



Executive Summary
INSTITUTIONAL AUDIT REPORT
OF THE
TSHWANE UNIVERSITY OF TECHNOLOGY

November 2023

© Council on Higher Education, South Africa 2023

1 Quintin Brand Street
Persequor Technopark
P.O. Box 94
Brummeria
0020
South Africa
Tel: +27 12 349 3840
Website: <http://www.che.ac.za>

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 of 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 Masters 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 were 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 the 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 cooperation 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 coordination was 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, 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 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, with respect to 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 the 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-coordinated 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 levels. 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 the 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 CHE panel also recommends that TUT improves incentives for staff development programmes 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 backup capacity.
8. The CHE 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 the 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 have 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, that the MERS, which was inaugurated in 2020, will facilitate evidence-based performance management that is integrated into the 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 (KPA) 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 the 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) coordinators.

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 the 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 ensure relevant courses in the interests of employability and 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 m 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 coordination 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.