ensure continuous student support (SER, p. 117).

A new LMS, BrightSpace (also referred to as myTUTor), officially went live in January 2021. The myTUTor, a cloud-based LMS, is available on all devices and operating systems (smartphones and computers). For the new LMS deployment, a focused approach was applied to ensure that all modules have digital content. A student resource module on how to use the LMS is available online. During the Covid-19 pandemic, students were not on campus. As part of the Change Management Strategy, various tools were deployed to make it easier for students to access online resources. A total of 303 online training sessions were conducted on both the LMS and MS Teams to ensure that students know how to navigate the LMS. The LMS training is also available in video format as a resource for students (SER, pp. 118–119).

Presentations were recorded and embedded in the modules so that they could be re-used for reinforcement of learning. This enabled TUT to deploy a Flipped Classroom Model where items will be used in the future as pre-developed material. As 56% of TUT students access the LMS with their handheld devices, the PULSE App was made available for LMS users (SER, p. 119). This gives access to quick information, such as announcements, reminders, grades, and notes, easier without having to log into the LMS.

Regular academic reviews at module level and student surveys were the main QA mechanisms used to assess the quality of the programmes that are offered remotely, either digitally or through a blended approach. Remote digital delivery was supported by safe and secure assessment systems that enabled the grading of students remotely yet securely, with plagiarism and proctoring tools in place. In addition, internal and external moderation of assessments was done electronically to ensure that the effectiveness of assessment was not compromised (SER, sections 3.4.1.2.–3.4.1.8).

During the interviews, the CHE panel was informed of the dramatic changes in technology that

accompanied the Covid-19 pandemic and its effect on the teaching and learning environment at TUT. The concerns around the digital divide spearheaded a range of training and support programmes for staff and students, the installation of Wi-Fi in the TUT residences, and the provision of laptop computers and data during 2021 and 2022. The Directorate: TLwT pioneered a new D2L BrightSpace cloud-based LMS, which hosts digital content to support digital content, peer, and lecturer engagement. Access to the platform was provided by the Directorate: ICT Services as follows:

- Wi-Fi in teaching and learning spaces (classrooms, laboratories, libraries, and open social spaces);
- Wi-Fi in residences; and
- Data provision for students in partnership with Vodacom, MTN and Telkom. Students received 20GB per month sponsored by TUT.

Commendation

- b. The CHE panel commends TUT for its effective and strategic response to the Covid-19 emergency by adopting a multi-pronged approach to student learning and support by providing virtual and hard copy study materials, extending electronic network access, subsidising data bundles and using the crisis to pioneer the D2L (BrightSpace) digital-learning platform.

Recommendation

14. The CHE panel recommends that TUT, in consultation with relevant stakeholders, develop a strategic plan and comprehensive development programme in each faculty for digital and online learning that sets guidelines, criteria, quality standards, policies, resource allocations and targets, and ensure that implementation is monitored by the Senate TLC.

Conclusion for Standard 13

The panel found the TUT to be *functional* in the area covered by this standard.

Standard 14 *There is evidence-based engagement at various institutional levels, among staff, and among staff and students, with:*

- a. *curriculum transformation, curriculum reform and renewal;*
- b. *learning and teaching innovation; and*

c. the role of technology (1) in the curriculum, (2) in the world of work, and (3) in society in general.

The HEQSF-aligned PQM of the University focuses on offering vocational, occupational or industry-specific programmes that focus on applied knowledge and skills. Most of the programmes on the PQM are undergraduate, vocational, and industry-specific diploma or degree programmes. Due to the many programmes that needed to be conceptualised, in some instances, the innovation and transformative nature of teaching and learning has not been foregrounded. In other cases, a compliance process was used to meet the submission deadlines under huge pressure. Programme teams used the TUT Policy on Curriculum Development (SER, Annexure 115). Once the programmes had been approved, the focus shifted to innovative teaching and learning practices (SER, section 3.4.2.4). However, Senate approved some fundamental modules to provide undergraduates with relevant skills in computer literacy, communication, information literacy and life skills, which address contemporary needs in the curriculum (SER, p. 123).

Many new programmes have been introduced at TUT, which directly address the issue of outdated curriculum and ensure relevant courses in the interest of employability and which facilitate articulation between diploma and degree studies (SER, p. 124). Curriculum transformation at TUT has to be construed in the context of vocational and technical education, which means that technology is crucial, and digital applications, both in learning and practice, are axiomatic. The CHE panel was therefore keen to explore the strides made by TUT in online learning occasioned by Covid-19 and its aftermath, in the firm belief that practice classroom learning can be enhanced considerably by digital innovation.

There are some fully online post-graduate diplomas under development in the Faculty of Management Sciences and in the Faculty of Economics and Finance. The Faculty of Science is using multi-modal learning with on-campus teaching providing access to labs with the online component covering theory. The Faculty of Humanities floated an online programme before the Covid-19 pandemic, but received few applicants, mainly because students did not have access to the Internet or computers.

Although there is little mention in the SER of the use of simulations, gaming or virtual or augmented reality, during the interviews, some Executive Deans indicated that simulation as a pedagogy was advanced during the Covid-19 pandemic, especially as a means of simulating WIL in the engineering and health professions. This was confirmed during the campus visit (28 July 2022).

The DTS is strong on Information Technology (IT) and technology requirements, but weaker on strategies for innovation using technology in teaching, which is where curriculum transformation at TUT should be concentrated in the view of the CHE panel, and borne out by discussion with various academic communities during the site visit interviews. The Learning and Teaching Plan 2020–2025 just has a weak fundamental assumption that there will be digital learning. There is no overall strategy for determining appropriate areas or markets for fully online learning, or for guiding the implementation of multi-modal teaching. In most cases, this is left entirely to the initiative of individual lecturers, or at best, to individual programmes.

Since TUT is focused on serving economically disadvantaged students, it needs to take fully into account internet and equipment access for student before launching technology-based courses.

However, TUT is a UoT. Some content areas will lend themselves to the heavy use of digital technologies, especially where industry uses technology, such as geographical information systems (GIS) or digital apps. Moreover, there is a growing demand for lifelong learning, enabling those already in the workforce to upskill or retrain, and for those who are currently unemployed to become trained in areas where there is strong demand for jobs. These students will benefit from the “anytime, anywhere” aspect of learning online and may already have good access to technology or key clients for targeted technical assistance.

In other words, the decision to move into multi-modal or fully distance online learning should be driven by the needs of both the market and the trends in industry. TUT may thus need to make special provision for internet-based courses, such as negotiations with the telecommunications companies and seek possible financial assistance for targeted students to cover the costs of their training, including internet and equipment access. It is, therefore, all the more important that TUT has a strong policy framework in terms of digital learning that could guide academic departments and instructors regarding the necessity, possibilities, and limitations of digital learning initiatives. TUT needs to link the choice of mode of delivery to the needs of the labour market and of the students. Moreover, lecturers need strong incentives to change their ways of teaching to exploit new technologies fully.

Recommendation

15. The CHE panel recommends that TUT explore various incentives for innovation in teaching to develop technology-based learning modules and explore new developments, such as simulation, gaming and virtual or augmented reality, and receive appropriate technical support (students should also be involved in such experimentation).

Conclusion for Standard 14

The panel found the TUT to be *functional* in the area covered by this standard.

Standard 15: *The students' exposure to learning and teaching at the institution, across all sites and modes of provision, is experienced as positive and enabling of their success.*

In this standard, the CHE panel sought to elicit information regarding student feedback systems, students' sense of belonging at the University, the voice of students in the consultation processes at TUT, mechanisms for student complaints, as well as staff experiences (wellness, belonging, reflection, and CPD) and their role in enhancing student success. The data collected from the SER, PoE, interviews, the tour of the facilities, and presentations were triangulated and viewed against the standards (and guidelines) to ensure that the findings of the panel took into consideration the data from various sources in making informed judgments of the state of quality management at TUT.

In addressing Standard 15, the TUT SER focused on students' experiences of teaching and learning, out-of-classroom student experience, the Student Ombudsman and academic support units (SER, pp. 125–129).

In the SER, the narrative on students' experiences of learning and teaching mentions that students at TUT are provided with opportunities to reflect on their experiences of teaching, learning and assessment. In particular, lecturer evaluations, conducted by the CDS, are used to elicit student feedback on teaching and learning. The outcomes of the survey are used in conjunction with HoD and peer evaluations to enhance staff development and student learning. There are follow-up evaluations by students in the subsequent semester. The SER has sparse information regarding whether and how improvements emanating from lecturer surveys are effective and, if so, whether they are documented, monitored, evaluated, and reported on in the relevant committee meetings. The CHE panel also did not get any definitive answers during the site visit interviews.

During interviews, the CHE panel was informed that quality assurance is a standing item in committee structures at faculty, department and division level where quality issues are reported and discussed. Quality assurance is also monitored through the combined assurance framework (risk management processes). The SER mentions that the DQP provides the university community with information analysis and intelligence to support planning and decision-making. There was however little evidence in the PoE to corroborate this claim, neither was it offered in the interview responses that the panel received.

During the interview with the VC, the panel heard that the University enabled student success through a shared understanding of this concept, through the policy platform, and structurally at Senate and at faculty level. Furthermore, units in place ensure relevant interventions assist students at risk, support staff training initiatives so that they can bring to fruition a successful academic project, and assist staff to attain the necessary qualifications which, in turn, improves the prospects of academics producing effective and influential research.

The DQP conducts student satisfaction surveys. In the past five years, the University has conducted the First Year Initial Experience Survey (FYIES). The surveys culminate in reports that are presented to the supporting divisions. Recommendations arising from the survey are implemented. During the multimodal teaching phase, a survey was conducted with students, with the outcomes (findings and recommendations) communicated to the key divisions. This was done to ensure that concerns were addressed and improvements produced. These were reported to FBs. The DQP channels data to the relevant committees to ensure that the recommendations are understood and the student experience is enhanced. Reflections are viewed through the lens of how the student experience can be improved.

Feedback received from students underscores issues with the IT system for online applications. The audit panel was informed that, in general, the systems work well year-round, except in times of heavy traffic during registration periods, resulting in a bottleneck. In the interview with the Campus Rector during one of the site visits, the panel was informed that the Registrar's Office, together with the IT unit, are working on finding a permanent solution to the problem. They also indicated that a resolution to the challenges that students experience with data connectivity was being explored. The panel also heard that feedback is elicited from class representatives who meet with the Assistant Deans and discuss concerns relating to teaching and learning. Based on this feedback, the Deans convene an evaluation session and look into approaches to improve teaching and learning.

Through the DCE and the Advancement and Partnerships Office, the University conducts annual graduate surveys in collaboration with Universum South Africa to determine graduate destination and employment status (SER, p. 130). It is not clear whether and how the outcomes of the survey are used to improve learning and teaching in the interest of student success.

The DVC: TLT informed the CHE panel that the University has a multi-pronged approach to enabling student success. Several mechanisms are in place to ensure student success. First, there is a Senate Sub-Committee for Student Success that meets four times a year and identifies bottleneck modules across campuses. The responsibility for putting in place appropriate

interventions for such modules lies at faculty level. There is a full-time success rate officer appointed to monitor all success rate activities with approximately R25 million, accessed through the UCDG, which is spent on just such interventions across campuses. In addition, the HEDA system is used to produce dashboards on student success and graduation rates, at programme, module and student level. The dashboards provide data that are used for student exclusion, to log student information including interventions and to raise the red flag where necessary. There is also a drive towards staff development to help enhance student success. The Haaga-Helia partnership has facilitated the training of almost 300 staff members in the Postgraduate Diploma in Higher Education. This staff development drive, in conjunction with other interventions, such as the appointment of curriculum and instructional design officers and capacity development programmes, targeting the use of technology in teaching and learning, aims to improve success rates.

Interviews with staff at all levels described in theory the QA processes in place that are meant to enhance the quality of teaching and learning. For example, the CDS conducts lecturer surveys and generates reports, which are sent to the lecturer and the HoD. There are also HoD and peer evaluations and a follow-up evaluation in the subsequent semester. It was however not clear how the evaluations produced improvement neither whether there are formal processes in place to ensure superior practice. Executive Management indicated that the HEDA system is used to monitor progress at student, module and programme level, and the MERS system tracks progress towards the achievement of the strategic goals.

The SER indicates that the University promotes a culture of student success. The directorates of SDS and SAED develop student programmes in collaboration with other support structures to address barriers to success, enhance opportunities for student success, help students acquire professional skills for career success, and are thus actively engaged in supporting student well-being and promoting student success. The SAED has strengthened its focus on inclusivity for underrepresented and minority groups of students (differently abled students, the LGBTQ+ community, and international students, among others). A pilot study conducted by the Research Office of the SAED yielded key areas for development. The information provided in the SER, interviews and PoE could however not fully explain how the findings of the study are currently being used to effect improvements, or whether there are M&E of the same.

The SER states that TUT has an established OSO that addresses student complaints related to teaching and learning, assessment, academic support, and postgraduate supervision. A total of 242 complaints were adjudicated with 45 being outside the scope of the office, 136 being multi-modal-related complaints, and 61 from other environments internal to TUT but within the ability

of the office to resolve. Based on the report, it appears that turnaround times for resolving student complaints are long, and that students may not be clear on the mandate of the office, as there is mention that students often raise complaints with the OSO that are not within its purview (SER, p. 128).

During the interviews with the SRC, student leaders indicated that, in their interaction with students who were referred to the OSO, they were mostly satisfied with and confident about the office. This is despite the office being located on only one campus. They explained that access to the services of the OSO on other campuses is long-winded and takes time, as the protocol requires that they follow different procedures to access the OSO. There is an alternate way to approach the OSO via e-mail. The SRC recommended that such an office be located on each campus to ensure equitable access to all students of TUT, which will assist in reducing the long turnaround time in resolving student complaints.

The SER points to the focus on staff capacity development as being an important contributor to student success (p. 128). TUT promotes staff development as is evidenced by several such initiatives that are in place for both academic and academic support staff. This was confirmed during interviews by staff who agreed that TUT provides opportunities not only for staff professional development, but also for further study to improve their qualifications.

Recommendation

16. The CHE panel recommends that TUT provide student ombudsman services on its distant campuses, and automate the complaints and appeals process to streamline administration and expedite arbitration in the OSO.

Conclusion for Standard 15

The panel found the TUT to be *functional* in the area covered by this standard.

Standard 16: *Institutions engage with and reflect on the employability of their graduates in a changing world.*

TUT regularly undertakes graduate destination surveys to provide data on:

- the number of graduates that are employed, have been employed, or are self-employed;
- how soon after graduation they became employed or self-employed;
- the nature and expected duration of their employment or self-employment (for example short-term contracts versus permanent employment); and

- whether their employment or self-employment is directly related to their programme of study.

The University undertakes research and reflects on the employability and/or other economic activity of its graduates, and actively engages with and acts on the results of its findings. Consistent efforts are made to ensure that alumni remain active in the affairs of the institution.

The University states in its SER that to enhance employability of its graduates, students are prepared for employment through professional skills workshops. These workshops were conducted online during the Covid-19 lockdown. The DCE has in place an effective WIL management system that is enhanced by the Graduate Recruitment and Employability Plan which complement each other in facilitating graduate recruitment and placement in the workplace. To facilitate graduate employability further, the DCE and the Advancement and Partnerships Office conduct graduate tracking through a survey conducted by Universum South Africa. The reports produced by Universum South Africa are evidence that the survey has been conducted. Missing in the PoE was the improvement plan and progress report detailing whether the outcomes of the survey are used to effect positive change in the area of graduate employability and employment. An area of development mentioned in the SER suggests that alumni may not necessarily all be aware of the survey due to the need for TUT to update its alumni database with current alumnus information to facilitate communication with and feedback from alumni.

While the Universum South Africa survey provides much rich information about TUT alumni that the University could use to strengthen and proliferate good practices across the board, the turnaround time to find employment is not mentioned in the survey and neither is information regarding the relationship between the field of study and graduates' current job. This gap was corroborated by the members of Executive Management who were interviewed by the CHE panel.

Data elicited from some interviews indicate that the University engages with the outcomes of the graduate destination survey that is conducted annually and makes decisions based on the findings, by engaging alumni in the affairs of the University, while in other interviews, it was mentioned that the survey had only been conducted once and that the response from graduates was too low to attach significance to the data. This contradictory information suggests that the survey may not be conducted as regularly as it should, and that the outcomes of the survey may not be used effectively.

Furthermore, interview data revealed that the turnaround time for graduates to find employment has not been thoroughly studied within TUT. Notwithstanding, the CHE panel was advised that the University was, at the time of the audit, in the process of initiating a focused cohort study to track the journey of its students – from first year to first job – in part to determine the time frame of the journey between graduation and securing a first job.

Interviews with stakeholders revealed that an employability project was launched earlier in the year (2022), as the question of employability is becoming a crucial issue to TUT and its graduates. There are, however, many areas where TUT students do find employment through the WIL programme with the company or business where they completed the WIL component of their programme. In addition, Owing to the nature of work in their discipline, art students tend to create their own employment even before they graduate. TUT has recognised the importance of entrepreneurship, and is intensifying its focus on including entrepreneurship as part of the curriculum in its programmes. This is a very important initiative that the University is undertaking.

During interviews, members of the convocation indicated that they would like to be actively involved in facilitating graduate employment. They suggested that TUT should optimise the opportunity to tap into the rich resources that the alumni (convocation) can avail, which would better serve TUT students, graduates, and the University. The CHE panel heard similar comments from external stakeholders, and their enthusiasm to be more involved with the University to enhance programme offerings, gives input into curriculum content and facilitates WIL, service learning, internships and learnerships for TUT students and graduates.

The members of the convocation shared with the panel their commitment and vision to make a positive and meaningful contribution to students and graduates, ultimately for the betterment of TUT. Alumni who were interviewed articulated their desire to have a more constructive relationship with the University, as they could add much value to the current students as well as to the graduates of TUT. They suggested more structured meetings to facilitate constructive discussions in this regard and better communication from the University so that alumni could be kept abreast of what is going on at TUT. Some alumni reported that they were not aware of the graduate survey, and hence did not participate in it. One interviewee suggested updating the information about graduates to enable convocation to be contacted for them to participate constructively in the University processes. Many members of the convocation spoke about their commitment to TUT, where they had attained their first qualification, and expressed their willingness to contribute to the different functions of the University. They also felt that the University should exploit the skills and knowledge of the alumni to its advantage, for example, by developing policy to build the University, creating a culture and an ambassador-based community

of TUT alumni globally. They also intimated that the Office of the Registrar should consider ways to ensure that alumni can participate in University processes.

In the SER and in interviews, the University also described the role it plays in ensuring the credibility and employability of its graduates by delivering HEQSF-aligned programmes, the provision of quality lecturers with the requisite qualifications to deliver the programmes, and by providing an environment conducive to studying (library, physical and online resources, etc.).

Commendation

- c. TUT is commended for intensifying its focus on entrepreneurship by including it as part of the curriculum in its programmes. This is an innovation that enhances employability and promotes job creation.

Recommendation

- 17. The CHE panel recommends that the Office of the Registrar improve virtual communication with TUT alumni and organise meetings of the Convocation which facilitate greater participation, and that the relationship among the Convocation, the Advancement and Partnerships Office and the DCE be strengthened to promote graduate employability.

Conclusion for Standard 16

The CHE panel found the TUT to be *functional* in the area covered by this standard.

3. Conclusion

The CHE panel is in broad agreement with the findings of the TUT SER. It acknowledges the openness of the University to the institutional audit process in virtual and face-to-face interviews conducted across all faculties, directorates and departments. TUT is candid about its strengths and weaknesses, and identifies seven areas needing quality improvement (SER, p. 135) and five others which are directly linked to Standards 2, 6, 8 and 14 (SER, p. 136). This self-evaluation is a firm foundation for current and future planning, and should be used in conjunction with the CHE panel report in developing improvement plans. In response to the SER, the CHE panel had sometimes ranged its critical analysis beyond the prescriptions of some standards to engage with the TUT interpretation and narrative. In a few cases, this has led to an unavoidable repetition of

themes across the CHE focus areas, and has sometimes led to a narrative that strays from the specificity of the guidelines set for the standard.

The CHE interviews were informed by a careful reading of the SER, its annexures, and the PoE, which was provided electronically. The CHE panel tried to be as comprehensive as possible within the confines of the five days of the site visit, and we tried to explore policy and practice in the core functions of teaching, research and community engagement through the lens of ‘the people’s university that makes knowledge work’ and ‘enabling student success’ (TUT vision).

The CHE panel’s brief was to do a quality audit. This was the thread in all our interviews during the week of 25–29 July 2022. With this in mind, the panel was keen to –

- examine the SER in respect of the differentiated identity of TUT as a UoT;
- review the student success rates at TUT;
- gauge innovation in digital learning and interactive pedagogies at the time of Covid-19 and in the post-pandemic experience;
- assess changes to its LMS (BrightSpace for undergraduates);
- examine equity on all its campuses in respect of facilities, staffing, and student support;
- understand funding and resource allocation across faculties, including student bursaries and other income streams;
- evaluate the transformation of the University, including curriculum and access;
- estimate the sophistication of the various electronic data platforms and cloud solutions in the interests of institutional efficiency and analytics; and
- measure the relational health of TUT among its staff, students, unions, management, and external partners.

This is, of course, not an exhaustive list.

The tours of the TUT campuses helped the CHE panel to visualise the complexity and size of the University, and to recognise its significant presence far beyond the City of Tshwane, in eMalahleni and Polokwane. Its multi-campus facilities and multi-faculty programmes attest to the importance of TUT as a UoT in South Africa. The panel also recognised its contribution to higher education and vocational advancement. In addition, we acknowledge that TUT is deeply invested in the community in the interest of social justice and socio-economic improvement.

The VC’s introductory presentation and the first interview session during the site visit provided an insightful overview of the TUT mission and its ISP 2020–2025, and focused on the current health of the University. He touched on areas that show a clear understanding of achievements and challenges at TUT. He also set the tone for the virtual interviews across a wide span of

academic, administrative, support, and external constituencies to help the CHE panel provide constructive recommendations, which will enhance the quality of TUT programmes and student graduates, as well as the reputation of the University for quality teaching and engaged research.

The CHE panel noted that, at the time, there was a large contract staff component among academics and educational design and support staff. The panel also acknowledged the challenge of attracting staff with advanced qualifications, as well as the number of staff vacancies, even at senior management level. This is an area that requires attention and the panel encouraged TUT to make this a priority.

The CHE panel hopes that many of the emergency measures that were taken to ensure quality teaching and learning during the Covid-19 pandemic will be extended and perfected in future blended, hybrid and online learning programmes, and that the gains made in digital transformation will not retreat now that contact tuition has returned to TUT campuses. We noted ambitious goals in the TUT Strategic Plan and among instructional design and student support departments, which should be implemented as soon as possible. The large budgets that were allocated to the provision of hard copy study materials during 2020 should be directed at advancing digital learning in the future.

The SER, PoE, interviews with panel members, and the site visit provided supporting information that the QA system at TUT is in place, is being implemented at all levels and structures, and is guided by relevant policies. The CHE panel noted that, at the time, TUT was addressing a range of challenges to ensure that the QA system achieves its purpose efficiently and effectively, and that its phased expansion will ultimately lead to positive results. Some examples are communication with internal and external stakeholders; adequate resources in key offices, such as the DQP; an update of the promotion policy to include support staff; and aligning the policy on budgeting with the current HE context.

The University has policies, processes, systems and resources in place to facilitate student success through several mechanisms, such as student surveys and the Office of the Ombudsman enabling the “student voice”. The staff were positive about professional development programmes, including CPD and opportunities to pursue higher qualifications. These achievements notwithstanding, the CHE panel identified areas for future development concerning the M&E of improvements arising from QA processes, and while the University has an OSO that is effective, it would be more efficient if the services of the office were extended across all the campuses.

Students are supported from their first entry into the University. Baseline testing is conducted, and the results are used to develop support interventions to enhance teaching and learning. TUT offers HEQSF-aligned programmes, which ensure the credibility of its courses and, by extension, the quality of its graduates. The University offers myriad student development interventions, which differ across faculties and campuses. There are also several staff development programmes and initiatives to advance their qualifications. The DCE and the Advancement and Partnership offices work in tandem to enhance graduate employability through the WIL management system and the Graduate Recruitment and Employability Plan. The CHE panel encouraged TUT to continue with these initiatives to upgrade staff qualifications and skills.

The SER, PoE and virtual interviews during the site visit indicated that resources had been made available to advance ICT capacity at TUT and to develop a range of electronic platforms to facilitate quality management across functions and structures of the University. In the interviews, members of the EMC explained the purpose and value of each of these platforms (listed in the SER, p. 93). It is clear, therefore, that TUT has invested in high-quality software and cloud solutions to provide managers with up-to-date data on all the financial, administrative, policy, human resources, teaching and research activities of the University.

Senior managers pointed out the different functions of the various electronic platforms, and the challenges faced by ICT to develop an consistent and more coherent, seamless QMS. The CHE panel, however, heard evidence from other divisions in the University that operations were still at an early stage and therefore not accessible to most constituencies. The coherence and integration of components of the QMS will therefore depend on how effectively the various platforms become accessible to staff and how efficient they are in gathering data before they can connect with each other to provide cross-cutting evidence and analytics for better planning.

The CHE panel found the TUT to be functional in 14 of the 16 standards. Standards 7 and 8 need substantial improvement to achieve better functionality and system integration. The University is also commended in three standards, and the panel has made 17 recommendations across all four focus areas, which it hopes provide constructive advice.

The co-operation of TUT in the process has made the review positive, and the CHE panel recognises the value of dialogue and engagement in the audit.

Annexures

Annexure 1

CHE TUT Audit Panel

Chair

Prof Sibusiso Moyo

Panel members

Prof Greg Cuthbertson (Deputy Chair)

Prof Elisha Chiware

Prof Elphina Cishe

Dr Mogasuri Moodley

Prof Hesta Friedrich-Nel

Prof Fabian Nde Fon

Prof Anthony Bates (International member)

CHE Support Staff

Dr Sanele Nene

Dr Precious Sipuka

Ms Paulette Nkuna

Annexure 2

Documents consulted

CHE Documents

- i. Higher Education Act of 1997
- ii. Framework for Institutional Audits 2021
- iii. Manual for Institutional Audits 2021

TUT Documents

- iv. Directorate of Quality Promotion Mandate Quality Manual
- v. Directorate of Quality Promotion Quality Manual
- vi. Monitoring, Evaluation, and Reporting Systems Manual
- vii. Management Information Systems Business process
- viii. Management Information Systems Faculty Success Rates
- ix. Management Information Systems Operations Policy
- x. Policy on Academic Reviews
- xi. Policy on Academic Qualifications/Programme Approval, Accreditation, and NQF Registration
- xii. Policy on Quality Assurance
- xiii. Policy on Policies
- xiv. Quality Management Action Plan
- xv. Quality Management System Strategy
- xvi. Strategic Risk Report
- xvii. TUT Delegation of Authority
- xviii. TUT Institutional Audit - Self Evaluation Report 25-29 July 2022
- xix. TUT Strategic Plan 2014-2019
- xx. TUT Strategic Plan 2020-2025
- xxi. Vice Chancellor 2020 Report

Annexure 3

Tshwane University of Technology Institutional Audit Site-Visit Schedule, 25-29 July 2022

Day 1 25 July 2022

Session	Activity
SESSION 1 08:00 – 09:00	Vice Chancellor and Principal
SESSION 2 09:10 – 09:50	Executive Management Committee (without the VC)
10:00 – 10:15	Tea
SESSION 3 10:20 – 11:40	Deputy Vice-Chancellor: Teaching, Learning and Technology Deputy Vice-Chancellor: Research, Innovation and Engagement
SESSION 4 11:50 – 12:30	Executive Deans
SESSION 5 12:40 – 13:20	Council Members
13:30 – 14:15	Panel review and lunch
SESSION 6 14:20 – 15:50	Heads of Schools and Departments
16:00 – 16:10	Tea and Panel Discussion
SESSION 7 16:10 – 17:10	Staff Unions
SESSION 8 17:10 – 18:00	Panel reflection session

Day 2 26 July 2022

SESSION 9 08:00 – 09:00	Directorate: Quality Promotion
SESSION 10	Registrar

09:10 – 10:15	Deputy Registrars Assistant Registrars
10:15 – 10:30	Tea and Panel Discussion
SESSION 11 10:30 – 11:30	Assistant Deans (sample of Teaching and Learning; Research)
SESSION 12 11:40 – 12:40	Executive Director: Higher Education Development and Support Director: Student Development and Support Director: Curriculum Development and Support Director: Cooperative Education Foundation Unit
12:40 – 13:30	Panel review and Lunch
SESSION 13 13:30 – 14:30	Executive Director: Student Affairs and Extra-Curricular Development Director: Sports and Recreation Director: Health and Wellness Director: Student Governance and Leadership Development Director: Accommodation, Residence Life and Catering Director: Extra-curricular Development
SESSION 14 14:40 – 15:40	Student Representative Council
SESSION 15 15:50 – 16:20	Class/Faculty representatives
16:20 – 16:30	Tea and Panel Discussion
SESSION 16 16:35 – 17:05	Alumni Convocation
SESSION 17 17:10 - 17:40	Senate Teaching and Learning Committee SENEX (without the VC)
SESSION 18 17:40 – 18:00	Panel reflection session

Day 3 27 July 2022

SESSION 20 08:00 – 09:00	ICT Library services
SESSION 21	Institutional Forum

09:10 – 10:15	
10:15 – 10:30	Tea and Panel Discussion
SESSION 22 10:30 – 11:40	Chief Financial Officer and Institutional Planning
SESSION 23 11:45 – 12:45	Campus Directors
12:45 – 13:30	Panel Review and Lunch
SESSION 24 13:30 – 14:30	Senior Academic Staff (Full and Assistant Professors, senior lecturers)
SESSION 25 14:45 – 15:45	Emerging scholars (new lecturers, new PhDs, new researchers/scholars in the field)
15:45 – 16:00	Tea and Panel Discussion
SESSION 26 16:00 – 16:40	Contract and part-time academic staff
SESSION 27 16:45 - 17:35	Academic support staff Administrative support staff
SESSION 27 17:35 – 18:00	Panel reflection session

Day 4 28 July 2022

SESSION 28 08:00 – 09:00	External stakeholders/employers
SESSION 29 09:10 – 10:15	Recall session
10:15 – 10:30	Tea
SESSION 30 10:30 – 11:35	Open Session – for special requests to present to the Panel

11:35 –	Panel Review, Lunch and Travel

Day 5 29 July 2022

SESSION 31 08:00 – 10:15	Campus Tours Labs, Demo Learning Management System Library Services Computing Labs Student Recreation Areas Quality Management System (Demonstrate Online) Student Study Spaces
10:15 – 10:30	Tea
SESSION 32 10:30 – 12:45	Travel to TUT Pretoria West campus
12:45 – 13:30	Panel review and lunch
SESSION 33 13:30 – 14:30	Panel Debriefing and consolidation of preliminary feedback.
SESSION 34 14:40 – 16: 30	Final meeting with VC and Management Executive Committee
15:40 – 16:00	Panel Departure